

THE BARCLAY PRINTING MACHINE?

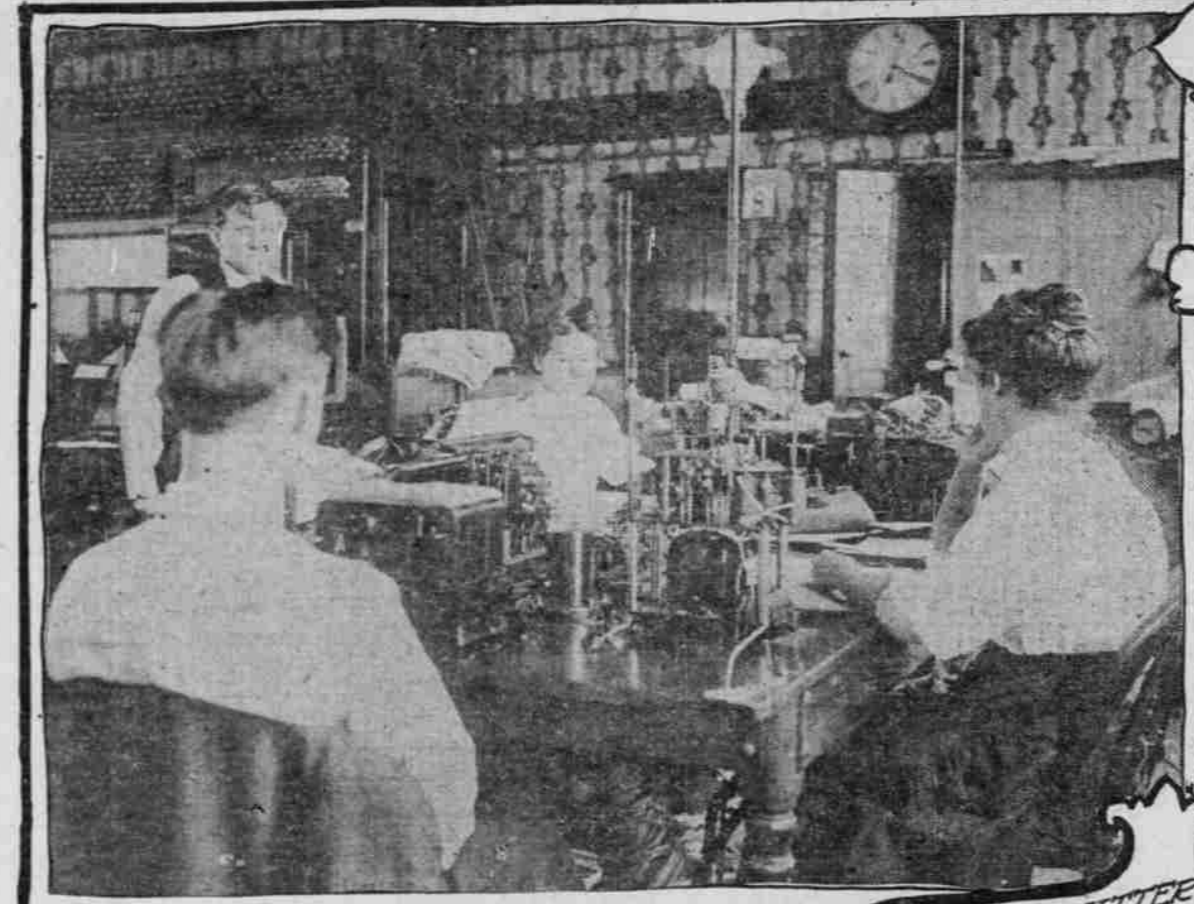
THE MORSE SYSTEM IN USE SINCE 1844, LIKELY TO BE SUPERPLANTED BY THE BARCLAY PERFORMING MACHINES

WILL the Barclay printing machine revolutionize the telegraph as it was established in 1844 by the Morse system? This is the absorbing question in the minds of thousands of telegraphers in the United States and Canada.

To the young members of the profession, whose memory of the past is but a dream of boyhood, and whose thoughts of the future do not go beyond the pleasant anticipation of some coming frivolity, this far-reaching question is of little concern. But it is to the Baltimore, Md., supremacy of the Morse system over any mechanical device has been undisputed. Every effort of the so-called "stars of electricity," and there have been many of them in the past 60-odd years, has been looked upon with disdain by telegraphers, and so accustomed have they become to the repeated failures to replace the Morse system with mechanical telegraphy that they confidently believed that it would never be accomplished.

Ask any telegrapher today for his opinion of the various systems of transmitting messages, and he will tell you that all of the new-fangled inventions are impracticable, that the Morse system of the present time will never be improved upon. His opinion is not infallible, however, and he can be pardoned for his optimistic view.

Music to His Ears. The click of the instrument is music to his ears. He loves its sound as the enthusiastic musician loves the low, sweet chords from his violin. Telegraphers have been known to become extremely despondent, and even suffer from ill-health, when forced through circumstances to absent themselves from the telegraph key for a considerable length of time. It is an occasion they will haunt an office where they can hear the familiar click of the instrument and revel in the music it makes for them. Ask any telegrapher who has given up the telegraph business to follow other pursuits and he will tell you that the telegraph still has a fascination for him that he cannot overcome, although he may not



have been actively engaged in it for many years. When the mechanical instrument encroaches upon their profession, then can they be blamed for feeling remorseful? Can any other feeling be expected of them? Yet that is what the Barclay printing machine, a silent though swift-working system, that is destined before many years to revolutionize the Morse system of telegraphy, is doing.

The present generation of thinking men and women has ceased to marvel at the wonderful miracles of electricity. So many have been the wonders brought down from the clouds by Franklin and made to perform such miracles that nothing is thought of as impossible, not even the mystery of

life itself. The story of its development can indeed be called romantic, so far-reaching has its influence been brought about by electricity since it was felt. But of all the inventions which electricity has made possible, there is none more wonderful than the Barclay printing machine.

Giving Cuyler "The Squeeze"—Prof. Shorty McCabe Tells How He Disposed of a "Pick-Up"

AND it looked like there was nothin' doin' too. Say, it ain't often I can work up a feelin' like that in New York either. But you take a pay day afternoon in the bow-wow days, when the telegraph is at work, and the excursion trains are being sent out double headed, and it's then Broadway comes nearest to givin' an imitation of an elephant. I've seen it myself out to Primrose Park and treatin' the mosquitoes, when up to the curb walks a big gasconade parson with the windows all open and one lone some gent sittin' up stiff and straight in the middle seat. Even before he opens the gate I feel the heat of his eyes. If I had my eyes shut I could have guessed it was either Vice-President Fairbanks or Cuyler Hartshorn.

Cuyler's dear friends will be glad to tell you how he the tightest was in their bunch. I've heard more or less about Cuyler's habits along the line; but in what the parson four agents calls a practical demonstration. First off, this little trip of his, that has all the tags of a reckless blowout, was just a swell way of doin' the iron steamboats out of half a dollar. Father-in-law been in Europe, the machine was made free to son Cuyler. Seems that Mrs. Cuyler was away with the old folks too, and that's a whole lot cheaper than payin' the passage money yourself.

Maybe Cuyler wasn't achin' to give up all the time, but I was tryin' to be sociable, so they come out. Anyway, he didn't talk none about countin' up how much he was savin'. Fact is, he seemed to enjoy it.

Josh. Ever have them funny fits when you feel like you'd got to do somethin' batty or bunt? I guess, it must have been the effect of bein' so long with Cuyler. He's always as serious as if he was buryin' his grandmother, and as stiff as if he was a stic rain pipe.

On the same block, both of 'em hunchin' their shoulders, and liftin' their eyebrows, and sawin' the air with their arms, until you'd think they was workin' up for a rough and tumble.

Jules puts that into frog talk and fires it at leather face. In a minute I has the answer.

shuntin a butt-in; but accordin' to his description I've handed a raw deal to a poor relation."

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RECEIVING MACHINES

TRANSMITTER

was eager to view for the first time the wonderful machine that was eventually to mean so much to them. The matter had been made the topic of conversation for several days, and all the while every eye was turned in the direction of the Barclay printing machine, eager to see the beginning of what to some of them, at least, spelled their doom. After several days the trying ordeal was practically over for the time being. Skilled electricians had put the machines in place and all was in readiness for the first attempt. Long before the arrival of the machines a picked set of young men and women had been selected from among the many employees of the Western Union office. With all the available material they had been coached in the manipulation of the machines. Pictures had been shown them and they were instructed to familiarize themselves with every little detail. Consequently, when the machines were in place there was little doubt in the minds of the telegraph officials that they would be successful. Finally, one morning, the psychological moment arrived. The operators who had been assigned to operate the machines, already familiar with many of the details, took their places. The current was turned on, and the machines began to hum and the tension of every man and woman in the large room was at once at its height.

Morse System Seems Doomed. Five, ten, fifteen minutes passed, and the death knell of the Morse system was sounded. All the doubts in the minds of the pessimists had vanished. They had seen with their own eyes the wonderful machines turn out perfectly printed messages at a rate that defied the competition of mere men.

It was the same old story of the printer and the Mergenthaler Linotype machine.

Many of those telegraphers who stood beside the Barclay printing machine watching its workings for a time realized that this was the Morse system would soon be over. True, it may be several years before a complete revolution is effected, but it is as sure to come as the cycle of time moves forward.

The machine is simple enough in operation, the operator, who may be some boy or girl who has never been inside of a telegraph office, touching the keys of the typewriter just as one writing on an ordinary office machine.

No operator is needed at the receiving typewriter. A girl only is needed, whose duty it is to keep the machines filled with paper and carry away the messages as fast as they are written. One girl can take care of a dozen or more receiving typewriters. The carriage turns the roll automatically. The bars rise up and strike the roll, the carriage moves along its own accord, and at the click of the line, the carriage gives a click, the paper turns the roll two notches, and the carriage slides back to another line. All the operator has to do is punch out when it gets full and slip in a fresh one.

The typewriter that perforates the tape for transmitting the messages is fed by a hand crank. Upon pressing any of the keys the corresponding series of punches, operated by an electrical current, are forced down and pierce the paper strip. This strip is about one-half inch wide. There is a combination of punch holes for each of the 26 letters and spaces. One to operate the carriage return, one to turn the roll for a new line. When the punched slip is inserted in the transmitter the holes allow rods or punches

to pass through, making a distant connection that passes to the receiving machine.

Amazing Speed. The machines are much faster than the fastest operator, and are absolutely accurate. In cases of a mistake, both the sending and receiving machines stop, and an automatic alarm rings out. The receiving machine has to receive the exact letter sent or else it will not work. If there is something the matter with the current sent in the receiving machine so that the letter sent is not recorded it gets stuck; the signal is sent back to the sending machine, which also stops. This prevents the sending machine from going on blindly and sending the telegram, which would have to be repeated.

The equipment of the Barclay printing machine consists of four performing machines and two transmitters and receivers each. As an indication that the machine has speed as well as reliability, an instance is cited when a test was made some time ago. On a circuit between Omaha and Kansas City 86 messages were handled in 35 minutes with the old Morse system. It would have taken a skilled operator nearly two hours to transmit the same number of telegrams. It is especially adapted to news work, although the use of the machine has been confined to message work so far. It has been known to transmit at the rate of 130 words a minute, which is nearly three times as fast as the most expert operator can send by hand.

The inventor of the machine, which bears his name, is J. C. Barclay, vice-president and general electrician of the Western Union Telegraph Company. Mr. Barclay invented many different kinds of machines used in telegraphy, but none of them compare in any sense with the Barclay printing machine. They are costly instruments, the receiver alone costing \$1000. One set of the machines will take the place of several operators, and, therefore, they do away with the high-salaried operator and save considerable wire mileage.

Up to the present time these machines have been installed in all of the larger offices as far west as Omaha. They will soon be in operation in all of the Western cities, particularly those on the Pacific Coast.

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THE WAY THE AYRAB TAKES CUYLER'S MEASURE WAS A CAUTION.

copper pieces that looked like trunk checks, and he didn't have any more idea where he was goin' than a pup in an express crate.

"Comfortable way to travel," says I. "Tell him I wish him luck, Jules," and I follows Cuyler into the machine. Franchy has delivered the message and was gettin' into his seat, ready to turn her loose, when Hassan rushes over and starts to pile in with us. Cuyler most has a fit at that, and waves him off with both hands.

"Tell him to clear out, Jules!" But Hassan don't act like he was takin' orders from any one. He throws out a few offhand remarks in French, and gets a grip on the door handle. Jules turns to me, grinnin'.

...I might be 'e guessed that, for any of