(Model.)

G. CUMMING.

TELEGRAPH KEY.

No. 256,645. Patented Apr. 18, 1882.

Fig. 1.

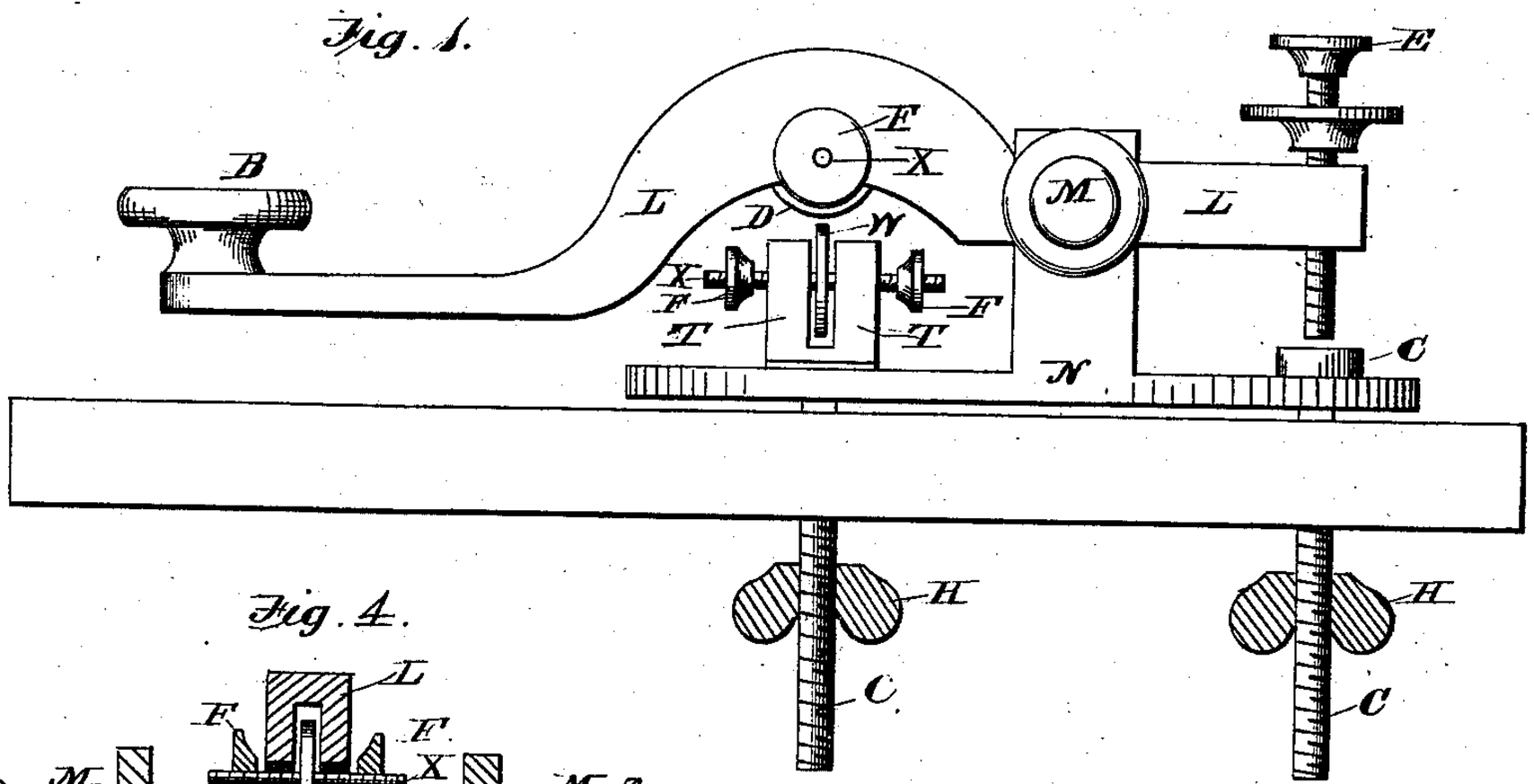


Fig. 4.

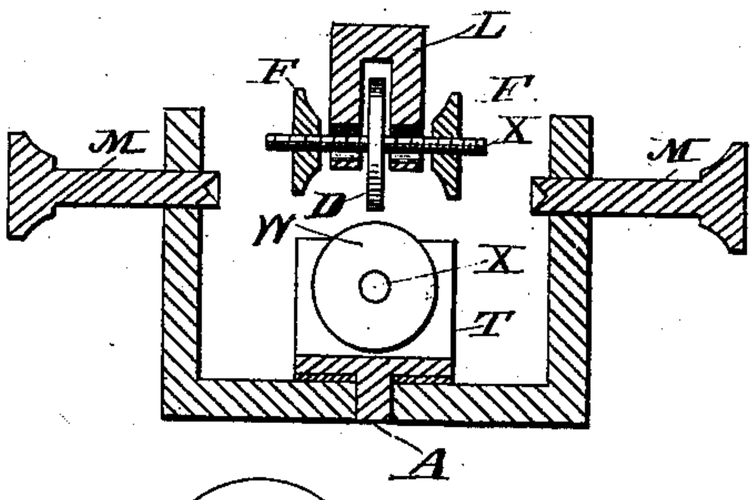


Fig. 2.

Fig. 5.

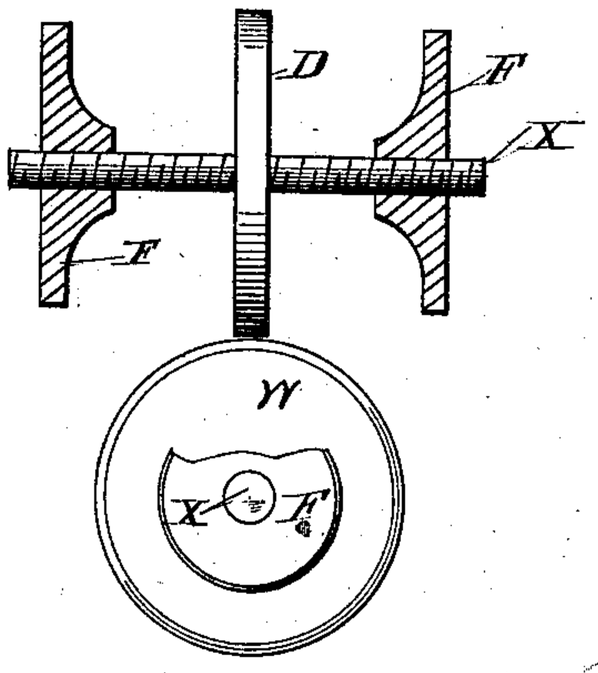
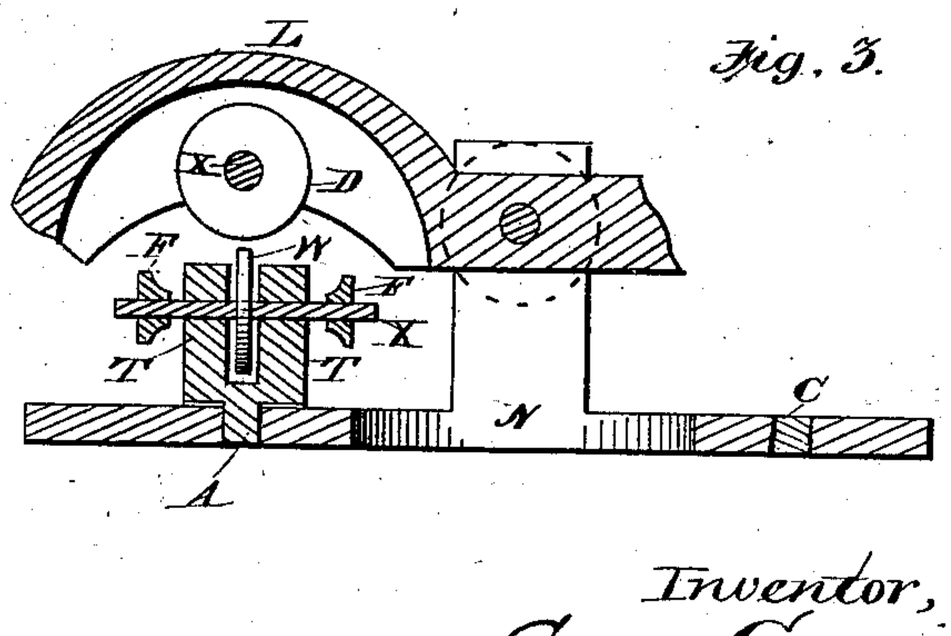


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE CUMMING, OF NEW YORK, N. Y.

TELEGRAPH-KEY.

SPECIFICATION forming part of Letters Patent No. 256,645, dated April 18, 1882.

Application filed May 10, 1881. (Model.)

To all whom it may concern:

Be it known that I, GEORGE CUMMING, of New York city, in the county of New York and State of New York, 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 arts to which my invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a side elevation of a telegraph-key embodying my said invention, Fig. 2 being a plan or top view of the same; Fig. 3, a vertical longitudinal section of said telegraph-key, taken on line P P drawn through Fig. 2; Fig. 4, a transverse section of the same, taken on a line, K K, Fig. 2; and Fig. 5, a detail of disks.

Like letters of reference indicate like parts.

The invention relates to the usual form of telegraph-keys, which consist of a standard supporting a lever which is hung on a trunnion.

Heretofore the contact between the two poles of telegraph-keys has been made either by metal points or the ends of wires cut square, or by a point working on a hemisphere, or a point coming in contact with the side, face, or margin of a disk. The first method is objectionable because by reason of oxidation or dust collecting between the contact-points of the key imperfect electrical connection is made, and what is called "sticking" is caused. The second and third methods are also objectionable, because they only partially remedy the same difficulty (viz., sticking) by allowing only one of the contact-points to be adjustable.

The object of my invention is to remedy the difficulty of sticking by providing for the adjustability of both contact-points, whereby better electrical connection is insured, and at the same time the smallest possible surface of actual contact is attained, together with the largest possible surface held in reserve, to be used at a moment's notice, when necessary or required.

The invention consists of two metal disks used as the two contact-points of the key, the peripheries of said disks being preferably placed at right angles to each other, and impinging upon each other at every motion of the lever and acting as the contact-surfaces. The two disks are sunk respectively in the lever or hammer, and in the standard or anvil directly underneath, the said disks being held in place by axles permanently affixed to the center of each disk, and set screws or nuts working on the same, the two disks working freely in slots and grooves provided for this purpose.

In the drawings, the standard T forms a bolt for the screw A, which runs through a hard-rubber core at the end of the standard N, and is fastened under the table, as is also screw C, by thumb-screws H H, as is usual, to keep the key firm and secure in its place. The disks or wheels D and W are adjusted in their places by axles X X, working in slots and grooves in the lever L and in the standard T, and held in place by set-screws F F, working on the said axles X X, the upper wheel or disk, D, with its axle, being secured in this way inside the lever L, and the lower disk, W, with its accompanying axle, being fastened in a similar manner inside the standard T. The axles of each disk are placed at right angles to each other, and the plane on which each disk is swung on its axle perpendicular to the plane of the other.

M M are trunnion-screws, and E the screw which regulates the vertical motion of the lever.

The operation of the device is as follows: By a pressure on the button B connection is made between the two electrical poles of the key by the two disks D and W touching one another on their peripheries on a line vertical to the axis of each disk. At any time, should dust accumulate or oxidation take place at the point of contact, the trouble can be quickly remedied by turning each disk slightly on its axis until a new or bright surface for contact is reached.

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 combination, with the operating-lever and base of a telegraph-key, of two rollers or

disks, one on the lever and the other on the base, said rollers having a peripheral contact and serving as the hammer and anvil for said key, substantially as described.

2. The combination of the lever and base of a telegraph-key with two disks having a peripheral contact, and arranged at approximately right angles to each other, and serving as the hammer and anvil for said key, substantially as described.

3. The combination of lever L, standard T, wheels or disks D and W, axles X X, and set screws or nuts F F, substantially as and for the purpose set forth.

GEORGE CUMMING.

Witnesses:
A. B. HINE,
J. L. MCGIMPSEY.