



The NEWS SHEET-

Dots and Dashes from Western Union



VOLUME I,
No. 1

Distributed occasionally to those who may be able to find a few items of sufficient interest to embellish general articles or to serve as fill-ins. If additional information on any item is desired, we shall be glad to give it if it is available, or if you wish to ask about subjects not mentioned herein please feel free to do so. Photographs or electros of illustrations sent free. WESTERN UNION TELEGRAPH CO., 195 Broadway, New York City.

April, 1925

Photos by Wire Now Come to Stay

By means of a new electrical instrument called the Telepix, photographs can now be transmitted as quickly and accurately as telegraphic messages.

The New York "News" and the Chicago "Tribune" combined to perfect this instrument while the Western Union Telegraph Company furnishes the wire facilities. Hardly larger than the average 5-tube radio set, and as fool-proof as a telephone, the Telepix opens up greater possibilities than ever in the transmission of news over wires and marks another great achievement in the field of wired communication.

During the recent pictorial report of a football game on the Pacific coast for the New York "News", the Western Union maintained a circuit that required 3,444 miles of copper wire, and eleven repeaters which are automatic electrical devices to strengthen the current. These repeaters do away with the old-fashioned relays and Morse operators. There were more than 125,000 poles and insulators and to make certain that transmission was perfect, 26 test stations were used along the route which passed through Buffalo, Toledo, Chicago, Omaha, Denver and Salt Lake City. 35 section linemen were located along the route, available for instant service in case of emergency.

A surprising fact is that the number of telegraphic signals required to transmit one picture is less than half the dots and dashes required to telegraph a thousand word news dispatch.

Speed Up Business by Telegraph

In the days of its infancy, the telegraph was used only in matters of extreme urgency. We became panicky when the message was delivered, and only expected to find news of accident and misfortune. We can now wire to our homes without fear of creating a panic, and new ideas concerning the value of time have made us more familiar with telegraphic communication. We no longer balance the small cost of a telegram against the saving of hours in important matters where time is an essential factor. Modern business demands not only accuracy but speed.

We have found that the letter is not as economical as we once supposed. The stationery costs something and the postage stamp increases the total somewhat. Then there is the wear and tear of the typewriter, the ribbon, the ink, and so on; all of which add their share to the final expenditure. Having analyzed these facts, business men are beginning to use telegraph service in a larger way and for more diversified purposes that were unheard of only a few years ago.

The telegram is given priority over other forms of communication and when a business man arrives at his desk in the morning, he will generally find his telegrams lying on top of his mail. One efficiency expert fig-

ured that in his firm, where the telegram was used only for emergency purposes and the mail was employed to serve as the principal means of correspondence, the firm lost the benefit of one hundred additional business days each year. In using a letter as a means of communication the transaction to which it relates is dying while the letter is in transit; the same transaction dies again when the answer is traveling back by mail. These two dead periods might be avoided by using the telegraph.

A further benefit of wire communication is that the telegraphic message generally goes direct to the right man and compels his immediate attention whereas a letter is perhaps filtered through a whole organization and is handled by one clerk after another.

One of the greatest advances in the use of the telegraph is in its utilization as a selling medium. Two large concerns in Chicago were in competition for business in a far Western state. One made use of the telegraph and had closed most of its contracts before the competitor's letters had got out of Illinois. The same concern that won this contract requires each of its sixty or more salesmen on the road to send his daily report to the head office in Chicago by day letter. Every morning each salesman receives a reply giving him market conditions, instructions and an encouraging word to help him along in his work. Although at a distance from headquarters the fellow in the field knows that his performance is being closely followed.

As to the cost of making sales by telegraph, this, of course, varies with the product sold and the skill displayed by the salesman in wording his message. One shoe manufacturer in New England wishing to clean out a stock of slippers, sent two hundred and fifty telegrams, costing one hundred sixty dollars, and disposed of the goods at a selling expense of only one per cent. A large company in Baltimore invested thirty dollars in night letters and disposed of six thousand dollars' worth of olive oil, at a selling cost of one-half of one per cent. A Philadelphia drug house spent three thousand dollars on a telegraphic campaign extending over several days, and found the result so satisfactory that the plan was adopted as a periodic feature. An Illinois manufacturer sent one hundred telegrams, netting forty-six answers, out of which there resulted thirty-two orders. The average expense of each order was eighty-eight cents, compared with a cost of five dollars for each such order secured by methods used in the past.

Down in Oklahoma, a small town was in need of pumping equipment. A number of manufacturers were hot after the business. One of the concerns wired several cities where their products were in operation, asking them to send a day letter to the town board in Oklahoma, at the company's expense, stating whether the concern was wholly reliable. Twelve telegrams were received by the board the next day and the enterprising manufacturer landed the contract.

An unusual use of the telegraph was made by a company that was unfortunate enough to get into straightened circumstances owing to slow collections. This corporation was on the verge of making an assignment when in desperation the management decided to try a file of night letters as a last resort, in an effort to scare up some business. Fifty such telegrams were sent to possible customers and these brought in orders amounting to six thousand dollars, which were hypothecated at a bank, enabling the company to obtain sufficient funds for immediate needs, and thus secure a new lease of life.

One of the most effective uses of the telegraph is for the purpose of collecting difficult accounts. Because of the importance attached to a telegram, slow-paying customers will

heed such a message requesting money, when a collection letter would be thrown into the waste-basket. There is a forcefulness and urgency about the telegraphed communication that impels immediate action. One company in Tennessee decided to use the telegraph on parties where every possible method had been exhausted in attempts to get a reply. Wired messages immediately brought letters promising settlement on specified dates, and there were checks to settle accounts that dated back two to three years. An up-to-date company in Cincinnati handles all delinquent accounts by mail correspondence up to a certain period, and when this proves unavailing, the telegraph is employed. This latter method results in the prompt collection of two-thirds of the cases.

An original use of the telegraph was made recently by a Pacific Coast Hotel. This hostelry sent one hundred night letters to prospective out-of-town visitors to an annual convention that was held, soliciting their patronage. As an added inducement, they inserted in the message—"This telegram good for your taxi fare from depot or dock to hotel." As a result of these telegrams, costing twenty-six dollars, there were sixty reservations. One reservation alone, covering a party of eight, more than paid for all the wires that were sent. Quite a few of the telegrams were turned in by the taxi drivers.

A project of some magnitude was carried out by a large Philadelphia Department Store not so long ago. The establishment had been considerably altered, and just prior to the opening of the enlarged store, the merchant arranged for the transmission of thirty-three thousand night letters inviting possible customers to attend the opening. The response was so satisfactory that the store was crowded the entire week. The messages cost the concern six or seven thousand dollars, but the returns more than justified the expense incurred.

W. A. MOORE

A Bit of Little-Known History

The Western Union Telegraph Company was indirectly responsible for the purchase of Alaska by the United States. A Mr. Hiram Sibley and his son had gone to St. Petersburg to negotiate with the Russian Premier, Gotchakoff, the possibility of

connecting Russia with America by a line across the Behring Straits and Siberia. In discussing the matter, Mr. Sibley senior stated to Gotchakoff that the Hudson Bay Co. would probably mulct the Western Union some five or six million dollars to allow them to cross their territory while the Canadian Government authorities would probably prove generous. To this Gotchakoff remarked, "Why, we would sell you Alaska for very nearly that price!" Mr. Sibley lost no time in communicating what he had heard to our minister in St. Petersburg, General Clay, who in turn quickly informed President Pierce in Washington. The matter ended with the purchase of Alaska by the United States. As a matter of fact, Mr. Sibley abandoned negotiating the Trans-Siberian line with the Russian Government owing to letters which he received giving the news that a vessel (ultimately the "Great Eastern") could be built of sufficient size to lay a cable under the Atlantic.

Do You Know that:—

By calling any Western Union Telegraph Office on the telephone and asking for the services of a messenger boy you can:—

- 1.—Have a package or parcel taken by boy to any distant place and have it delivered?
- 2.—Have a careful, courteous boy take the dog for a walk, or watch the baby?
- 3.—Have a careful, intelligent boy come to your office and take care of all phone calls, visitors, etc., while you are out?
- 4.—Have anything delivered to any part of the city?
- 5.—Have any kind of an errand done from arranging for steamship tickets to buying meat for the evening dinner?
- 6.—Have practically everything done or attended to, when you are too busy, or cannot be there?

This special messenger service is a mighty convenient thing to remember.

* * *

"Stringing Him"

"My wife tells me that she is all unstrung. What shall I do?"

"Send her a wire."

—Toronto Goblin



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VOLUME I,
No. 2

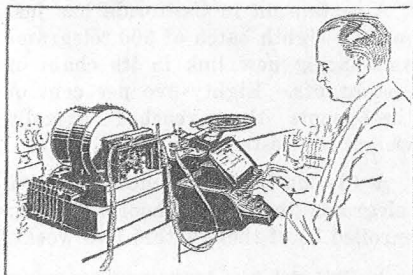
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May, 1925

How Cablegrams Are Sent and Received

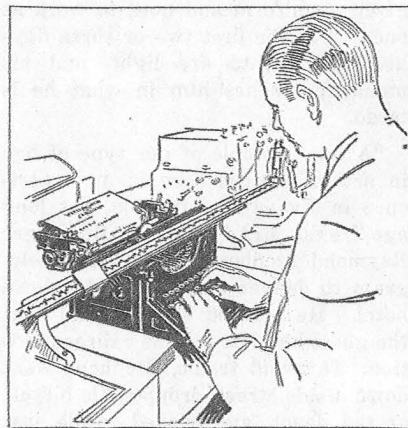
Ask the average man what he knows about cablegrams, and he will probably reply that they cost like the deuce, or that a fellow moves a telegraph key over here and the man at the other end deciphers, the message by watching a flickering light in a mirror, or something like that.

The correct answers are quite surprising; a cablegram can be sent from New York to Great Britain and Ireland for as little as five cents a word; and all cablegrams are sent by automatic devices as pictured below.



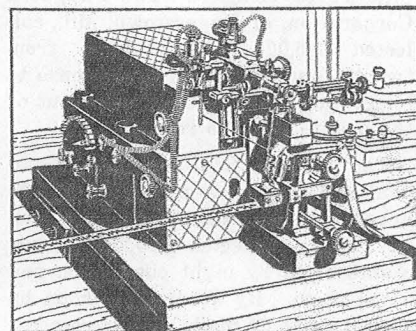
This shows a cablegram being prepared for transmission. A paper strip, perforated by operation of the typewriter keyboard, is then passed through the automatic transmitter at the left. The holes in the tape correspond to the dots and dashes which are transmitted directly from the tape into the cable. Almost instantly the

signals are recorded on a tape at the distant end of the cable. Cablegrams are regularly sent from New York to London and an answer received in less than four minutes. As many as four cablegrams may be sent and received at the same time over the same cable!

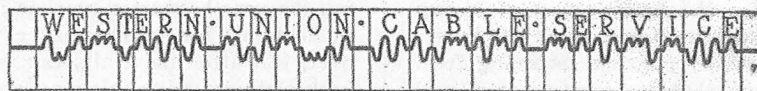


This shows a receiving operator at the distant end of the cable. A paper tape carrying a wavy line automatically passes from right to left before him at an average rate of 250 letters a minute. This wavy signal line is deciphered as readily as you or I would read a line of type and is then typewritten on the standard cablegram blank. It is probable that some

day the cablegrams will be automatically typewritten, thus doing away with the tape and the receiving operator.



This is a close-up picture of the siphon recorder—a delicate instrument which automatically writes the wavy signal on a piece of tape, shown below. The vertical divisions are drawn in so that you may see how each letter is deciphered. Dots are represented by the undulations above the center line; the dashes below. The siphon that writes the signal is formed by bending a hollow glass tube no larger than a hair. This glass pen is moved by tiny currents sent into the distant end of the cable. As low as eight or ten volts will operate a cable. Contrast this with the voltage used on your radio set.



Original photographs, or electros of above illustrations, are available without charge.

Dots and Dashes Make the Slow Payer Loosen Up

The telegram is an extra weapon in the hands of the collection manager in getting remittance from slow-pay customers and in raising money on

bad debts. As in the case of sales the telegram gets results often because it gets preferred attention. The brevity and connotation of urgency suggests immediate action. It seems that the creditor means business.

The Western Union has worked out

a number of samples and suggested wordings for use in connection with collections by telegraph, including the following:

You have probably overlooked outstanding account. Kindly favor with remittance.

Account overdue. Unless receive prompt remittance collection proceedings will be instituted.

Your account long past due. Please remit at once.

Please remit for account at once. Imperative need. Thank you.

In order to clear our books kindly send check.

Very important that we receive remittance by January first. Answer.

Your account past due. Please send check without further delay.

The Boston office of the Goodyear Rubber & Tire Company report success with the telegraph in collections, using it on slow accounts, and stating that it carries an unusual punch in this work; they are making a regular practice of using it. The Pangborn Corporation, of Hagerstown, Md., collected \$45,000 in one week from twenty-four customers in response to telegrams. Only one customer out of the group failed to respond.

The Herbert Specialty Mfg. Company of Chicago, wanted to get \$5,000 in cash not later than Wednesday, and on Monday selected \$10,200 in accounts owed by eight customers, and wired them. By Wednesday noon by special delivery mail they had received checks totalling \$9,600. Many similar instances are on file.

D. F. Sheffield, credit manager of Chas. Goggan & Bro., of Houston, Tex., reports that after appealing to quite a number of slow customers and frequently threatening suit without results, a list of one hundred hard accounts was selected and a wire sent to each requesting settlement. More than ninety either sent a payment immediately or made a definite promise.

From "Personal Efficiency," February 1925.

In the Good Old Days!

In the bankerless twelfth century, so great was the difficulty of conveyance for the transmitting of money from Spain to Rome, which was generally done by pilgrims returning from Santiago, that for every ounce of gold brought safely to the treasury of St. Peter's special privileges were granted to the bearer by the Roman pontiff.

From an Old Book

Today how different! Sending money by telegraph has become an accepted practice in business and by individuals. Money, to the value of hundreds of millions of dollars, is transmitted every year by telegraph money orders.

Any amount can be sent thousands of miles and delivered within an hour to the distant point, at a moderate cost. The smallest recorded amount transferred was two cents, telegraphed by an ardent lover to the postmaster in a distant city in payment of postage due on a letter from his sweetheart. As much as \$140,000 has been transferred at one time and sums of \$10,000 are daily speeded to their destination by telegraph.

A "Message to Garcia" Everyday

Whether it is rescuing fair ladies from mice or delivering a death message in a storm, the bedrock rule of telegraph service is "Get the thing done." It is astonishing that the boys have achieved such a high level of performance, considering that the service is not a trained one. There is no school or apprentice corps for messengers. A boy comes on today, is given a uniform and goes to work at once. For the first two or three days his assignments are light, and his manager coaches him in what he is to do.

"A fine example of our type of boy in action may be seen in an experience in Evansville, Indiana, not long ago," said Mr. Fowler. "Messenger Raymond Stephens was given a telegram to deliver to a guest at a local hotel. He learned at the hotel that the guest had left for the railroad station. To avoid traffic, Stephens went down a side street, dropped his bicycle at the depot, and rushed inside just as the train was slowly puffing out. The gate had closed and in front of it was a hilarious crowd of students.

"To get through that mob and past the closed gate and catch an already-departing train would have looked hopeless to most people, but not so to Stephens.

"'Gangway! Gangway!' he cried, charging through the crowd. Reaching the gate he wasted no time in argument with the gateman. He climbed over, ran after the train, caught the back platform, paged his man, and delivered the telegram, dropping off at a crossing stop a mile and a half out."

American Magazine

From a Business Man's Notebook

A clothing store in South Dakota orders goods by telegraph; says manufacturers give such orders preferen-

tial treatment and goods are on the shelves four days earlier than if ordered by mail.

Another clothing store in California sent city telegrams to business and professional men inviting inspection new spring models. Direct results good but greater benefits from this unique type of advertising.

Again in California exclusive ladies' shop sent 444 city telegrams at cost of \$106.54. Traced \$1,125 sales.

Shoe store in New York sent 28 telegrams; received 15 replies; developed \$16,000 sales.

Paint store in New York sent 145 night letters; sold \$5,500 at cost of less than 1%. (If paint can do it, why can't I?)

A skeptical jeweler in Atlanta tried out the plan of selling by telegraph. Five telegrams brought him \$1,000 of business, some from new customers.

In Spokane, Washington, 25 telegrams, costing \$15.60, sold seven lots and two houses.

A leather dealer sent 15 telegrams; received 5 orders.

A Florida book store welcomes newcomers to the city by telegraph and is repaid for the courtesy by fat orders. (I understand that city telegrams cost 24 cents.)

A restaurant in California has just sent its eighth batch of 500 telegrams announcing new link in its chain of restaurants. Eighty-five per cent of the people thus reached actually visited the restaurant.

A Florida business school sent 182 telegrams to High School students: enrolled 20 of them within two weeks.

A Philadelphia insurance company sent night letters to delinquent policy holders with fine results.

A California automobile dealer invited 1,500 people by telegraph to view new model. More comments on this unique advertising than he had heard in his 15 years' sales work.

An Oregon advertising agent mailed to 800 prospects a ready-to-sign telegram of acceptance of an offer and netted \$1,000 from this unique method of solicitation.

A Mississippi lumber company sent nine day letters; got \$2,000 in orders.

A California paper company can trace \$75,000 in orders from 2,000 telegrams at sales cost of less than 1%.



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June, 1925

How Telegraph Messages Are Sent and Received

Where's that metallic "click! click-click! click!" of the old telegraph sounder? Without having been conscious of it, it's been a long while since you've really heard a telegraph instrument, isn't it? However, you need not feel that is a reflection on your powers of observation, for, as a matter of fact, the key and sounder, and the art of "pounding brass," as the old telegraphers say, are rapidly being superseded, except in railroad offices. Mr. Average Citizen's reaction to this is, "Well, how in the Sam Hill are telegrams sent, then?" And thereby hangs a tale.



Today messages are sent by an operator seated before a machine that resembles a typewriter as illustrated above. As she types the message on the keyboard the machine automatically punches holes in a tape, each letter having a certain distinct group of holes. This tape, a sample of which is shown below, runs through a transmitter at the side of the sending machine which automatically interprets the holes into electrical impulses that flash over the wire.



At the receiving end, these electrical impulses are automatically translated into the proper letters by an automatic typewriter that actually prints the message on a telegraph blank as in the illustration below, or on a paper tape that is pasted on the blank.



The only time the human element enters into the receiving of a telegram is when a new blank is put in the machine or when the tape is pasted. It is probable that some day the tape method of receiving telegrams will be used entirely and that the message will be pasted into proper paragraphs on the regular blank or, on special occasions, on a decorated blank of the type now so popular at Christmas, Valentine's Day and Easter.

He Must Be!

"The stingiest man I ever saw," said the manager of the local telegraph office, "came into the office during the eclipse and wanted to have a telegram sent at once at night rates."

Correct Time from Washington

Since the general adoption of standard time, the time of noon by the 75th meridian, time has been sent out from the Naval Observatory at Washington. A few minutes before noon the transmitter is compared with the standard clock on a chronograph and the amount of its error determined. It is then set exactly right by gently touching the pendulum with the finger, making the clock gain or lose, as is necessary, by accelerating or retarding the pendulum. At 5 minutes and 15 seconds before 12 o'clock noon everything being in readiness, the transmitter is switched in and the signals are transmitted to all parts of the country, being heard in every telegraph office through which they pass. The small toothed wheel, which omits the 29th and 55th to 59th (inclusive), seconds each minute, is in operation until 11-59-49 A.M., which is the last signal by it. Then to give opportunity for switching in clock circuits the clock switch is moved to the other point and no more signals go out until the instant of noon, when a signal lasting for about a full second is sent. This long signal is necessary to insure the working of the electro-magnets which correct the clocks. While the signals are leaving the Observatory, both the transmitter and the standard clocks are recording their beats upon a chronograph, a record which is preserved so that at any future time the error of the signal may be measured. Thus, every day at noon, the clocks in the government offices are set to accurate time, the numerous offices of the Western Union Telegraph Co. are furnished correct time, and many thousands of miles of railways are given the signal over their lines. The

whole operation is done automatically, except the closing of the circuits, which is performed by the officer in charge of the service.

The system is capable of indefinite extension, for it is only necessary to multiply the well-known devices used for repeating telegraphic messages to accomplish it. Clocks in San Francisco may be set from Washington, and the error due to the time lost in the transmission of the signal will be less than one-fifth of a second. In effect, by the setting of a clock, the stroke of a bell or the sound of a telegraphic instrument, the true time is ascertained with as much exactness as if the standard observatory clock were itself at each and all of the stations where the signals are received. The work would be limited to that done in Washington but for the co-operation of the Western Union Telegraph Co. Each day this company suspends its private business for the time used in transmitting the signals, and allows the Observatory the free use of its great facilities.

Buying By Telegraph Profitable

Trade follows lines of least resistance. Mr. and Mrs. Jones, particularly Mrs. Jones, who does 75% of retail buying, prefer to shop where prices are right and real personal service on tap.

Service means willingness to furnish exactly what is wanted promptly. Because of high wages, good roads, and national advertising, many customers find it easier to spend money away from home. Yet the wideawake retailer need have no fear of competition.

Universities of Business throughout the country find rates of turnover for certain retailers average less than half of those enjoyed by merchants in the larger cities. More than is realized, speed of turnover depends upon method of buying.

These universities are teaching the business men of tomorrow that, between salesman's trips, the daily replenishing of stock by telegraph and express or parcel post is more profitable than trying to anticipate demand and buying by mail, because:

- 1st—Turnover is quicker.
- 2nd—Stock is fresher.
- 3rd—Greater variety of stock for the same money.
- 4th—Because of 2nd and 3rd items, customers are better satisfied and patronage is enlarged.
- 5th—No customer need be dissatis-

fied and go to a competitor—telegraph will get the goods in the quickest possible time and get quick shipment by the wholesaler and manufacturer.

6th—Buying small quantities quickly results in no dead stocks, thus saves losses due to sacrifice sales.

7th—Problem of financing business reduced to a minimum.

8th—No cause to turn away patrons with the remark, "Sorry we haven't got it," but retain them with an offer to telegraph for the goods required.

Retailers of today who have adopted daily telegraph buying not only keep trade at home, but are building a more satisfied patronage, doing a greater volume with a minimum overhead, and making profits on every sale.

The "Jopptomist", published by the Joplin, Mo., Chamber of Commerce.

Historical Sidelights

Mr. Hiram W. Sibley, a gentleman of over eighty, recently related some interesting facts concerning the early days and history of the Western Union Telegraph Company.

These facts were passed on to him by his father, Hiram Sibley, who was a close associate of Mr. Morse.

In the early fifties, when slavery was still an institution, and young Mr. Morse's invention, the talk of the country, Mr. Hiram Sibley went to Washington where a relation by marriage, Ezra Cornell, introduced him to Mr. Morse who at that time was attempting to raise capital with which to develop his new invention.

Mr. Sibley and Mr. Morse soon decided to enter into partnership, Mr. Sibley to manage the financing of the new organization, and Mr. Morse to handle the technical end. After discussion, they came to a decision to build their first experimental line between Baltimore and Washington, and Mr. Cornell was awarded the contract of digging the trench to take the line between these two cities. Remember that at this time they were still groping in the dark trying to discover the best way to handle these lines, so after commencing the work as outlined, they were staggered by the time it would take. An acquaintance suggested to the partners that a better way would seem to be to fasten the lines along the trees on the roadside. They acted upon this suggestion and the line was completed.

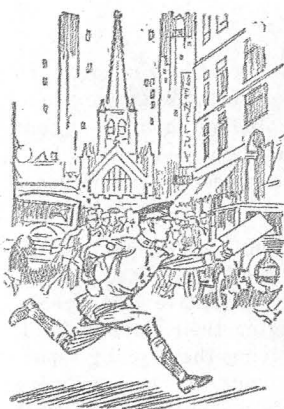
Some time later Mr. Morse and Mr. Sibley decided to attempt to run a single circuit from the east to the west. They raised the \$400,000 needed for this by a loan from the Government which was to be paid off by the Government using in the cost of telegrams every year a substantial amount of the money borrowed. At the close of the Civil War the Government informed Mr. Sibley that such was the worth of the telegraph that they would gladly have paid many times the amount of their annual bill for the inestimable benefits that the Western Union had conferred upon the country. As a side line to this it might be mentioned that due to the service of the Western Union, California was kept in the Union.

The greatest difficulty in running the line to the west in those days was experienced by reason of the Indians cutting down the poles which crossed their territory. Mr. Sibley was told that there was only one man who could deal with the matter, namely, John D. Caton. After a conference, Mr. Caton went west, assembled the Indian chiefs along the territory where the line was to run and informed them that when they heard the hum of the wires it was the voice of the Great Spirit speaking to them. This piece of information resulted in the Indians not only leaving the poles and wires untouched, but having delegations of braves carefully guarding them against outside interference. This line was started both from the east and the west and was completed in four months, the meeting place being Omaha.

As a matter of interest it might be well to mention that in the early days a message from Washington to New York cost a dollar (a great deal of money in those days). Today a 10-word message from Washington to New York costs only 36 cents.

Telegraph Wires

To carry on the telegraph system of the United States 1,500,000 miles of wire are required. Next in turn comes Russia with about one-third this mileage. Germany is third and France fourth. Canada, despite its great size, has but 230,000 miles of wire, or about one-half as much as France. The United Kingdom is comparatively poorly off, with 265,000 miles of wire, while British India is somewhat better equipped.



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July, 1925

Eight Telegrams Sent at the Same Time Over One Wire!

At this statement, the layman instinctively throws up his hands and says, "Wonderful, but too deep for me!" As a matter of fact the principles are simple and easily understood.

For example, a single copper wire extends between Chicago and New York. At each end of the wire are

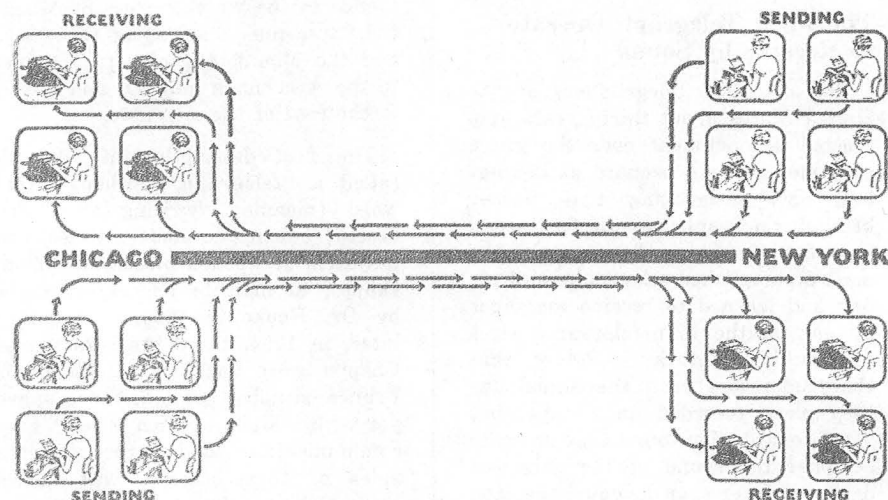
from operator B in New York to printer B in Chicago; then C; then D—then back to A again and so on. This rotation is accomplished by means of two revolving wheels called distributors, one in New York, the other in Chicago. These wheels revolve at exactly the same speed and are so controlled that when the wheel at New York has electrically connected the wire to New York's A operator, the wheel at Chicago re-

C operator: WILL MEET YOU
D operator: LOVE FROM ALL

As each operator begins to send, the letters are picked up by the distributors and sent over the line in the following order: CSWLOHIOMI-LVEPLE ATMFTEER NEOO TMND COYAEZOL EUL N. The distributor at Chicago picks up these letters as fast as they come in and electrically sorts them out to the different automatic typewriters in one, two, three order. As a result, the four typewriter-printers at Chicago will turn out four perfect messages just as they started from New York, the actual transmission taking less than three seconds for all four messages. If you were observing the operators, you would see that they were typewriting continuously. The distributor interrupts the circuit so quickly that the flow of words is practically unbroken.

By electrically "balancing" the line, four operators at Chicago are also enabled to send simultaneously to the operators of four automatic printer machines in New York City. Thus, as can be seen from the illustration, we have a total of 16 operators, four sending and four receiving from each direction—all on one small copper wire! What a wonderful asset to the American business man!—this capacity for communication, this certainty of operation, this speed that annihilates distance and enables a man to finish today what he began today.

The process of electrical balancing is rather technical but is accomplished by making the Chicago receiving apparatus operate independently of the Chicago transmitting apparatus, precisely as is done in radio when the broadcast listener tunes out his local stations. The wonderful difference is that, in automatic telegraphy, the



four operators pounding keyboards that perforate tape which is automatically translated into electrical impulses. At each end of this tiny wire there are also four typewriter-like machines called printers that receive these electrical impulses and change them automatically into the proper letters and then type these letters on a blank or paper tape. The receiving operators do nothing but feed the yellow blanks to the machine.

Now, this is the way it works: The electrical impulses travel over the wire in rotation—operator A in New York to printer A in Chicago: next

ceives these electrical impulses and deposits them neatly into the automatic typewriter A at Chicago. During the next quarter-revolution of the two wheels the B operator at New York sends the impulses into the B typewriter at Chicago. Then, on the next quarter-revolution the C operators at New York send to the C typewriters at Chicago, and so on.

This procedure is easily illustrated by taking, for instance, four messages at New York, each operator having one message to send to Chicago.

A operator: COME AT ONCE
B operator: SHIP TEN DOZEN

same group of instruments is used both for sending and receiving—and at the same time!

From a Business Man's Notebook

A Cincinnati trunk manufacturer sent 114 sales telegrams that impressed new prospects. One order alone more than paid for cost of the telegrams.

A seed firm in New Orleans sent 22 night letters at cost of \$7.70; received 11 orders totalling \$1,000.

A nationally known drug manufacturer in New York sent a sales telegram to every druggist in the United States. Hundreds of entirely new prospects responded by telegraph with orders.

An association of music teachers in Texas deluged the state representatives with telegrams urging support of a certain band law. The bill passed.

An Ohio manufacturer of art goods sent 63 telegrams to slow papers; received cash payments totalling \$2,537 and notes for \$1,558. (My credit man gets this one.)

An Alabama men's clothing store told 80 customers by night letter of certain bargains. 60 customers came to store; 3 of them within 30 minutes after delivery of telegrams began. This advertising cost less than 1% of the resulting sales.

A Virginia Chamber of Commerce sent telegrams to directors who had been lax in attendance. The telegrams delivered at supper time, brought 34 out of the 36 directors to the meeting. (The telegraph certainly does get results!)

Collecting Money

The Credit Guide states: "For some time past we have been using telegraph service freely, not only for gathering and distributing credit information but also for collecting delinquent accounts. It is true that the substitution of the telegraph for the mail has added somewhat to our overhead, but we view this as an investment toward an improved and more efficient service for our members and ourselves. Not only have we become thoroughly converted to the telegraph idea, but thousands of our members are resorting to it upon our advice in connection with transactions involving credit and other matters of a commercial nature where the element of time and the necessity of effective action are vital factors."

"The telegraph is often used to advantage in collection work and credits in securing credit information about prospective customers transmitting legal notices, etc. The use of the force of telegraphy in making collections offers many possibilities to the ingenious credit and collection man."



The First Telegraph Operator to Receive by Sound

The old time telegraphers of the United States about thirty years ago, erected a monument over the grave of James Francis Leonard at Lexington, Ky., designating that former brilliant telegrapher as the first sound operator. Mr. Leonard was one of the most accomplished telegraphers of his day and learned to receive messages by ear on the first telegraph wires erected in Kentucky. Before that time, operators read the signals as they were recorded on a tape, but Mr. Leonard soon found that he could decipher the sound of the dots and dashes quicker than he could the tape record.

The Dawn of Telegraphic Communication

So far as we have any knowledge, the earliest methods of signalling, all of which have come to be classed under the general term of telegraphs, were of a very simple character. Among savage tribes, and, indeed, largely among more civilized races, these signals were by fires. The "sign of fire" is alluded to in the Old Testament by Jeremiah. As civilization advanced, torches, flags, birds, drums, trumpets and other modes of

conveying the vocabulary of signalled thought and information, were employed. The Indian mounds on our Western prairies give evidence of having been beacon bearers in the years gone by.

The unfolding intelligence of the age revealed itself, also, in so arranging the more primitive fire-signals, that, by changing their size, or dividing or multiplying them, or by separating their flame, it became very easily possible to spell out distinct words. This was brought into such perfection in the third century before the Christian era, that, by the combined use of torches and fires, the Roman generals were able to communicate their plans to each other with much minuteness and success. Mr. Schaffner, in his Manual, has with his accustomed industry, and in a most interesting manner, entered very largely into the history of the signal service of this remote period. He gives, as an illustration of its capacity, as early as 1084 B. C., the announcement thereby to the Palace at Rome of the fall of Troy, by beacon lights from Ida to Lemnos; from thence to Athos, Mount of Jove; thence to the watch-towers of Macistus, Messapius the crag of Cithaeron, and the Mount Aegioplanctus; thence to the Arachnaen heights, and finally to the roof of the Atreidae.

The first description of what is called a "telegraph," although that word (meaning "writing at a distance") belongs to modern times, was a system of wooden blocks of various shapes, to indicate letters, arranged by Dr. Hooke in 1684. A century later, in 1794, three brothers named Chappe were confined in schools in France, situated some distance apart, yet within sight of each other. Free communication, under the rigorous rules of these schools was denied them. They yearned for intercourse. Finally affection suggested a plan by which a pivoted beam could be used to convey the signs of letters, by pointing it in different directions. The variety of signals was enlarged by adding small movable beams at the end of the main beam. In this way these brothers arranged 192 different signals. After their release, the system they had devised for communication with each other was exhibited to the government of France, and adopted for a service of signals. These were continued for a number of years.

"The Telegraph in America."



The NEWS SHEET-

Dots and Dashes from Western Union



VOLUME I,
No. 5.

Distributed occasionally to those who may be able to find a few items of sufficient interest to embellish general articles or to serve as fill-ins. If additional information on any item is desired, we shall be glad to give it if it is available, or if you wish to ask about subjects not mentioned herein please feel free to do so. Photographs or electros of illustrations sent free. WESTERN UNION TELEGRAPH CO., 195 Broadway, New York City.

August, 1925

"Cashing In" on the Golden Rule

The Manufacturer's Record of Baltimore believes in giving its readers a true insight into all matters affecting public welfare. In this case, it is about a little-known practice of one of the telegraph companies—that of protecting the interests of its patrons in the matter of tolls, as outlined in the letter below.

"You filed with us June 18th a day letter of sixteen words, destined to Daytona, Fla., on which the day letter rate was \$1.08. As a fast telegram of that length would cost only \$1.02, we took the liberty of changing the classification and transmitted the message as a telegram, effecting a saving for you of six cents, and giving you faster service. It is standard policy to serve the interests of the patron."

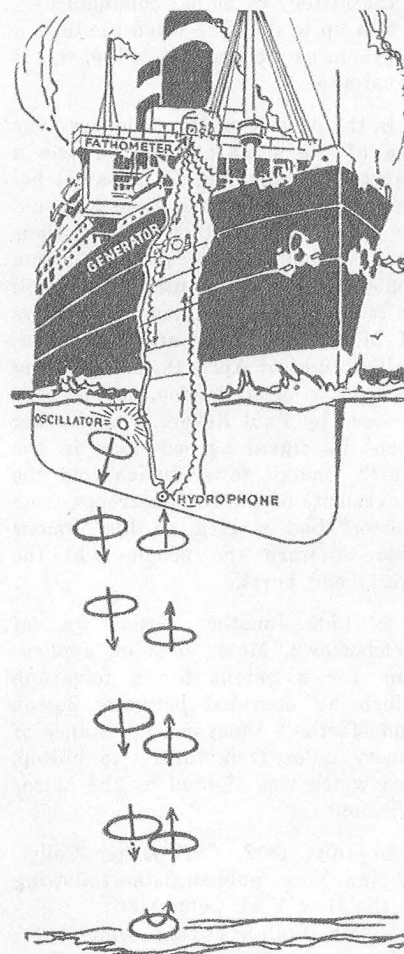
The Manufacturer's Record commented as follows:

"Here is a case where the telegraph company, in order to serve one of its customers, changed a day letter telegram into a fast message, the latter in this case costing a little less than the former, thus serving the sender of the message by more rapid delivery, and a saving of a few cents to the loss of the Company.

"A spirit of service such as this, if it permeated all the corporations of this country would revolutionize the feeling and the relations between the public and corporations. May this policy become the universal policy of all business interests! It is a policy which is really based on the Golden Rule, 'Do unto others as you would that they should do unto you.'"

Ocean Echoes Bring Added Safety to Ships

"Nine fathom, a half—ten fathom, a quarter." The chanting cry of the old leadsman is rapidly fading into one of the traditions of the sea with



the time-honored routine of "heaving the lead"—all because some man with a scientific bent happened to remem-

ber that every sound produces an echo.

The echo is put to work by the fathometer—a new instrument that automatically registers the depth of water over which a ship passes. The first commercial vessel to be equipped with it is the Western Union cable ship, "Cyrus Field," a powerful "watch-dog" of the undersea lines of world-wide communication.

The illustration shows how the fathometer works. The generator produces electric currents which pass to the oscillator on the outside of the lower part of the hull where the electric pulsations are transformed into a distinct musical note. This sound travels to the bottom of the sea under the ship, and rebounds in the form of an echo. The hydrophone catches this echo and electrically carries it to the fathometer on the navigator's bridge, where accurate measurements are made automatically of the time interval between the sound and its echo and this time shown in terms of fathoms on the dial of the fathometer.

The outside diameter of a deep sea cable is only about one inch; the copper core that carries the electrical impulses is about the size of a lead pencil. When the cable is laid, the exact location and depth are recorded. Knowing this depth, it is much easier with the fathometer to lay and pick up a cable than by the old method. More cables and faster cables are being laid every year to meet the world's demand for fast and dependable communication, and it is here that the fathometer will make a special place for itself.

A Typewriter With the Keys 7,400 Miles from the Type Bars

What is believed to be the world's longest direct or through-working telegraph circuit was recently operated by the Western Union Telegraph Company between London, England, and San Francisco, California. This record breaking circuit, 7,400 miles in length, was occasioned by the opening of California's Diamond Jubilee on September 5th at which time the Lord Mayor of London exchanged messages of greeting with the Mayor of San Francisco and the chimes of Big Ben in London were reproduced in San Francisco.

Not only was this "super circuit" remarkable for its tremendous length but also because of the fact that it was automatically operated with typewriters or printers now used daily on telegraph circuits between large cities.

The operation of this "super circuit" can be likened to a typewriter where the type bars were in San Francisco and the keyboard in London. As the operator in London typed his message on the keyboard, the keys, instead of registering on a roll of paper printed the message automatically and instantaneously in San Francisco.

Although twenty-two automatic repeaters were used along the circuit they functioned only as "boosters" to the message. The time of transmission was so unbelievably swift over the circuit that as the operator in London pressed the letter "A" on the typewriter, for instance, the letter "A" was printed in San Francisco before the operator in London had time to remove his finger from the key of the typewriter.

A scientific feature of this "super circuit" is that distance offers no obstacle to its successful operation. If a circuit were available it could be extended around the circumference of the earth, a distance of 25,000 miles, and work as perfectly as it did between London and San Francisco.

The amazing scientific features of the "super circuit," however, are overshadowed by the fact that its application presages the time when any city of America can be brought into direct communication with the cities of Europe, thereby making a neighborhood of the globe and next door neighbors of all its people.

Manufacturer of Dictating Machine Produces a New Cylinder for Recording Telegrams

Recognizing the fact that modern business is using the telegraph for every purpose, a manufacturer of dictating machines has put a new short cylinder on the market. The new cylinder is approximately three inches long and is made specifically for dictating telegrams. One or more messages up to the full length of the cylinder can be dictated and immediately taken off and transcribed, there being no lost time nor lost cylinder surface, as is possible with the usual six-inch cylinder that has been used.

The Dawn of Telegraphic Communication

Note: An article appeared in the July issue of the News Sheet outlining the very earliest attempts of man in originating signal communication. This article is a continuation, bringing the history of signal communication up to the time when the telegraph, as we know it today, was patented.

In the American Revolutionary War one of the signals employed was a flagstaff surmounted by a barrel beneath which a flag and a basket could be so changed in their combinations that a number of announcements could thus be communicated. It will be remembered, also, how the farmers of Middlesex, Essex and Worcester, on the night of April 18, 1775, sprang to arms to meet the foe, having been aroused by Paul Revere, who, having seen the signal agreed upon in the North Church tower which told the movements of the British troops from Boston, had started on his famous ride to warn the people that the storm had burst.

In 1800 Jonathan Grout, Jr., of Belchertown, Mass., filed an application for a patent for a telegraph which he operated between Boston and Martha's Vineyard, a distance of ninety miles from hilltop to hilltop, and which was sighted by the aid of telescopes.

In July, 1812, Christopher Colles, of New York, published the following in the New York Columbian:

"Mr. Colles, having completed his telegraphs, informs the public that their operations will be shown from the top of the Custom House on Tuesdays, Thurs-

days and Saturdays, from 4 to 6 in the afternoon, admittance 50c."

Mr. Colles issued an explanatory pamphlet in which he said:

"Eighty-four letters can be exhibited by this machine in five minutes to the distance of one telegraphic station averaged at ten miles and by the same proportion a distance of twenty-six hundred miles in fifteen minutes and twenty-eight seconds."

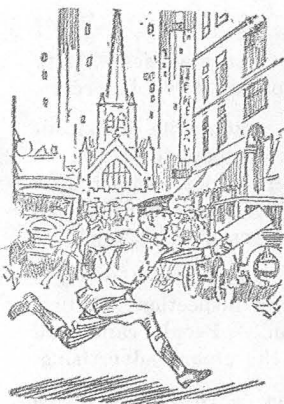
This, of course, was nothing but the already well-known European semaphore or visual signal. Colles worked his signals between New York and Sandy Hook for several years.

Incidentally, speaking of the semaphore or visual signal leads us to remark that the earliest system of telegraphy for signaling over long distances is said to have originated among the African negroes. The means used were telephonic and the signals were read by sound and not by the eye as in the case of the semaphore or other early signaling devices. The "elliembic," as the instrument is termed, has been in use from time immemorial in the Cameroons country on the west coast of Africa. By the sounds produced on striking it the natives carry on conversation at several miles distance. The noises are made to produce a language as intelligible as the human voice.

The period from 1800 to 1845 was one of intense activity on the part of the scientists in attempting to devise a means by which some of the newly discovered principles of electricity could be harnessed so as to give the rapidly growing world a means of ready and sure communication, which was beginning to be urgently needed. Both in Europe and America scientists had been at work and had discovered important principles of electrical circuits and grounds, of galvanic batteries, of magnetism and other minor details. As more and more of these principles were discovered it soon became evident that it needed only the perseverance and ability of a man to harness them together in order to produce the desired result—namely, a means of telegraphic communication.

It was in this period that Mr. Morse lived and he, together with all of the others, had been working toward the same end.

Excerpts from "Telegraph in America"



The NEWS SHEET-

Dots and Dashes from Western Union



VOLUME I,
No. 6

Distributed occasionally to those who may be able to find a few items of sufficient interest to embellish general articles or to serve as fill-ins. If additional information on any item is desired, we shall be glad to give it if it is available, or if you wish to ask about subjects not mentioned herein please feel free to do so. Photographs or electros of illustrations sent free. WESTERN UNION TELEGRAPH CO., 195 Broadway, New York City.

September,
1925

"and to those who make the wheels go 'round!"

The urge that drives us into the busy sequence of things from morn till night gives little time for graceful tributes to those who serve through our public utilities. We push the button; the light flashes on—of course! If there's standing room, we are soon home via the car line. (Why don't they put on more cars!) At home we hear that the telegraph office wants us on the telephone. (Why didn't the boy catch me at the office; that's right, I left early!) Fume and fuss as we will occasionally, we do realize that public utilities have an enviable record in delivering the goods. In one instance, this time a telegraph company, a heavily loaded steamship was unable to come into Miami harbor. The captain had no orders enabling him to leave the port, and no wireless. A representative of the steamship company asked if the telegraph office could deliver a message to the ship.

The telegram was accepted, delivered by messenger in a tug boat which finally located the ship some miles up the coast. The ship then proceeded to New Orleans, in accordance with orders in the telegram. That office manager may never have read about the message to Garcia, but he knew what service meant.

YOUTELER!

Dumb Dora: "Is that Western Union clock right, there?"

Storekeeper: "Lady, that clock has been right, there, for the last ten years."

"Shooting" Telegrams Beneath the Streets

Startling as it may seem, in the large cities telegrams are really "shot" under the streets at a speed of approximately a quarter of a mile a minute. This amazing speed is obtained by means of tubes operated by combined air pressure and vacuum. The telegrams flit through the



tube in receptacles, or carriers, somewhat like those seen in department stores.

These tubes run from the central telegraph office to branch offices and are used for receiving telegrams filed by the public at the branch offices and for delivering telegrams between the same points. With this pneumatic service the little yellow blanks are handled in a matter of seconds. Speeds generally average about 1,300

feet per minute. Most tubes are from 1,000 to 4,500 feet in length. The longest tube in service is 10,500 feet, running from the main operating room of the Western Union in New York City to the Flatiron Building. The illustration shows a section of the tube delivery department in the main cable office of the Western Union in New York City where cablegrams are received for all points of the world.

After all, what the telegraph company sells to the business man is dependable speed—the certainty that the telegram to buy or sell, or the longer detailed message will be delivered in a few minutes. Naturally, every device is used that will add speed—and the pneumatic tube is only one of them. Each carrier can be dispatched every 20 seconds, and with 8 telegrams in a carrier, the tube can be operated at a capacity of 1,440 telegrams an hour. When the yellow envelope brings you a telegram, note the time it was filed and the time it was received. The few minutes difference between the two times will frequently reflect the express speed of the pneumatic tube.

Working in conjunction with the pneumatic tubes are other devices—the key and sounder, the wonderful typewriter printer, the telephone—all combining to transmit telegraphic communications in the shortest possible time.

When Is a "Book" Not a Book?

"English 'as she is spoke' is sometimes responsible for embarrassing situations," remarked a merchant who had just moved to town. "The manager of the telegraph office had made an engagement to see me and at about the time set, a young fellow strolled

in with some opening remarks about having telephoned to me about a book. I get hot pretty quick, and was about to rake him fore and aft when a second glance at his card stopped me in time. He was selling 'books' all right, but the kind that brings in the money. He explained that 'books' was a term that just grew into use when a merchant wanted to send the same telegram to several distant wholesalers or to customers. 'Two telegrams,' he said, 'really make a book of messages, but ten thousand in one book is not unusual and we have had thirty thousand in one book—all of them telegrams announcing special bargains at the opening of a new store.'

Small Telegram Blanks for Notebooks

A maker of loose leaf books recently furnished with data sheets a set of telegram blanks $3\frac{3}{4}$ " x $6\frac{3}{4}$ " in size. It appears that the practice of having salesmen report daily by telegraph is growing rapidly, and in order to gauge the demand for these convenient size blanks, the maker is distributing them to leading stationery stores where they can be obtained free.

A Really True "Fish" Story

A local Manager of one of the Western Union offices was recently talking about the novel experiences of his messenger boys. Among other things, he said—

"Here's one today that's sure a new one on me. One of our boys was called to a residence by a lady, and on his arrival was handed two pans of frying fish right off the stove, to be delivered to some doctor who could not get home for supper. She asked the boy if he had a car to take them in. Since he had only his bicycle he could handle only one pan at a time, but at that he filled the need, and doubtless prevented one M.D. from going hungry that night."

Before Columnists Were Witty

In the late 1850's a newspaper columnist wrote, "London journalists have adopted the word 'telegram' to represent a telegraphic dispatch. Some such term was needed." Now "telegram" is the family name for several telegraphic services; the popular night letter, the economical night message for short communications, the day letter, and the high-speed full-rate service.

The Maker of the Jordan Motor Car Says:

"There was a time when people dreaded the receipt of a telegram. They thought somebody was dead.

"Now they're sure someone is alive.

"You know a man is going to read a telegram and read it before he does anything else in the world. As it lies on his desk it keeps slapping him in the face all day long.

"The story of creation was written in 600 words.

"And when you add up the cost of your own time and then double it for dictation and transcribing and a stenographer a letter costs more than a telegram.*

"We believe in selling in the telegraph way."

Edward S. Jordan

*Average of 69c for entire country.

(Editor)

The dynamic writer of the breezy "Playboy" advertisements practices what he preaches in the above tribute to the telegram. A list of the things he insists shall be done by telegraph includes the following: considerable correspondence with dealers; weekly reports from dealers and nearly all monthly orders from them; often telegraphs entire advertisement and instructions to many newspapers; often announces price changes, new models and publicity stories by telegraph.

From a Business Man's Notebook

(All Auto Business)

In sunny California, a dealer says it is not necessary to be three days by mail from the factory; he is only 20 minutes away by telegraph. Used to arrange for newspaper advertising by letter, but says loss in many ways was large. Now makes arrangements by telegraph. Takes monthly inventory of his territory by telegraph.

An Automobile Club in California sends out a "barrage" of Night Letters when a car is stolen.

A Florida tire dealer sent thirty telegrams; received \$4,000 in orders.

A California automobile dealer invited 1,500 people by telegraph to view new model. More comments on this unique advertising than he had heard in his 15 years' sales work.

A Minnesota dealer sent 150 Night Letters inviting inspection of new service station. People came and commented on the unique advertising.

In Oklahoma a dealer invested \$46.45 in collection telegrams that made slow payers come across with \$18,000. (No legal liability in dunning by telegraph.)

A dealer in Nebraska is convinced that the telegraph is helping him get and hold business that could not be controlled if he depended on the comparatively slow-traveling letter.

Another California dealer keeps up time payments on trucks by sending collection telegrams.

A Tennessee dealer tried selling by telegraph. Got eight new accounts first three days.

Brevity Plus Courtesy

"In 1924, the American public paid over a million dollars just to put one word in their telegrams—the word 'Please.' Not a bit too much for courtesy." (The National Park Bank of New York). The President of a well-known chain of cigar stores instilled courtesy into his clerks by telegraphing them this question: "Did you say 'Thank you!' to every customer today?"

ONE WORD ENOUGH

The young woman carefully wrote out her telegram and handed it across the counter.

"Seventy-five cents," said the clerk, giving the yellow slip a professional glance.

"Gracious!" the girl exclaimed. "Isn't that rather expensive?"

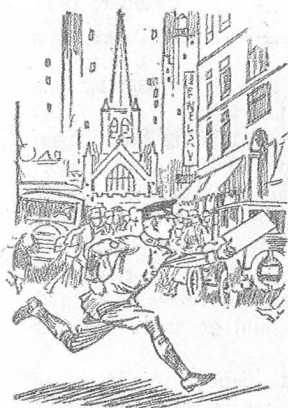
"Regular rate, Miss," the clerk informed her.

"Seventy-five cents for only one word?" asked the girl.

"Yes, ma'am. But of course you can send nine more words without it costing you any more," he pointed out.

She thought over this for a moment.

"No," she finally decided. "I've said 'Yes' once. Ten of them would look like I was too anxious.



The NEWS SHEET-

Dots and Dashes from Western Union



VOLUME I,
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October
1925

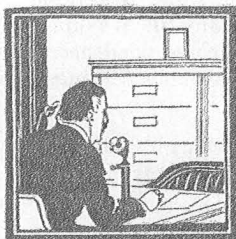
What Happens When You Lift Your Telephone Receiver and Ask for the Telegraph Office

(In One Act)

Prologue: Most people do not know just what happens when they send a telegram over the telephone. The following scenes depict some of the steps in the handling of a telegram.

Scene I.

Any place where there is a telephone.



Mr. Busyman picks up the receiver and asks for the telegraph company by name, or dials the number given in the directory.

Scene II.

Five seconds later—in the telephone receiving department of the telegraph office.



An experienced operator has answered Mr. Busyman and is taking his message on a noiseless typewriter as he dictates. The message will be repeated to Mr. Busyman when it is finished and the telegraph tolls will appear on his next telephone bill.

Scene III.

(After a lapse of a few seconds)



The message has been given to an operator of an automatic machine who prepares the message for transmission, and as she touches the keys of the typewriter-like machine, the telegram speeds to the distant city.

Briefly, the type keys punch holes, corresponding to an alphabetical code, in a paper tape. As it passes through the box-like instrument at the left, the holes are electrically interpreted into alphabetical signals.

Scene IV.

(Just a split second after Scene III)

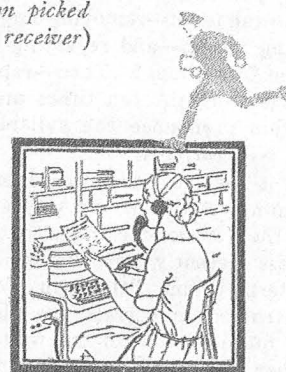


The message is being received at the distant end, and copied on the familiar yellow blank by an automatic typewriter.

Most people still think that telegrams are received by the Morse sounder. But today automatic receiving machines are used in practically all large centers, the sounder being in use only at smaller places.

Scene V.

(About ten or twelve minutes after Mr. Busyman picked up the receiver)



The receiving operator of the automatic typewriter has passed the message on. And by now a trained telephone operator is calling Mr. Busyman's correspondent on the telephone to dictate it to him, or a speedy messenger is on his way, one or the other method being used as the circumstances suggest.

End.

Note: This little play has taken the public by storm. It is being enacted nearly a million times a day in cities large and small.

Sports Writers!

Please Copy

Last year when that band of pigskin warriors out of the Kentucky hills swept college gridirons like wild fire, you scribes bore down heavily on their custom of opening a scrimmage with prayer. Sincere? Of course, and what "pep" it did give them!

Out in California and the middle western states they get their "pep" differently. Here has grown the novel practice of deluging the traveling home team with "pep" telegrams,

delivered in the dressing room. Not only the student body but merchants and civic associations join in this long distance cheering with such vim that the jinx of playing away from the home grounds seems to be laid for good, not only in football but in all sports. Imagine the "Mighty Casey" tensing himself to slam the hurtling spheroid! Would he have struck out? What would DeWolf Hopper now recite?—had mighty Casey first scanned a mass of yellow blanks urging him to drive 'em out for the sake of the old home town?

How Are Your Vowels and Consonants This Morning?

How would you like to begin the morning by dropping the lower jaw until you can insert two fingers between the teeth—removing fingers and closing mouth—and repeating the exercise four times? Then—repeat the sounds "ah-yah" ten times and after all this pronounce the syllables Tid, Din, Nil, Lir, Rit.

"Not for me," you would probably exclaim, yet this is the way students of the "voice-technique" training classes recently established by the Western Union Telegraph Company are trained in correct speaking and it is quite similar to the way that a teacher of singing would instruct her pupils.

If necessary, the students are instructed to remember that "three" is pronounced, "t-h-r-e-e" and not "t-r-e-e" and "yes" is pronounced "y-e-s" and not, "yeh" and "yep," and that "bird" is never pronounced "boird." Funny? Yes, when it is done in cold type, but people unconsciously slur words and inflections. Unconsciously too, all people react favorably to a pleasant, courteous voice, and with the tremendous increase in the public's tendency to save time by telephoning their messages to the telegraph office, pleasant voices are to this company a valuable asset.

"Meet Me at Nine, Love"

As told by a Messenger Boy

"Oh yes, I get caught on the train sometimes and have to go to the next stop but that's all a part of my job to get the message.

"I'm there to make it easy for the public that rides on trains to send messages about things they've forgotten to do, or just remembered they want to tell somebody about, and it's all a question of hurry, particularly

when the conductor shouts 'all aboard.'

"And they all get nervous and shaky—men and women—and often I have to write it for them. A lot of the messages are telling when they'll arrive or something about meeting them, and ninety-nine out of a hundred put 'love' at the end. There sure is a lot of love thought of on trains. Then often women have forgotten to turn off the water, or are worried for fear the cat hasn't been put out and they wire neighbors about that.

"Business men's telegrams about business are easy. They're getting to use more and more of them too. Often I get four or five from one man. Mostly they're all written out before I get there, for there are blanks in every Pullman car and all I have to do is figure the rate.

"Trouble about charges? Oh, sometimes, but then there's the rate book I always carry and that answers every question.

"One question though is asked all the time. 'When will it get there?' I can't promise, of course, but I tell them that so long as we can cable to London and get an answer in three minutes, it's a safe bet that a message given to me on the train will be on the wires in a few minutes after the train has pulled out, and will be delivered in half an hour anywhere in the little old U. S. A.

"Yes, I have to make speed and falling over suitcases sometimes makes it hard, but then people want to send messages and it's up to me to help 'em out."

A New Wrinkle in the Merchandising of Books

During the Civil War a man hung on the new fangled telegraph wires a pair of boots addressed to his son down the Potomac with "Fightin' Bob." His more enlightened grandson came into the telegraph office the other day and sent a copy of "The Purple Shoestring" to his girl a thousand miles away. She got the book through an arrangement made possible by the cooperation of the telegraph company and the American Booksellers Association, an organization similar to that of the florists. Flowers, books, candy—all delivered anywhere by telegraph! What next?

Carrying the Message To Ling Yung

A summer vacation, a poor memory, a Chinese laundry ticket, and a resourceful messenger recently

emphasized a service offered by one of our public utilities.

A gentleman, returning home from vacation, discovered that he had neglected to call for a package of laundry he had left with a certain Oriental whose address he did not recall. He did have an idea of how to reach the place, and his problem was to tell someone who could go there and get the package.

The puzzled owner of the poor memory finally wrote the manager of the telegraph office at the resort, gave a sketchy diagram of where he believed the Chinese laundry to be located, enclosed the identification ticket and a sufficient sum to cover the cost of the laundry work and the messenger errand service. In a few days he received the package by parcel post.

From a Business Man's Notebook

A leading insurance company stimulated agents by telegraph and broke all sales records.

The telegraph company is supplying free a sticker reading, "If it's speed you want, telegraph!" A lumber company in Washington uses it on their correspondence; says it almost invariably "brings home the bacon."

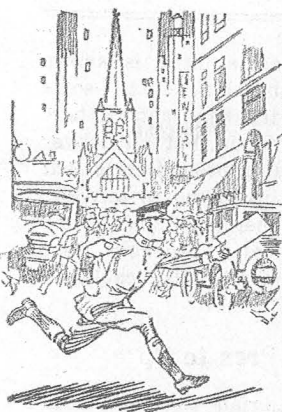
A Pittsburgh tailor reports 15% sales from telegrams to his customers. (A good tip for cloth manufacturers to reprint.)

Another Pittsburgh tailor sent ten telegrams at cost of only \$2.58; sold three \$100 suits. He intends to use the idea regularly.

A jeweler in the Tar Heel State holds customers by telegraphing New York for what he has not in stock. Goods arrive next day. This plan enables him to keep small stocks of slow moving items.

A Salt Lake City dealer in wooden ware sent telegrams to slow payers. Collections were made at cost of ½ of 1%. (No legal liability in dunning by telegraph. I understand the telegraph company furnishes sample collection telegrams.)

A Piggly Wiggly store in Texas sent 300 city telegrams to announce opening of a new store. Store was crowded all day; many phone and verbal comments on clever advertising. (Manufacturers could well include this in suggestions to dealers.)



The NEWS SHEET-

Dots and Dashes from Western Union



VOLUME I,
No. 8

Distributed occasionally to those who may be able to find a few items of sufficient interest to embellish general articles or to serve as fill-ins. If additional information on any item is desired, we shall be glad to give it if it is available, or if you wish to ask about subjects not mentioned herein please feel free to do so. Photographs or electros of illustrations sent free. WESTERN UNION TELEGRAPH CO., 195 Broadway, New York City.

November
1925

From the Train Window

As the telegraph poles flash by, try to remember how many there are to the mile; if you knew, you could estimate the speed of the train. Make a note now: there are forty to fifty usually and as high as seventy in storm-swept sections.

Each pole that speeds by is a product of scientific forestration, lumbering and preserving methods second to none in our conservation of national resources. For telegraph service, chestnut, Eastern white cedar, Western red cedar and yellow pine are used. All woods exposed to the weather have comparatively short life, and to extend the life, and in the interest of conservation, all poles are treated with a preservative. The pine poles are treated over their entire length. The other three classes of poles have only that part treated which sets in the ground. The treating process consists of boiling the poles for three hours in creosote oil, then drawing the hot oil off quickly and replacing it with cold creosote oil in which the poles soak for another hour. After treatment in the tanks the poles are lifted out by derricks and dried, ready for shipment.

The importance of the telegram has so increased in business and social life (particularly since it has been possible to telephone telegrams to the telegraph office) that in 1924 alone, over 50,000 miles of new lines were built by the Western Union to help carry the business. This added load requires increased pole strength, more poles, better poles! When one considers that the Western Union system alone has 214,431 miles of pole lines an idea is gained of the tremendous number of poles used in making replacements alone.

This company has three pole-treating plants with a yearly capacity of two hundred and fifty thousand poles, each leaving its oily bath with possibly fewer years ahead of it than if it had stayed in the forest primeval but certainly with more fruitful years to the public that increasingly demands the fast and accurate service started by Mr. Morse.

"How Long Will It Take?"

The man behind the telegraph counter may be from Podunk or from New York City. But irrespective of his location he has heard that same old question asked in a dozen different ways.

Before the question can be answered, it should be understood that the transmission time on trunk lines does not vary with the distance. A telegram is transmitted to San Francisco in the same time that it is transmitted to Chicago or New York. The message travels almost instantaneously—therefore the question, "How long will it take?" really means "How long will it take your people to handle my message after I 'file' it."

A telegram is considered "filed" as soon as it has been received over the counter and paid for, or accepted as a charge or collect message, or received and read back by the operator over the telephone. As soon as the yellow blank is received at the counter it is stamped with the exact time it was "filed." It is then whisked by pneumatic tube to the sending operator. Here it is apparently copied on a typewriter, but the typewriter keys instead of making abc's make little holes in a strip of paper, and this paper tape controls the automatic devices that transmit the message.

The business man who instructs

his secretary to telephone all messages to the telegraph office obviously gets his telegram on the wire in less time than if he pulled his call box handle or telephoned for a messenger boy, and when you are at home it is obviously easier to lift your telephone receiver and ask for the Western Union office, than it is to make the trip to the telegraph office in person.

The standard instructions for the handling of full rate telegrams specify, "All telegrams between large cities (trunk line terminals) must be transmitted immediately and in no case shall they remain unsent longer than ten minutes after being filed. Between smaller towns, or places served by a railroad office, such full rate telegrams must be transmitted in fifteen minutes after being filed."

Training the Deaf To Be Telegraphers

For the purpose of opening another field of occupation to deaf persons, the Western Pennsylvania School for the Deaf and The Bureau of Mines have designed telegraph receiving instruments which utilize the sense of touch. In one type of instrument the finger tips placed lightly on a vibrating plate, accurately interpret the dots and dashes. In another type of receiver, resembling a head telephone, the vibrations are transmitted to the temporal bone directly in front of the ear. The electrical connections for the instrument are the same as in ordinary line telegraphy.

The deaf students have shown great enthusiasm in the experiments and apply themselves diligently to practicing the code.

During the war a Canadian telegraph company successfully trained

several deaf and dumb people to operate what is called the multiplex system of telegraphy in which the message is sent by operating a type-writer-like keyboard and received on an automatic typewriter that actually types the telegram on the yellow blank. These girls proved to be accurate and efficient employees.

The Humor of the Passing Years

We are often prone to regard ourselves and our achievements as practically the ultimate. Hardly ever do we think of ourselves and our time as little stepping stones in the long pathway of the ages. Consider then, if you will, the humor of this.

A century ago the school board at Lancaster, Ohio, refused to allow certain "liberals" to use the schoolhouse, and in an ancient document dogmatically states:

"You are welcome to use the schoolhouse to debate all proper questions in, but such things as railroads and telegraphs are impossible and rank infidelity. There is nothing in the word of God about them. If God had designed that his intelligent creatures should travel at the frightful speed of fifteen miles an hour by steam, he would have clearly foretold it by his holy prophets. It is the device of Satan to lead immortal souls down to Hell."

There is a smile in that. Why today, on almost any of the busy corners in any city, town or hamlet in the country, one can send a telegram, transfer money, send flowers or cable to any part of the world—all in a comparatively short time—usually measured in minutes. One need not even leave one's home or office, since the telegraph and cable companies now accept messages over the telephone, and will deliver them in the same time-saving way.

Oh, if the old Lancaster school board could only "please note!"

The Largest Tuning Fork in the World

Almost every one is familiar with the common tuning fork which when struck produces a pure musical tone of a pitch that depends upon the size of the fork. Not every one knows however that such forks in the larger sizes have uses quite foreign to singing schools and barber shop harmonies.

For instance, the Western Union uses a tuning fork with tines 18 inches long, in connection with automatic

printing telegram apparatus. This fork vibrates at a "pitch" or frequency far below the range of response of the human ear, and is electrically driven so that it runs steadily hour after hour. Its vibrations are used to control the revolutions of a wheel, which is an important element of the printing apparatus, and the speed of which must never vary to the slightest degree if telegrams are to be correctly printed. The tuning fork thereby does its bit in maintaining fast, accurate world-wide communication, through its very valuable characteristic of constant, unvariable vibration.

* * *



Meet the Tereido Family

It is not recorded that Captain Nemo in all his leagues of under-sea travel, had any extraordinary encounters with the teredo family. Perhaps the "Nautilus" was sheathed with brass?

According to the submarine cable companies, brass is the only defense against this small but powerful worm of the sea which an imaginative artist has sketched above in the act of lurching on the luscious lead covering of a deep sea cable. The teredo bores through the lead, takes a nibble at the jute and hemp, but keeps boring until he reaches the gutta percha insulation. This, apparently is his objective—his idea of dessert supreme—but in modern submarine cables the gutta percha is protected by a brass sheathing that defies the powerful cutting tool of the teredo. According

to the encyclopaedia, little is known of the exact abrasive action: some authorities say the head cuts; others that the tail bores in, but all deliver themselves of the profound statement that only one in five hundred teredoes is a male. The other four hundred and ninety-eight females probably vent their disappointment on the cable.

From Prex to Op

Many an Algerian tale has been told about telegraph operators rising to great heights but few are those relating of the reversion amid fine social surroundings of the president of a railroad to telegraph operator. Such a development took place at a charity bazaar in which the president of one of the country's important railroad systems and his wife occupied a tent over which hung the legend: "The Great Mystery Man and Mind-Reader."

Upon payment of a quarter admission, could be seen the mystery man, blindfolded and sitting on a miniature stage. In the front row before the stage sat his helper. Numbers and names would be written on paper and handed to the helper who did nothing but nervously tap the arm of her chair every once in a while. Always the mystery man would speak the mentally transmitted secret number or name.

The act baffled friends of the couple and at a dinner following the bazaar the toastmaster said his only request of the evening was that the mystery couple should explain their great hidden powers which had made more money for the bazaar than any other act. The railroad president arose.

"You see, I began the railroad business at the telegraph key," he said. "I developed pretty good speed, through Min's help," he continued, turning to his wife. "She used to practice messages with me on a small home set we had. She knows the Morse code backwards and forwards, and the nervous tapping on the arm of her chair spelled out the numbers and names you wrote down for her. That's all."—*Wall Street Journal*

A Fair Return

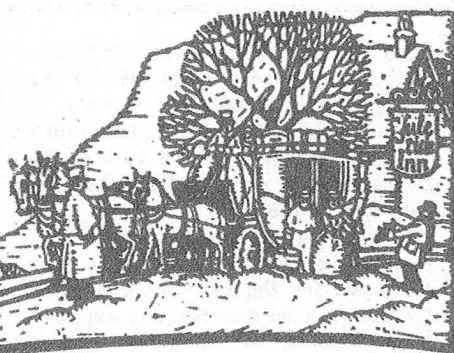
Rice.—"I arrived in this town just three years ago today with \$1.00 in my pocket which gave me my start."

White.—"You must have made a good investment with that \$1.00."

Rice.—"I did! I telegraphed home for money."

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December
1925

Yes, There Will Be Canned Cablegrams Again This Christmas

It is said that Henry Ford values highly as publicity the many "Lizzy" jokes that have been perpetrated. In the same spirit the telegraph and cable companies invite their friends the columnists and cartoonists to spread again throughout the land the fact that Davy Jones this Christmas will again wonder at the thousands of messages reading something like this, "Miss Mary Jones, The Oaks, Lonely Lane, Lancastershire Eng'and, number eleven (signed) Charles," the number, meaning, when translated on the other side, "Love and all good wishes for Christmas and the New Year."

Beneath the surprise at the low cost of greeting cablegrams to Great Britain, Ireland and Continental Europe, there will be a feeling that the telegraph and cable companies have at last hit upon a sound merchandising idea for a service that the public has too long mistakenly associated with high cost. Away back in 1866, five dollars a word was the cable rate; but now a message may be cabled to London, for instance, for as low as five cents a word. The special Christmas rates for greetings of eight to twenty-three words are \$1.00 or \$1.25, depending upon the location. A similar service to Italy is only \$1.25 in New York City; \$1.50 elsewhere. These rates include the name, address, message and sender's name.

Among the canned cablegrams sent last Christmas was one to King George. To whom will you send "number 11?" or perhaps to Italy you may send number 12 which will reach the other side like this: "Pensieri aff-

ettuosi e sinceri auguri di buone feste?" The cable knows many languages.



For Members of the S. P. U. G.

The Society for the Prevention of Useless Giving is reminding its members that this year the telegraph companies again offer to deliver for them brand new money to friends and relatives who have shown marked antipathy to white elephant gimcracks and geegaws. The money will be delivered early Christmas morning by uniformed messenger.

Holiday Dress for Telegrams

The first man to telegraph his holiday greetings had forgotten to mail a printed card. He got such a fine acknowledgment praising his originality that he decided to do it again; and he told his friends who did likewise. That may have been the way the custom began. Sufficient to say, that the holidays now bring greeting business of huge proportions to the telegraph companies.

This year the exceptionally artistic appearance of the telegram blank recalls some of the scenes in that friendly mellow series of Christmas-tide stories in Washington Irving's "Sketch Book," or to you it may suggest Dickens.

And why should not the message that speeds over the shining copper wires come in Christmas dress? Not satisfied with this embellishment, one telegraph company has arranged to deliver each holiday greeting telegram in a specially decorated envelope. Now not even the most timid of women can have the slightest excuse for an extra flutter of the heart when on Christmas morning that gayly dressed telegram reaches her door. If any messages are delivered to her this Christmas they must be telegrams, or cablegrams, for Uncle Sam is making that day a day of rest for mail carriers everywhere.

Advice for the Traveler

The traveler can often do much to balance some of the inconveniences of long days on the train. For one thing, telegrams can be sent to friends at places along the route, announcing the time that the train is expected to arrive at particular stations, and with such notice friends can spend anywhere from a few minutes to an en-

joyable hour talking over old times. In these cases it is always well for the traveler to add the train number to the telegram so that if it is impossible for the recipient to come to the station, an answer can be telegraphed and delivered on the train.

When there is any change in railroad schedules or any delay, it is courteous for the expected guest and traveler to send a message of explanation to his or her hostess. This is done most promptly by sending a telegram from the train explaining the delay. The folks at home, of course, should be notified of one's safe arrival, and of changes in plans.

From a Business Man's Notebook

A real estate agent sold \$7,700 worth of land by telegraph. (This wasn't in Florida, either.) Said he would have lost half the sales if he had written letters. §53

A New York silk merchant sold \$20,000 worth of goods by eighty Night Letters; closed forty new accounts. §56

A Pittsburgh importer of novelties says he obtained from the telegraph company a supply of stickers reading, "For immediate shipment, telegraph the money and goods will be shipped same day." Pastes them on all circulars and catalogs—and it pays. §41

A Kentucky job printing salesman finds telegram a mighty fine "follow-up" and often gets orders by "wire-suasion" that letters will not bring. (I'll admit there's something compelling about a telegram.) §39

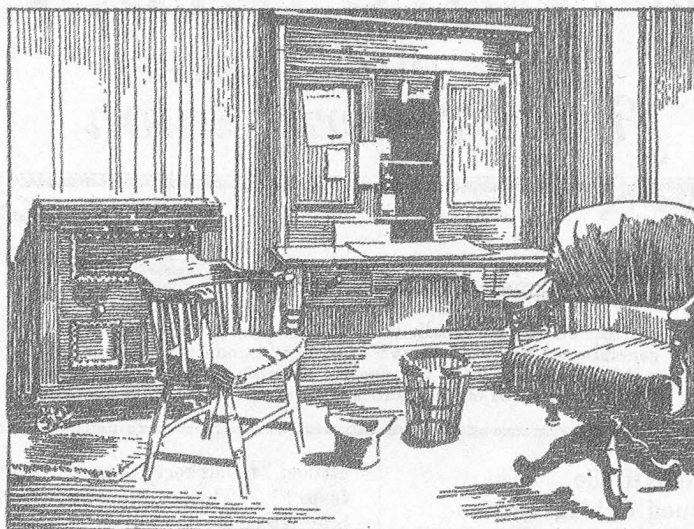
Another firm, this time in rubber business in Oklahoma, announced by city telegrams the opening of a factory branch. (This is worth trying.) §37

Even in sophisticated "lil ol' New York," 604 city telegrams brought home the bacon to a new magazine that offered advertising space. (When you can sell 'em in New York, you can sell 'em anywhere.) §36

One of the telegraph companies offers to retailers a sign reading, "Goods always available. If not in stock we will order by telegraph." (That's what I call "service.") §35

A Missouri syrup refining company experimented by answering trade inquiries by telegraph instead of by letter; so profitable they will continue the practice; results have been a revelation.

"Great Oaks from Little Acorns"



Seventy years ago this little office in Rochester, N. Y., served as the executive headquarters of the Western Union Telegraph Company, and was used as such until 1866 when the Company transferred its executive activities to New York City. Today, this queer little office remains intact; just as it was nearly three-quarters of a century ago.

From a beginning that called for such a tiny executive office, this Company has grown until today its lines of communication extend to every point on the globe. In the days when its business ancestors occupied these chairs a file of a few dozen telegrams a day was a noteworthy occasion. Today the business has grown until a

veritable flood of more than 250,000 messages a day are transmitted with the speed of light. That growth is mainly due to the fact that the telegraph has become a very necessary power in business and social affairs. In New York City during last Christmas 15,000 telegrams of greeting were filed in a single day by telephone alone. The total for the entire country was probably a million telegrams conveying holiday greetings.

Notice the old plug hat on the floor? (and this is where interior decorators should take notice). It is not a plug hat—it is a cuspidor—one of the novelties of the days when bushy faces and plug cut were one and inseparable.

When Jack Frost Lowers the Curtain

The icy winds scream down from the north and batter at the doors and windows with frigid fists. You or I merely put another shovelful or two of coal in the furnace—if we have any—and snuggle down in a cozy chair again to say: "Phew, what a night!"

But at the same time other men are being called to duty—the men who maintain the lines of communication no matter what the weather. For tomorrow morning the world moves on and telegrams must be sent. These telegraph linemen—theirs is the job of doing sometimes almost the impossible for neither storm nor snow, neither sleet nor hurricane must delay—this vital service must go in.

Only last winter the middle western portion of the United States was

gripped in one of the most destructive storms in its history. Untold tales of bravery and fortitude and work in the face of almost insurmountable difficulties was done and the report said "The telegraph service continued without serious interruption and, despite severe weather conditions, the lines were quickly restored." That's all—"The lines were quickly restored."

After the war-time explosion in Halifax, a gang of telegraph linemen who had been laboring for days in a heavy snow storm were rushed to the wrecked city and without rest or adequate comforts performed herculean tasks in establishing lines that again placed the city in touch with the world. It was all in the day's work. So say not only telegraph linemen, but all outdoor servants of the many public utilities that serve us in our home and office.