

(No Model.)

H. P. COPELAND.
TELEGRAPHIC PEN.

No. 379,368.

Patented Mar. 13, 1888.

Fig. 1.

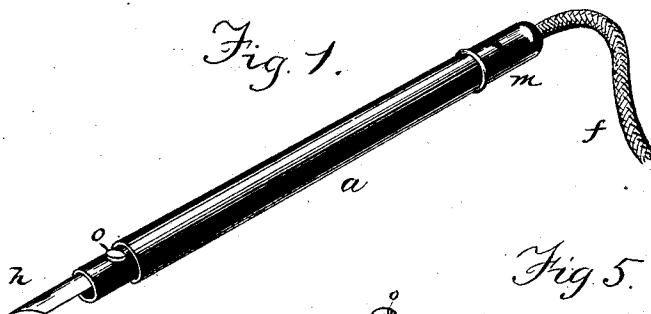


Fig. 5.

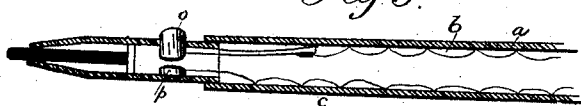


Fig. 2.

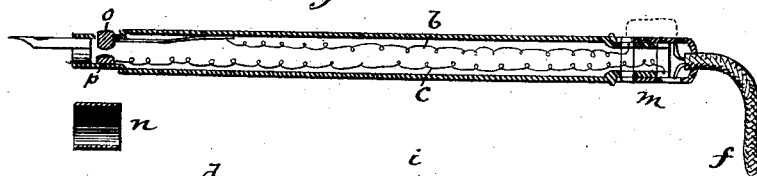
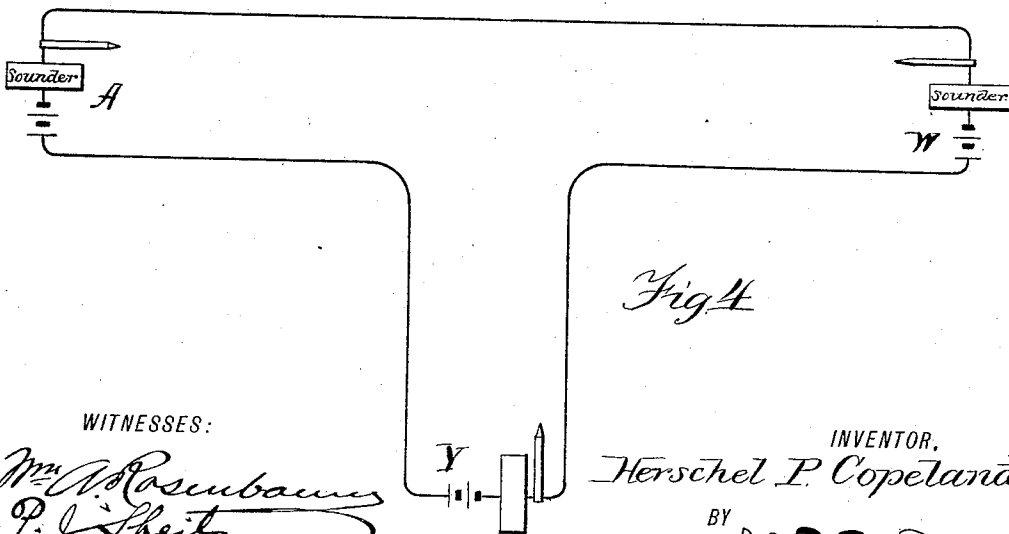
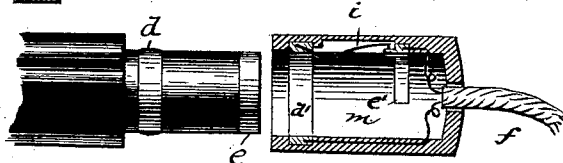


Fig. 3.



WITNESSES:

Mr. Rosenbaum
P. J. Sheils.

INVENTOR,

Herschel P. Copeland.

BY

W. D. Johnston
ATTORNEY,

UNITED STATES PATENT OFFICE.

HERSCHEL P. COPELAND, OF EAST ORANGE, NEW JERSEY.

TELEGRAPHIC PEN.

SPECIFICATION forming part of Letters Patent No. 379,368, dated March 13, 1888.

Application filed December 29, 1887. Serial No. 259,284. (No model.)

To all whom it may concern:

Be it known that I, HERSCHEL P. COPELAND, a citizen of the United States, residing at East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Telegraphic Pens, of which the following is a specification.

The object of my invention is to provide means whereby beginners in telegraphy may be relieved of the necessity of depending solely upon sound in transmitting telegraphic messages, and may be guided to some extent by the eye.

In practice my invention can also be used advantageously by skilled operators for preserving a record of messages in the transmitting-office for future reference. Such a record might serve to settle disputes between senders and receivers in a conclusive manner.

By the use of the apparatus which I have invented an unskilled operator, in the act of sending a message to a distant station, writes out, in the Morse or any other code, the message which he sends. The message is received at the distant station upon suitable instruments designed for that purpose.

The pen employed may be a fountain-pen or an ordinary pen having a handle or holder provided with suitable means for making electrical connections, as will be described hereinafter. Any kind of ink may be employed, and the writing may be done upon paper or any other good receiving-surface. If preferred, a stylus or pencil may be substituted for the pen.

The receiving apparatus at the distant station may be a sounder or a recording apparatus of any of the well-known types. The character of the receiver has nothing to do with my present invention.

Both the sending and the receiving stations are provided with similar apparatus, including one of my pens and also a suitable receiver.

In the drawings which illustrate my invention, Figure 1 is a perspective view of my telegraphic pen. Fig. 2 is a longitudinal section thereof. Fig. 3 shows a detail. Fig. 4 shows the circuit, and Fig. 5 is a sectional view of a pencil with the electrical devices attached.

In the drawings, *a* represents the casing or holder of a fountain or other pen, the casing

being made of hard rubber, as is usual in such pens. The pen *h* is in this instance an ordinary writing-pen.

b and *c* are electric-circuit wires, which are connected at one end of the holder with conducting plates or rings *d* and *e*, respectively, and at the other end with push-button *o* and contact-piece *p*, respectively. Any of the well-known means may be provided for relieving the wires from strain, and, if desired, they may be attached at different points along the rubber casing. This is shown in Fig. 5.

The pen is provided with the usual cap, *m*, which has rings *d'* *e'*, of conducting material, corresponding with the plates *d* and *e*, already mentioned. When the cap is in place, the corresponding plates make contact with each other in an obvious manner. The rings *d'* and *e'* are respectively connected with electric-circuit wires which form part of an insulating-cord, *f*, and which are also a part of the same circuit in which the wires *b* and *c* are included.

It is evident that when the cap is on, at *A*, there will be a circuit for the batteries *W* and *Y* in Fig. 4, which will be open only between *o* and *p*.

In Fig. 3 I have shown the construction of the cap *m* and the end of the pen over which it fits in detail. I have arranged a spring, *i*, secured at one end to the ring *d'* in the cap, projecting into the chamber of the cap and up into a slot, where it terminates directly over a portion of the other ring, *e'*, which is the terminal of the other pole of the battery. Now when the cap is in place the spring is held out of contact with ring *e'*, but when the cap is removed the circuit automatically closes, so that when the pen is disconnected and used for other purposes the circuit is closed to receive a signal or call.

Now, supposing an operator wants to send a message, he takes the pen *a*, sees that the cap *m* is in place, and holds the pen in a position for writing, placing his forefinger on the button *o*. He then writes in the Morse characters whatever message he desires to send, and in doing so every time the pen makes a mark upon the paper or other receiving-surface he presses the button *o* into contact with *p*. This causes a closure of the electric circuit and a corresponding action upon the sounder or

other receiving apparatus at the distant station. The duration of the closure will of course be greater when a dash is written than when the pen simply makes a dot. In this way the proper signal will be received or the proper record made at the receiving-station, while at the sending-station a record will also be kept, which will be valuable to any operator, whether skilled or unskilled, and a beginner will have the advantage of being guided by his eye in the sending of the message.

The ring or circuit-closer *n* is designed to be placed over the end immediately over the button *o* in such a manner as to press the latter against the corresponding contact. This keeps the circuit closed, so that a call can be received from a distant station, while at the same time the pen may be used as an ordinary pen to record the message received should there not be a recording-instrument at the receiving-station.

While I have illustrated the connections as being made with the line through the cap *m* and the parts connected therewith, yet it will be understood that I can make these connections in any other convenient way, if I choose. The special feature of my pen is the construction whereby the pair of terminals *o p* is conveniently located for being operated when the pen is used in ordinary writing. However, I do not wish to confine myself to the specific location illustrated, although I prefer that arrangement of the parts.

It is obvious that the cap *m*, carrying the line, may be detached and the pen then used as an ordinary writing-pen either portable or for the desk, in which case the circuit would be closed to receive a signal by the spring in the cap, as before described.

Having described my invention, what I claim is—

1. In an electric circuit, which includes a

suitable receiving apparatus, a transmitting-pen provided with circuit-terminals, one of which is movable and located upon the pen, so as to be moved in the act of writing.

2. A telegraphic pen having terminals for connection with a circuit, and also having a pair of terminals, one of which is movable and located so as to be moved with relation to the corresponding terminal when the pen is used.

3. A telegraphic pen having two pairs of terminals, the members of each pair being connected with corresponding members of the other pair, and one of the members of one pair being movable, as and for the purpose set forth.

4. A telegraphic pen having two pairs of terminals, the members of one pair being relatively fixed and those of the other being relatively movable, in combination with a cap for the said pen, having terminals which correspond to those which form the pair whose members are relatively fixed, the cap-terminals being joined to the wires of an electric circuit, as set forth.

5. A telegraphic pen having a pair of relatively-movable terminals, one of the said terminals being located in position to be operated by the index-finger in writing.

6. A telegraphic pen having a pair of relatively-movable terminals, one of the said terminals being located in position to be operated by the index-finger in writing, in combination with a cap, band, or circuit-closer adapted to press the movable terminal into contact with the corresponding terminal.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HERSCHEL P. COPELAND.

Witnesses:

WM. A. ROSENBAUM,
AUGUSTUS MERRITT.