

G. ALLAN & J. W. BROWN.

TELEGRAPH-RELAY.

No. 178,578.

Patented June 13, 1876.

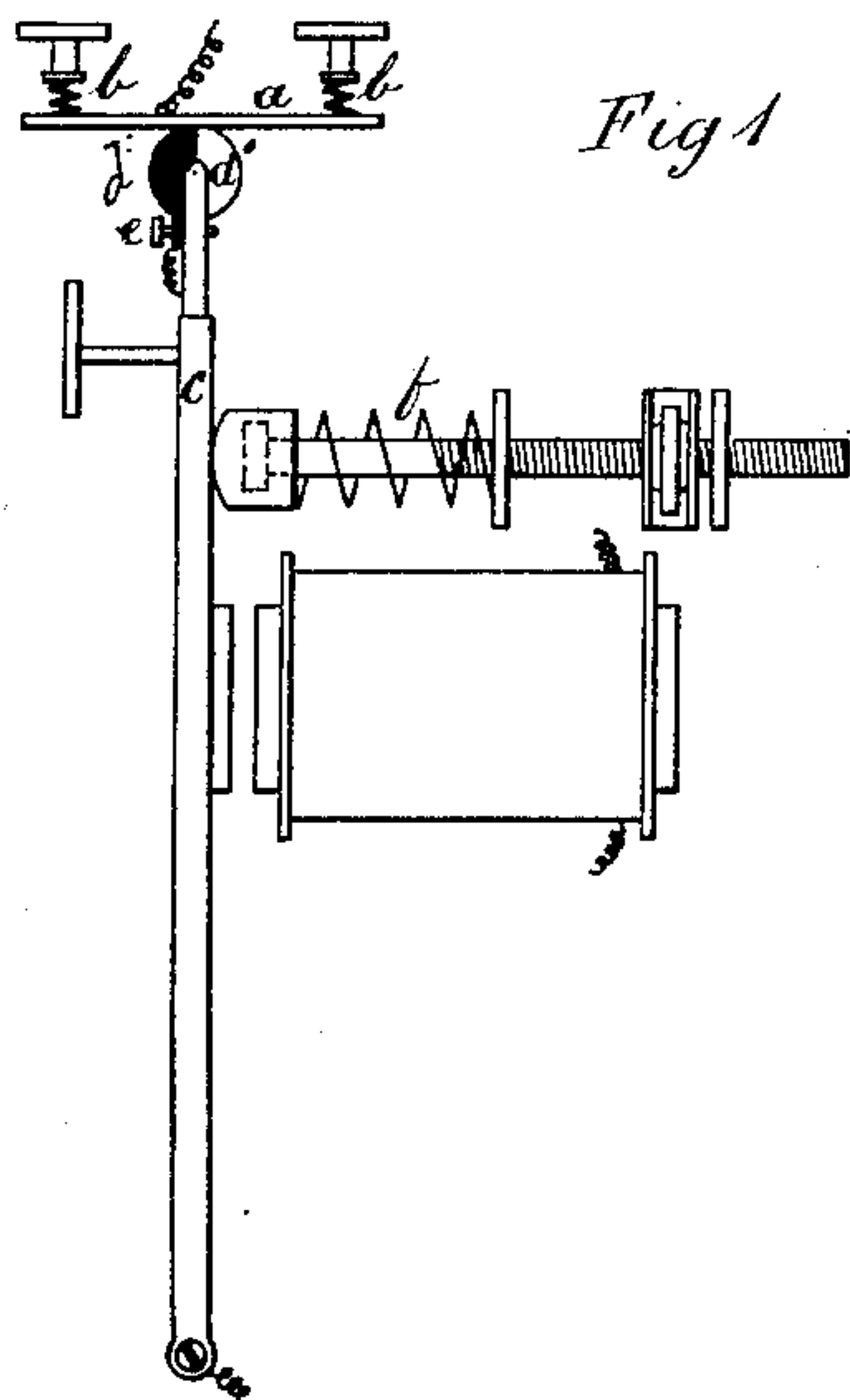


Fig 1

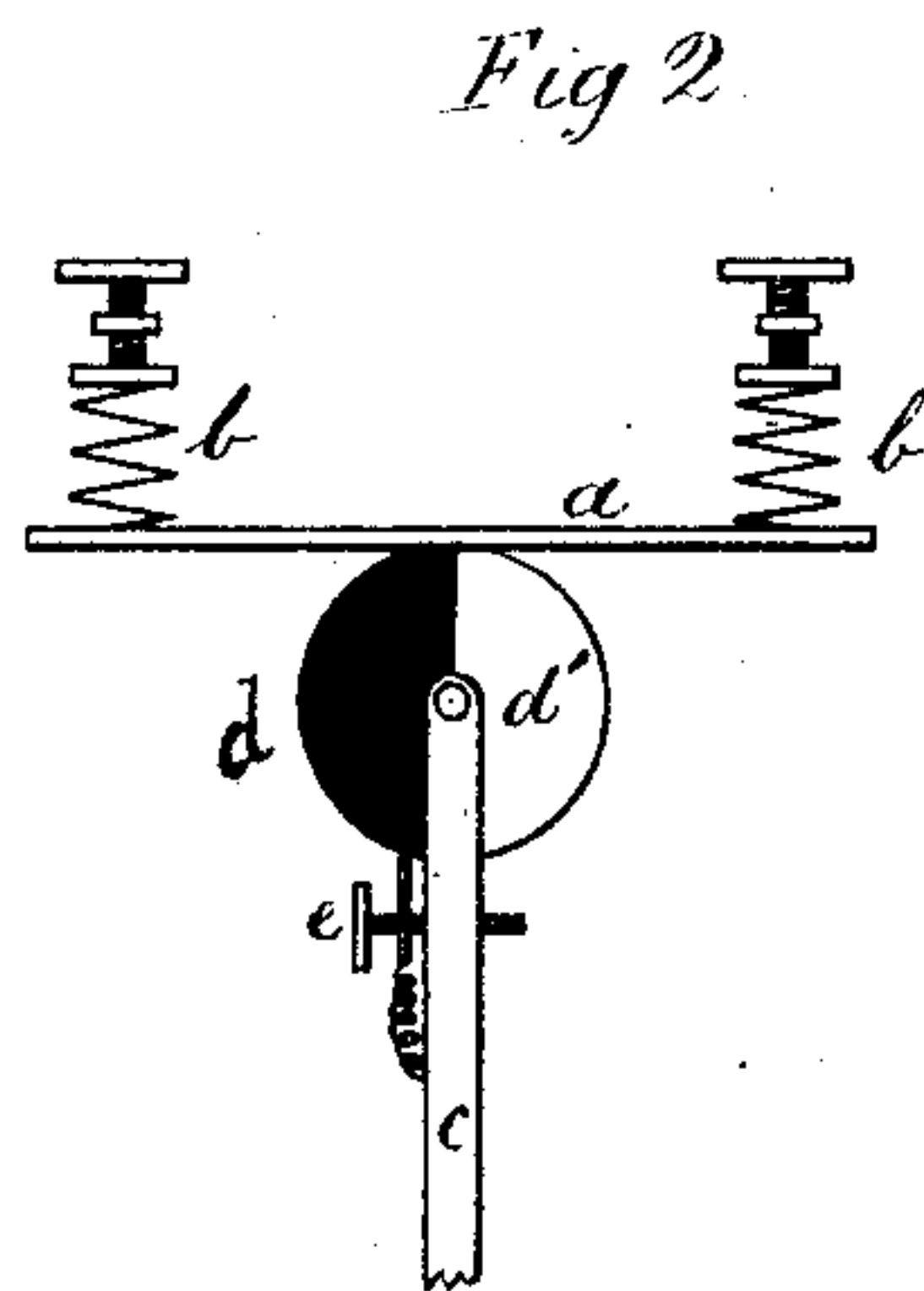


Fig 2

Witnesses

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IMPROVEMENT IN TELEGRAPH-RELAYS.

Specification forming part of Letters Patent No. **178,578**, dated June 13, 1876; application filed May 5, 1876.

To all whom it may concern:

Be it known that we, GEORGE ALLAN and JAMES WALLACE BROWN, of London, England, have invented an Improved Relay or Pecker, of which the following is a specification:

The object of the said invention is to record dots and dashes transmitted through a submarine cable or other difficult circuit—it may be a land line—by closing and breaking local circuit on any of the well-known recorders, either chemical or otherwise, at a superior rate of speed.

As means for effecting the above object, we construct a relay or pecker so that the armature or contact-maker shall act with a compound motion. Equilibrium-springs are preferably applied to the contact-maker or armature.

By the above means a fall or rise of potential in the actuating-current will serve as effectually to make or break contact as if the current were reversed.

Figures 1 and 2 of the sheet of drawings hereunto annexed are illustrative of our said invention.

Fig. 1 (the contact-receiver) consists of the adjustable metal friction-piece *a*, kept in position by the springs *b*; *c*, contact-maker, caused to vibrate in any convenient manner. The contact-maker *c* carries a disk, formed of the insulated portion *d* and conducting portion *d'*. *d'* is connected to *c*, and thence to a local wire. When *c* vibrates, contact is made and broken with *a* by the revolution of the disk *d d'* thereon. The disk is so adjusted that after contact has been made or broken it

slides, instead of rolls, along the surface of the friction-piece *a*. Therefore, on the reversal of the current, or even a diminution of the potential therein, contact is immediately broken or made by the motion of the armature through the counter-revolution of the disk. *e*, screw for adjusting the amount of revolution of the disk *d d'*. Equilibrium-springs *f* are employed to retain the armature and disk in their normal position.

Fig. 2 shows a modification of Fig. 1, in which a soft-iron relay is used. Like letters refer to the same parts as in Fig. 1.

Having now described our said invention so that others will be enabled to carry our improvements into effect, we claim—

1. The combination, with an armature-lever, of a wheel or segment composed of insulated and conducting sections, pivoted to the lever, and a yielding contact-plate, upon which such wheel impinges to make and break circuit, substantially as set forth.

2. The compound armature *c d d'*, formed of the lever *c* and the disk *d d'*, in combination with the receiver *a b*, operating substantially as and for the purposes set forth.

3. The combination of the parts *c* and *d d'* with the springs *f*, operating as and for the purposes set forth.

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