E. A. HILL & H. J. SCHNEIDER.

Pocket Telegraph Relay.

No. 165,578. Patented July 13, 1875.

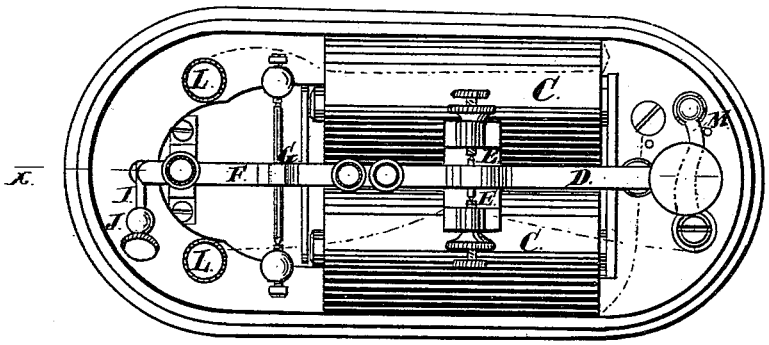

Fig. 1.

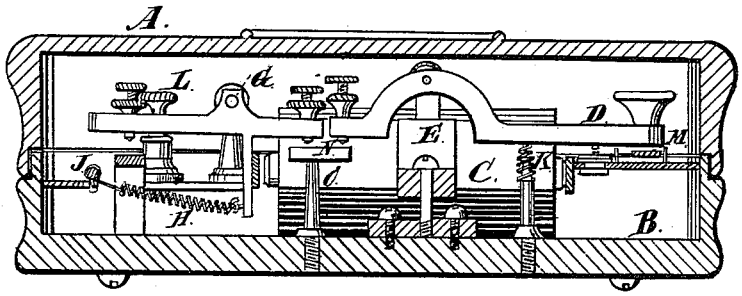

Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD A. HILL, OF CHICAGO, ILLINOIS, AND HERMANN J. SCHNEIDER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNORS TO EDWARD A. HILL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN POCKET TELEGRAPH-RELAYS.

Specification forming part of Letters Patent No. **165,578**, dated July 13, 1875; application filed June 18, 1875.

To all whom it may concern:

Be it known that we, EDWARD A. HILL, of Chicago, county of Cook and State of Illinois, and HERMANN J. SCHNEIDER, of Philadelphia, in the State of Pennsylvania, have invented a Pocket Telegraph-Instrument, of which the following is a specification, reference being had to the accompanying drawings, which form a part hereof.

The object of our invention is to make a more compact, convenient, and effective pocket-relay; and our invention consists in the combination of the different parts with each other and with the case, as hereinafter fully described.

In the accompanying drawings, Figure 1 represents a top or plan view of the instrument with the top of the box or case removed. Fig. 2 represents a vertical sectional view of the same, taken at the line *x x* in Fig. 1.

A is the top of the case; B, the bottom of the case. The different parts which constitute the instrument are attached to the bottom B of the case. C is the magnet. D is the key, with its trunnion shown at E. The piece E performs the double purpose of holding the magnets in the case, and making a trunnion-bearing for the key D of the instrument. F is the sounder-lever, with its trunnion at G. H is the spring attached to the lower end of the armature-lever, and its tension is regulated by the inclined thumb-piece spindle I, which has a bearing in the post J. This spindle enables one to adjust this spring readily, and easily reach it. K is the key-spring. L are the ordinary binding-posts, to which the wires are attached when the relay is put in a circuit for operation. M is the circuit-breaker. N is a stop-plate for the back stroke of the key, and also for the sounder-lever. This anvil is supported on the post O between the magnets. These various parts are all secured, by means of screws, to the bottom part B of the case; and they are so combined and arranged, relative to each other, as to occupy but a very little space. They are accessible, and of sufficient size to be effective in their operation.

When detached from the circuit the cover A is put on, as shown in Fig. 2, and the instrument can be carried with little danger of being injured.

I claim—

1. The combination of the magnets C, piece E, for securing the magnets, and making a trunnion-support for the key, the stop-plate N, and the key G, as specified.

2. The combination of the magnets C, stop-plate N, sounder-lever F, spring H, and inclined thumb-piece spindle I, as specified.

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