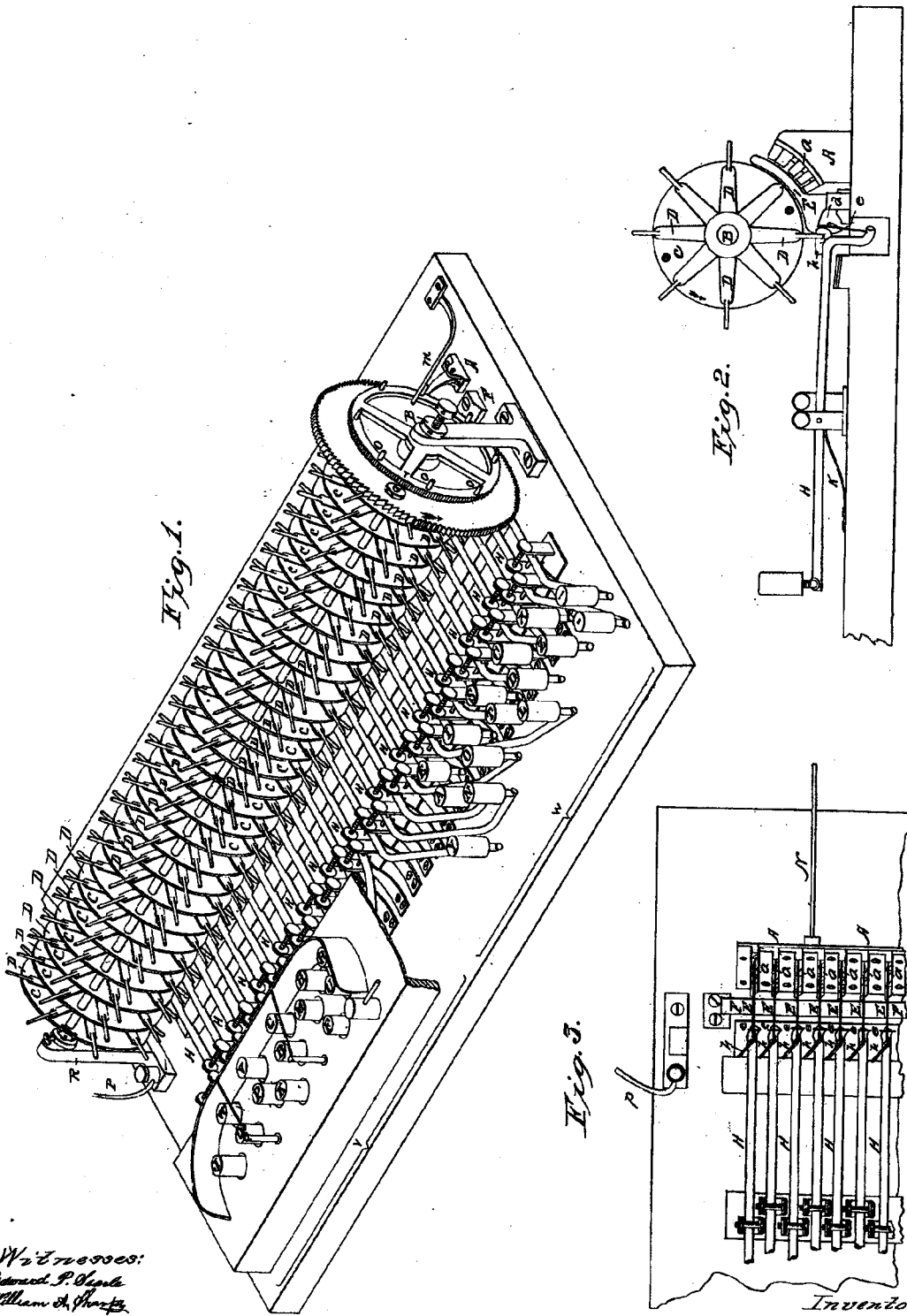


A. F. PARK.  
ELECTRIC TELEGRAPH CORRESPONDENT.

No 7,606.

Patented Aug. 27, 1850.



Witnesses:  
Edward P. Smith  
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# UNITED STATES PATENT OFFICE.

AUSTIN F. PARK, OF TROY, NEW YORK.

## IMPROVEMENT IN ELECTRIC-TELEGRAPH MANIPULATORS.

Specification forming part of Letters Patent No. 7,606, dated August 27, 1850.

*To all whom it may concern:*

Be it known that I, AUSTIN F. PARK, of the city of Troy, in the county of Rensselaer, and State of New York, have invented a new and improved machine for transmitting messages by electric telegraphs, which I term an "electric-telegraph correspondent;" and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the accompanying drawings and the letters of reference marked thereon, and which are hereby made a part of this specification.

Figure 1 is a perspective view of my machine, showing its general appearance, and exhibiting a part of the finger-keys with their protecting-case placed over them, as at *v*, and the remainder exposed to view, as at *w*. Fig. 2 is a view of a cross-section, showing a single metallic plate and the series of pointed springs belonging to it, together with a "form" for a single letter, and a finger-key and rod, and the parts belonging thereto. Fig. 3 is a view of a portion of the machine, the shaft or cylinder of metallic plates and springs being removed and exhibiting more clearly the situation of the forms for letters, the guides and the end of the finger-rods, and the guides by which the pointed springs are made to close and break the electric circuit.

The same letters have reference to like parts of the machine in the different figures.

The nature of my invention consists in arranging machinery for closing and breaking an electric-telegraph circuit, in transmitting intelligence, whereby the operator, by giving a finger-key one instantaneous touch, as distinguished from the prolonged touch applied to the key in ordinary machines, closes and breaks the electric circuit at and during such time as is required to signal or record a telegraphic sign for a letter, figure, or other character.

The construction of my machine is as follows: I employ a rest or bed-piece, A, to which are attached the forms *a a a*, corresponding to the letters or characters to be registered or recorded. These forms for letters are made in any of the known shapes for letters and other characters, whether similar to those patented by Morse or used by any other person. The rest or bed-piece and the forms thereto at-

tached are electrically isolated from all other parts of the machine and in electric communication with one of the wires N of the broken electric circuit. The forms for letters are placed on the bed-piece so as to make a part of a segment of a circle, that the pointed springs hereinafter described may be brought into contact with them.

Upon a metallic shaft, B, I arrange circular metallic plates C C C, equal in number to the forms of letters or characters to be made, and so arranged on the shaft that they are equidistant between every two of the forms *a a a*.

On the shaft B, and midway between every two of the plates C C C, I place a series of pointed springs, D D D, radiating from the shaft, and arranged longitudinally in lines lengthwise of the said shaft. These springs, near their points, bear upon the circular plates C C C, and are equal in number in each series belonging to each circular plate. The number of these springs for each plate may be increased or diminished, but the different plates have always the same number, one with another. These springs are electrically connected with the other wire, P, of the broken electric circuit, which is soldered to the metallic standard R.

In front of each form for the letters or characters I place a guide, E E E, supported on a bed-piece, F, and terminating at its lower extremity in a hook or catch, *d*. On each finger-key rod H, I attach a guide-piece, *h h h*, and a spring, *e*, which spring hooks into the catch *d* when the finger-key rod is raised by touching the finger-keys A, B, C, D, &c., and retains the guide *h* in an elevated position until one of the pointed springs D in its revolution comes in contact with the spring *e* by means of the guide *h* and unhooks it, when the finger-key rod drops to its original position by means of the spring K.

On the driving pulley or wheel L, I place as many pins *o o o* as there are pointed springs in each series. As the shaft revolves these pins are acted upon by the spring *m* bearing against them, and a click is produced whenever such spring falls from one of these pins to another. These pins are about equidistant from each other, and so adjusted that the click is heard when the guide *h* is midway between any two of the pointed springs D D.

The operation of the instrument or machine in closing and breaking the electric current or circuit to make a letter or character is as follows: The circular metallic plates O O O and the pointed springs D D D are made to revolve with the shaft B in the direction pointed by the arrows. The motive power may be clock-work and weights or any other power, and the shaft may be made to revolve at any desirable velocity. The clock-work (which is not represented in the drawings) I attach to the end of the shaft marked B, and an apparatus for writing the letters or characters I attach to the other end of such shaft. In the natural or ordinary revolution of the shaft and of the plates and springs attached thereto the pointed ends of the springs D D D pass behind the guides E E E, and no electric communication takes place between the springs and the forms for letters; but if at the time a click is made by the spring *m* on a pin, *o*, the key for any letter corresponding with a letter-form is touched and pressed down, the end of the finger-key rod underneath the cylinder is raised, and the spring *e* hooks into the catch *d* and retains that end of the finger-key rod and the guide *h* in an elevated position. As the shaft revolves the end of one of the pointed springs comes in contact with the guide *h*, and is so directed by such guide that it is brought in front of the guide E, and thus is made to pass over a form for a letter, by which means the electric circuit is closed and broken as the point of the spring passes on and off the parts of a form for a letter which projects beyond the front of the guide E, and a telegraphic letter is recorded with accuracy. The passage of the spring D along the guide *h* also unhooks the spring *e*, and the spring *k* brings the finger-key rod to its original position, so that as the succeeding springs D D D revolve they pass, as usual, above the guide *h* without being brought into communication with the forms until the finger-key is again touched.

I make the length of the longest form for a letter or character somewhat less than the distance between the ends of any two of the pointed springs D D D, by which the circuit is closed or broken, so that if a finger-key is touched at every click there will be a space between every two letters as registered. The shortest forms are placed on the form-bed, nearly opposite to the middle of the longest forms.

In transmitting a word the finger-keys for its corresponding letters are depressed in the order they occur in the word, each key being

touched at or about the time a click is heard. To leave a space between words no finger-key is pressed down at the click which first succeeds the touching of the key for the last letter of the word, and the key for the first letter of the next word is touched at the time of the second click.

I ordinarily arrange a key (with its revolving springs and form) for each letter of the alphabet, and additionally one or more other keys with suitable plate and springs, and a form for a dot (·) or dash (—). These forms are placed on the form-bed the length of a dot in advance or behind the longer letter-forms, and if made use of at the same time and in connection with the various letter-forms many different characters can be made, which may be used to indicate figures, marks of punctuation, &c. For instance, if the key for W (— —) and a dot (·) are both pressed down at any one click, the character — — ·, representing the figure 1, will be produced, and in the same manner other combinations may be produced.

I am aware that forms have been used in combination with a traversing point to close and break an electric-telegraph circuit in transmitting telegraphic letters, and I do not claim any combinations heretofore used for that purpose.

What I claim as my invention, and desire to secure by Letter Patent, is—

1. The two guides E and *h*, with their hook and detent-spring, as described, in combination with the movable connecting-points D D, and the type-forms for letters, substantially in the manner and for the purpose set forth, the guides being disconnected as soon as the movable connecting-point has passed them, thereby causing the finger-key rods to resume their proper position to be again acted upon, and allowing the succeeding points to pass in their regular revolving course without coming in contact with the type-forms.

2. The manner of disconnecting the two guides, viz., by the action of the movable connecting-point upon the detent-spring, as above set forth.

3. The employment of a clicking apparatus to indicate the proper time of depressing the keys, the whole being constructed and arranged in the manner and for the purpose substantially as herein set forth.

AUSTIN F. PARK.

Witnesses:

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WILLIAM A. SHARPE.