J. O. BYRNS.

TELEGRAPH-KEY.

No. 180,839. Patented Aug. 8, 1876.

Fig: 1.

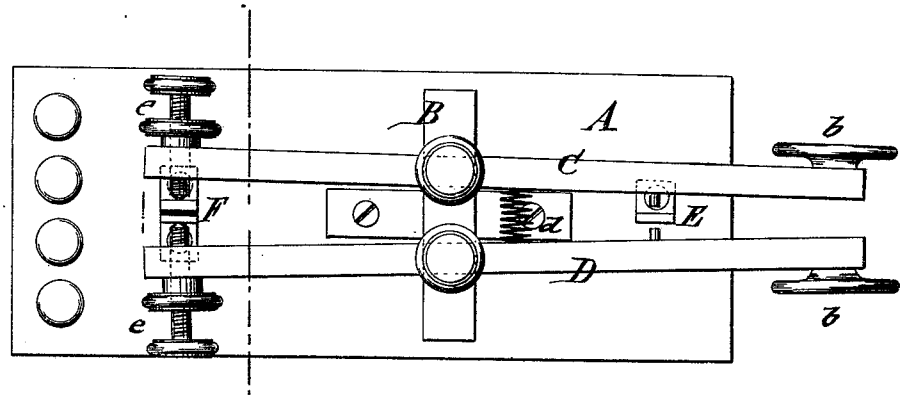
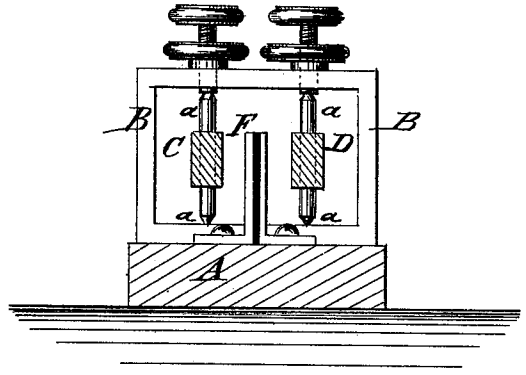


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JAMES O. BYRNS, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN TELEGRAPH-KEYS.

Specification forming part of Letters Patent No. **180,839**, dated August 8, 1876; application filed May 22, 1876.

To all whom it may concern:

Be it known that I, JAMES O. BYRNS, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Telegraph-Key, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a top view, and Fig. 2 a vertical transverse section on line *x x*, Fig. 1, of my improved telegraph-key.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish for telegraph-operators an improved duplex key, by which the time taken up by the upward motion of the present key may be utilized, and the sending of the messages be accomplished in about half the former time, and with greater facility and ease.

The invention consists of two horizontal swinging and spring-acted keys, whose contact-points alternately close the circuit by contact with an intermediate post, the keys being cut out, when not in use, by the rear set-screws bearing against a double post with dividing insulating-layer.

In the drawings, A represents the base-frame of the key; B, the upright metallic frame, to which the horizontally-swinging keys C and D are pivoted by steel pins *a*. The keys C and D are provided at the outer ends with the usual buttons *b*, by which the keys are operated by being swung by thumb and forefinger from one side to the other in place of the up-and-down motion of the common key.

The keys are jointly connected by a spiral spring, *d*, that interrupts the contact of the key-points with the post E, which is connected to one pole, while the upright support B is connected to the other pole, of the battery.

The contact of either key closes the circuit, so that by the alternate working of the keys the motion of the hand is utilized in both directions for the transmission of telegraphic characters.

The rear ends of the keys C and D bear by set-screws *e* against a double post, F, that is centrally split or divided by an insulating-layer, which serves to cut out the key by connection with the main line and keys. The tension of the spring *d* is regulated by the adjustment of the set-screws in the customary manner. The duplex key admits with little practice double transmitting speed, as compared to the single key, and facilitates the work of the telegraph-operator to a considerable extent.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A duplex telegraph-key made of horizontally-swinging and spring-acted lever-keys, that close the circuit alternately, substantially in the manner and for the purpose set forth.

2. The combination of two horizontally-swinging and spring-acted keys, by rear set-screws, with a double centrally insulated post, substantially as shown and described.

JAMES O. BYRNS.

Witnesses:
PAUL GOEPEL,
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