

Twentieth Century Telegraph Key.

This is an instrument which signalizes a radical departure from present methods. Writers' cramp and telegraphers' paralysis are serious afflictions to

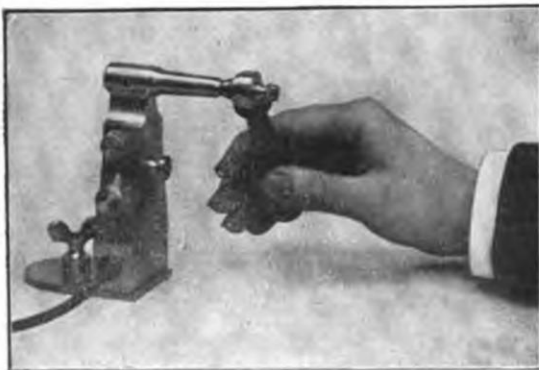


THE 20TH CENTURY TELEGRAPH KEY.

an extent that the telegraph operators of this country know too well. The introduction of the typewriter into telegraph service and its marvelous results are so well known to telegraphers that comment is unnecessary. Suffice it to say that every telegrapher knows that writer's cramp no longer has any terrors for the operator, and that the receiving operator who uses a typewriter is no longer at the mercy of the transmitting operator.

But what about telegraphers' paralysis? Is there an operator in this broad land who can not number among his acquaintances many who have "lost their grip"—whose transmission of Morse characters is such that it is torture to copy from them, and to whom transmission is agony. Go into any large telegraph office and note the effort of those afflicted to transmit with various parts of the hand or wrist, or with the left hand. No argument is necessary to show the enormous prevalence of this affliction.

Even the application forms of the telegraph com-



THE FAVORITE POSITION.

panies to-day contain the query, "Are you afflicted with telegraphers' paralysis?" and those so afflicted are seriously handicapped, in some places entirely disbarred from employment. Nor is any operator "immune" from this dread visitor. The brilliant

operator of to-day, with a wonderful record for transmission, is the applicant for a berth on "receiving sides only" to-morrow. Why all this? What causes this paralysis that destroys an operator's usefulness when he should be at his best?

Let us go back a few years. With the invention of telegraphy a "key" was provided, its purpose being to open and close a circuit. Now, you can do that with the two ends of the wire of the circuit, and the key of common use to-day is practically those two ends with a rubber knob attached to one of them so that the opening and closing may be done without touching the wire. It will be noticed that this knob is made in the shape of a flat topped button, as though the intention was to tap it with one finger; in fact this was the manner in which its use was originally intended. But modern speed makes it necessary to grasp this knob in order to transmit, thus necessitating a cramped position of the fingers. Numerous devices of rubber covers and the like to make this grasp easier have failed to afford relief. Observe the effect upon the nerves and muscles when this key is operated. A little contraction of the muscles



POSITION FOR SITTING UPRIGHT IN CHAIR.

of the wrist downward, with a quick return, makes a dot or dash, requiring two muscular contractions to a signal. How simple, you say, but let us figure a little. The Morse signals average three to the letter, that is six muscular contractions per letter, which at five letters to the word makes thirty contractions per word, and at twenty-five words per minute produces a total of seven hundred and fifty muscular contractions per minute. With half of a nine hour day put in on the sending side this means 202,500 of these nervous pulsations per day of ordinary work, all upon one set of nerves and muscles in the wrist. Is it any wonder that they become paralyzed? The marvel is that they stand it as long as they do without breaking down. It is not strange in view of these facts that many press operators, whose work means twice or thrice the amount quoted above, place two or more keys in various positions on their tables in the endeavor to shift the strain even in such a slight degree as this affords.

The instrument here introduced is the result of the study of years of the conditions leading up to this paralysis, and is offered as a relief to oper-

ators who are already victims, and as a preventative to those who are not. Its construction is, as may be readily seen, a radical departure from ordinary keys, and it will be noticed that there is no knob that the tired fingers must grasp. A handle that may be grasped by the whole hand or operated by the touch of any finger or part of the hand,



KEY IN POSITION FOR LEFT-HAND TRANSMISSION.

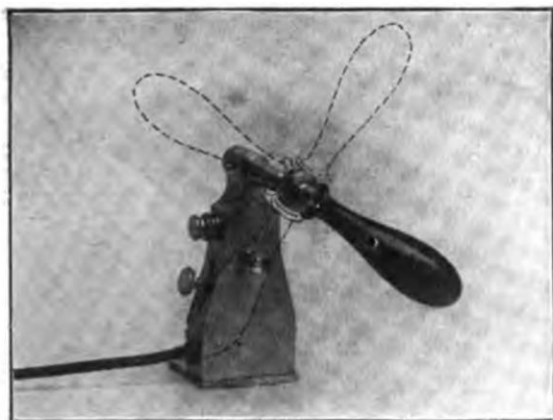
or even arm, is provided. It is unnecessary to retain a firm hold upon this handle, and the fingers may be shifted as desired during transmission, thus affording great relief. The handle itself may be turned completely around at will, while transmitting, so that any desired position may be secured instantly. Whenever the slightest strain is felt, a change can therefore be made, affording instant relief.

The key as a whole can be completely turned around upon its base, affording another entire set of changes of position, in such manner that it may be operated by either hand, or permitting a

of its positions the operator will find, at first use, a muscular feeling akin to that when first learning to send, or when learning to ride a bicycle, caused by the use of muscles that he "never knew he had." This, of course, quickly wears off as these long dormant muscles become accustomed to use.

The key is also provided with a flexible spring point to prevent the jar that a solid point gives. The term "pounding brass" is no misnomer with the ordinary key. As an operator who is using the new key expresses it: "The action of this key as compared with the ordinary key, feels like the difference between the touch of velvet and sandpaper." A result of this is that a naturally light sender transmits solid signals despite himself with this key. It is confidently predicted by many that the New Century Key will work a revolution in telegraphy as great as that caused by the introduction of the typewriter.

This key is being made and sold by Foote, Pier-son & Co., the well known manufacturers of telegraph apparatus, at 82-84 Fulton Street, New York City.



SHOWING RANGE OF HANDLE FOR VARIOUS POSITIONS.

change of the position of the operator in his seat. Transmission may also be conveniently effected while standing, by an upward twist of the handle, and those who use a key while standing will find this instrument a revelation in comfort.

It will be noticed that this key brings into play various sets of nerves and muscles, and in many