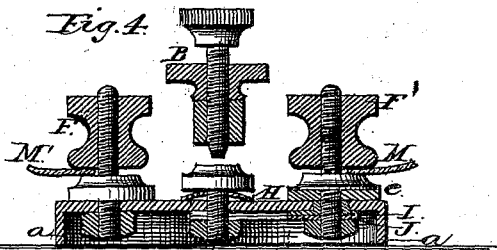
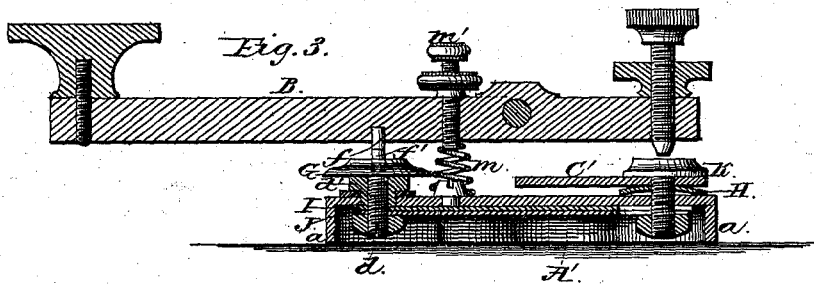
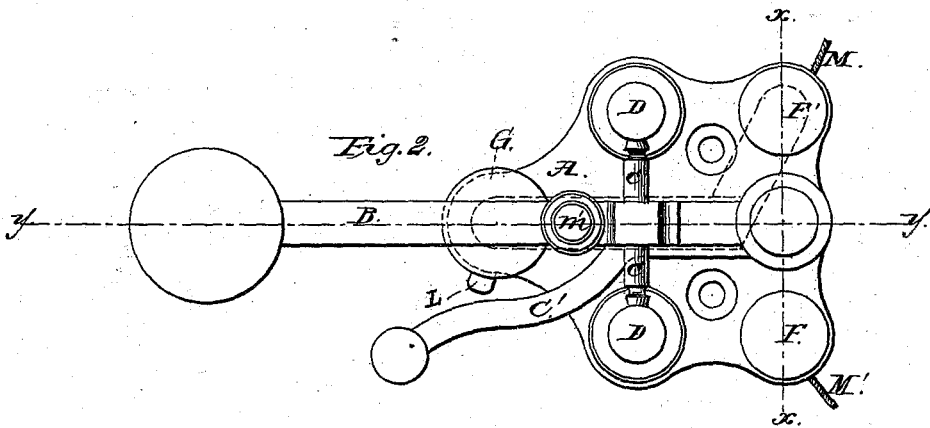
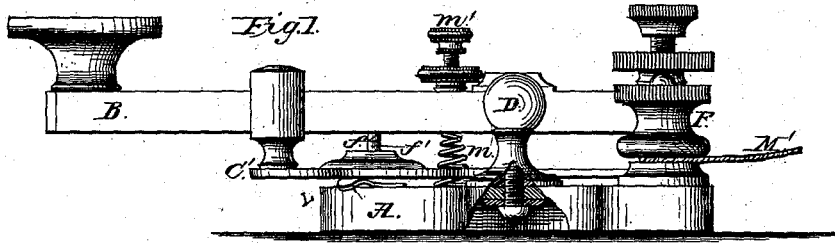


C. W. LEWIS.  
TELEGRAPH-KEYS.

No. 177,856.

Patented May 23, 1876.



Witnesses:  
N. C. Guidley.  
C. H. Sherburne.

Inventor:  
Charles W. Lewis

# UNITED STATES PATENT OFFICE.

CHARLES W. LEWIS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE WESTERN ELECTRIC MANUFACTURING COMPANY, OF SAME PLACE.

## IMPROVEMENT IN TELEGRAPH-KEYS.

Specification forming part of Letters Patent No. 177,856, dated May 23, 1876; application filed January 29, 1876.

To all whom it may concern :

Be it known that I, CHARLES W. LEWIS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Telegraph-Keys; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 represents a side elevation of a telegraph-key embodying my said invention. Fig. 2 represents a plan or top view of the same. Fig. 3 represents a sectional elevation of the same taken on the line *yy*, drawn through Fig. 2, and Fig. 4 represents a transverse section taken on the line *xx*.

Like letters of reference indicate like parts.

The object of my invention is to improve the construction of telegraph-keys so as to render them less liable to get out of order, and to admit of attaching the binding-posts directly to the base of the instrument above the table. To that end, my invention consists in the arrangement of the several parts of the instrument, as will be more fully understood from the following description and claims.

In the drawing, A represents the base of the instrument, to which the operating parts are secured. This base is provided with a depending flange, *a*, adapted to rest upon the table and extending around the base, forming a chamber, *A'*, to receive the screw-heads connecting the operating parts to the upper surface of the base, thereby preventing the screw-heads from coming in contact with the table. B is the key-lever, mounted upon a trunnion-shaft, C, journaled in the upright posts D D. The posts D D are firmly secured to the base A by screws *m* passing upward through the base into the ends of the posts, and which so connect the posts to the base as to allow them to be adjusted to the journals of the trunnion without the employment of set-screws, and are, consequently, less liable to become loosened by the jar of the lever.

G is the anvil, which is permanently secured to the base by means of bolt *d* and insulating-

collar *d'*, as shown in Fig. 3. F and F' are binding-posts, secured to the base on opposite sides of the lever B, the post F' being insulated from the base by a non-conducting collar, *e*, as shown in Fig. 4. J is a connecting-plate, attached at one end to the binding-post F', and at the other end to bolt *d* of the anvil, and is insulated from the base by a non-conducting strap, I, arranged between it and the base, as shown in Fig. 3. C' is the circuit-connecting lever, fulcrumed at one end upon a screw-bolt, K, passing through the base and forming the back stop for the key-lever B. H is a convex spring-washer, arranged upon bolt K between lever C' and the base. The tension of this washer is such as to compress the lever firmly against the head of bolt K, thereby producing the requisite friction to hold the lever at any desired or adjusted point, and so as to prevent the lever from being displaced by the ordinary jar of the instrument while being operated.

Permanently secured within the lower surface of the key-lever is a pin, *f*, adapted to engage a like pin, *f'*, permanently secured in the anvil-face.

*m* is an adjusting-spring arranged between the base and the key-lever, and secured in position by means of an adjusting-screw, *m'*. This spring acts to lift the key-lever when not positively acted upon, thereby disengaging pin *f* from pin *f'* of the anvil.

L is a compression-spring, located on the base immediately under the insulating-collar *d*, and projecting outward slightly beyond the lip of the anvil. The arrangement of this spring is such as to yield and allow the circuit-closing lever to pass between it and the lip of the anvil, and to hold the lever firmly in contact with the lip when so adjusted. M and M' are the wires of the main or local line, which are secured to the binding-posts F and F' in the usual manner.

It will be observed that the ends of the trunnion-shaft supporting the key-lever are journaled within the posts D D, the object of which is to prevent the ends of the shaft from being loosened by the jar of the lever, or by improper manipulation, and allow the lever to rock, as is the case in telegraph-keys

wherein the ends of the shaft are pivoted in the end of adjusting - screws affixed to the posts in the ordinary manner.

The operation of my invention is as follows: When the circuit - closing lever C' is moved from contact with anvil G, the circuit will be broken and the current will pass from wire M through binding - post F' and plate J to the anvil, and from thence through key-lever B, base A, binding-post F, to wire M', when the circuit is closed by the contact of the key-lever with the anvil. When the circuit-closing lever C' is moved in contact with the anvil, the circuit will be closed, and the current will pass from the wire M through binding-post F', plate J, anvil G, lever C', base A, and binding-post F, to M'.

Having thus described the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The base A, provided with the chamber A' to receive the screw-heads connecting the operating parts to the base, substantially as and for the purpose specified.

2. The combination of binding-post F', connecting-plate J, and anvil G, substantially as specified.

3. The spring - washer H, in combination with bolt K, and the circuit-closing lever C', substantially as and for the purpose specified.

4. In combination with the key-lever and trunnion-shaft of a telegraph-key, the posts D D, secured to the base A by the screws m, and adjusted to receive the journals of the trunnion, substantially as and for the purpose specified.

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Witnesses:

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