G. ALLAN & J. W. BROWN.

TELEGRAPH-RELAY.

No. 178,579. Patented June 13, 1876.

Fig 2

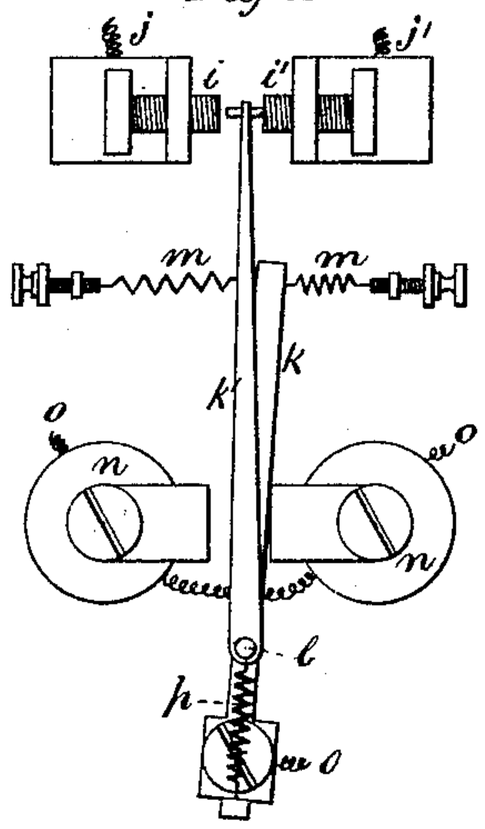
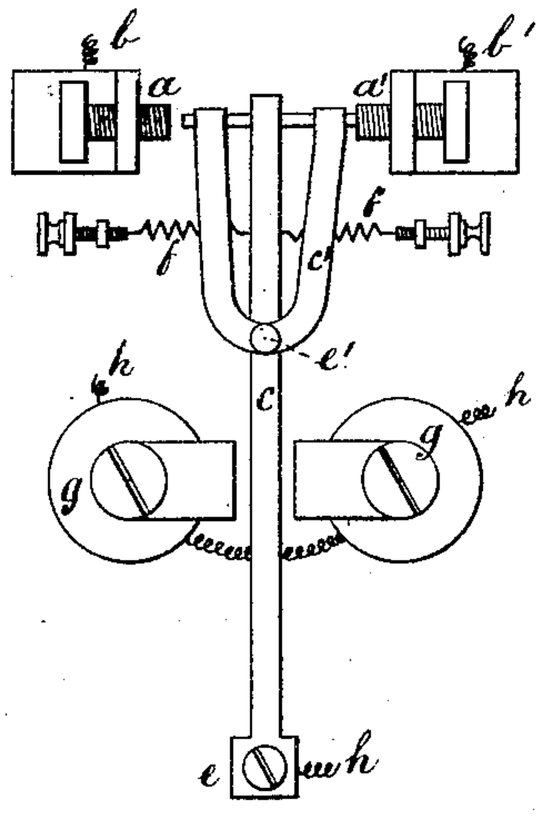


Fig 1



Witnesses

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GEORGE ALLAN AND JAMES WALLACE BROWN, OF LONDON, ENGLAND.

IMPROVEMENT IN TELEGRAPH-RELAYS.

Specification forming part of Letters Patent No. **178,579**, 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.

In Fig. 1, *a a'* are stops of the receiver; *b b'*, local wires. The contact-maker or armature is formed of two pieces, *c c'*. The part *c* vibrates on the fixed center *e*, and the piece *c'* on the pivot *e'*, secured to *c*. *f*, compensating-springs; *g*, electro-magnets; *h*, earth and line wires.

It will be seen that the piece *c* is free to vibrate the whole distance allowed by the compensating or equilibrium springs *f*, while the piece *c'* never moves a greater distance than the space between the stops *a a'*. The friction between *c c'* is sufficient to insure simultaneous movement except when the piece *c'* is retained by one of the stops *a a'*.

Fig. 2 shows a modification of mechanism, acting in the same manner as Fig. 1. Here *i i'* are the stops; *j j'*, local wires; *k k'*, contact-maker; *l*, center secured to *k*; *m*, compensating-springs; *n*, electro-magnets; *o*, earth and line wires; *p*, tension-spring, to adjust or regulate the friction between the pin *l* and piece *k'*.

Having now described our said invention so that others will be enabled to understand it, we claim—

1. The compound armature or contact-maker *c c'*, formed of the lever *c* and the yoke or piece *c'*, operating in combination with the receiver *a a'*, substantially as and for the purpose set forth.

2. The combination of the parts *c*, *c'*, and *f*, operating substantially as and for the purposes set forth.

3. The compound armature or contact-maker *k k'*, formed of the lever *k*, yoke or piece *k'*, and adjusting-spring *p*, in combination with the receiver *i i'*, operating substantially as and for the purposes set forth.

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