J. B. STONER.

TELEGRAPH CUT-OUT.

No. 184,052. Patented Nov. 7, 1876.

Fig. 1.

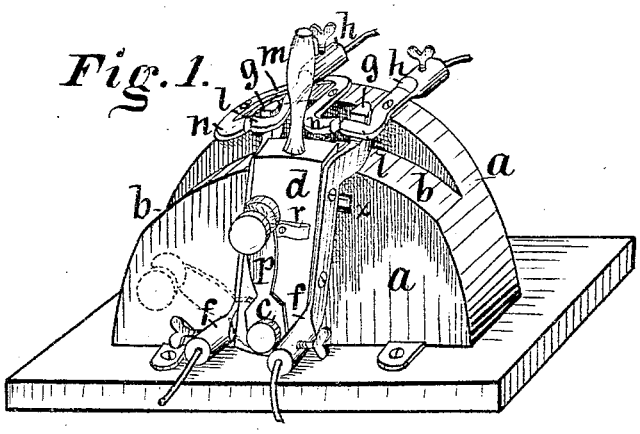


Fig. 2.

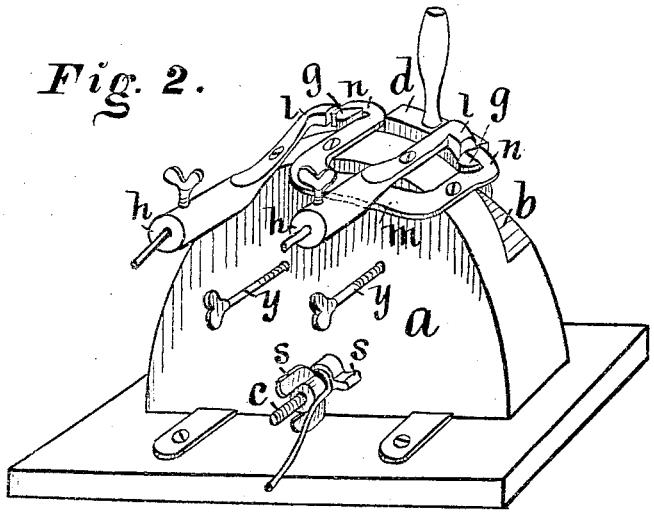
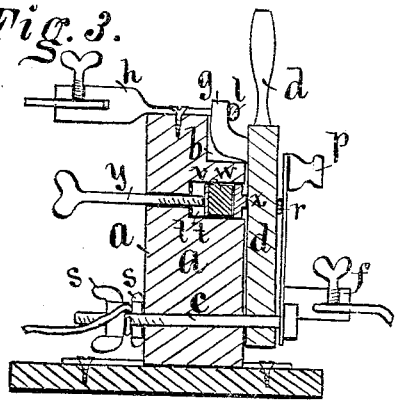


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

JACOB B. STONER, OF BLOOMFIELD, IOWA.

IMPROVEMENT IN TELEGRAPH CUT-OUTS.

Specification forming part of Letters Patent No. **184,052**, dated November 7, 1876; application filed August 29, 1876.

To all whom it may concern:

Be it known that I, JACOB B. STONER, of Bloomfield, in the county of Davis and State of Iowa, have invented an Improved Telegraph Cut-Out, of which the following is a specification:

The object of my invention is provide a portable instrument that is simple, and complete in itself, and that can readily be placed in position between a main line and a battery to receive the wires and connect and disconnect the battery instantly and safely, without breaking the current, by the adjustment of a lever, and also ground a message or current by adjusting a minor lever. It consists, first, in the form of a non-conducting block, and base adapted for mounting thereon fixed and also adjustable poles; second, in a pivoted and adjustable lever-carrying combined poles and connectors; third, in pivoting two adjustable levers by means of a fixed ground pole and connector; fourth, in a fixed U-shaped connecting-link, having poles on its ends adapted for transmitting electric currents to and from the fixed poles and the adjustable poles; fifth, in a device for adjusting my movable lever and its poles relative to the fixed poles to compensate for wear and to insure complete connections and operations, all as hereinafter fully set forth.

Figure 1 of my drawing is a perspective view, illustrating the construction and operation of my instrument.

a a is a semicircular wooden block and non-conducting base, secured upon a table or against a wall or window by means of the perforated plates or ears attached to its bottom. *b* is a shoulder formed in the top edge of the half-round block and eccentric therewith, but concentric with the pivotal point of the adjustable lever. *c* is the ground-pole of my instrument, in the form of a bolt passed transversely through the block *a a*, to serve as a pivot for the adjustable levers. *d* is my major lever, formed of wood or other non-conducting material. *f f* are connectors, to which the battery-wires are attached. These connectors of elbow form are rigidly secured to the sides of the lever *d* and terminate at their top ends in elbow-form poles *g g*. *h h* are connectors, rigidly fixed upon the top of the block *a a*, to receive the wires connected with a main line and second battery. They terminate in elbow-form poles *l l*, to engage the adjustable poles *g g*, and thereby form direct lines of communication. *m* is a U-shaped connecting-link, rigidly affixed on the top of the block *a a*. Its ends terminate in elbow-form poles *n n* and in line with the elbow-form poles *g g* and *l l*, but not in contact therewith. But these poles *n n* and link *m* are placed in such position relative to the poles *g g* and *l l* that the poles *g g* carried by the lever *d* can be passed from the poles *l l* to the poles *n n* without breaking the continuity of the electric current. *p* is a minor lever on the outside of the major lever *d* and also pivoted to the block *a a* by the bolt *c*. *r* is a friction-plate rigidly fixed across the face of the lever *d*. It has a concave in its center, which serves as a latch to the minor lever *p* to retain the lever inoperative in the center of the major lever *d*. By turning this minor lever *p*, composed of conducting material, to one side, as indicated by broken lines, it comes in contact with a connector, *f*, and becomes a connecting-link to conduct the electric current from the direct line to the pivotal bolt *c*, which bolt also serves as a combined pole and connector to transmit the current and message to the ground-wire. (Shown on the opposite side of the block *a a*.)

Fig. 2 is a perspective view, showing the reverse side of Fig. 1.

s s are two thumb-screws on the bolt *c*, clamping the ground-wire to the bolt *c*, which thus becomes a connector.

Fig. 3 is a transverse and central elevation, illustrating the arrangement and combination of the adjusting mechanism employed to keep the instrument reliable and in order.

t t is a cavity formed in the block *a a*. *v* is a rigid movable plate fitted into the cavity. *w* is a rubber spring or cushion. *x* is a movable metal bearing fitted in the cavity, and rests against the outside of the elastic cushion *v*. This metal bearing *x* is engaged by the inside face of the adjustable lever *d*. *y* is a set-screw, which passes through the block *a a* and metal plate *z* fixed in the cavity *t t*, and engages the movable plate *v*. By the use of one or more set-screws, *y*, thus applied, the

vertical lever *d* and the poles *g g* carried thereby can be readily adjusted laterally, as required, to bring the adjustable poles *g g* into close contact with the fixed poles *l l* and *n n*.

In the practical use of my instrument, a battery is "cut out" and its wires connected and disconnected at pleasure, by simply adjusting the major lever *d* alternately from right to left, and a message and current are "grounded," by simply turning the minor lever *p* to one side to engage one of the connectors *f*.

I claim as my invention—

1. The semicircular non-conducting block *a a*, having the shoulder *b*, in its top edge, substantially as and for the purposes shown and described.

2. The pivoted and adjustable lever *d*, carrying the combined connectors and elbow-form poles *f g*, substantially as and for the purposes shown and described.

3. The adjustable levers *d* and *p*, in combination with the bolt *c* and block *a a*, substantially as and for the purposes shown and described.

4. The U-shaped connecting-link *m*, having elbow-form poles *n n* on its ends, substantially as and for the purposes set forth.

5. The combined connectors and poles *h l* and the U-shaped link *m*, having elbow-form poles *n n*, fixed on the block *a a*, in combination with the adjustable lever *d*, carrying the combined connectors and poles *f g*, substantially as and for the purposes shown and described.

6. The block *a a*, having the side cavity *t t* and the fixed poles *l l* and *n n*, and the adjusting mechanism *v w x y*, in combination with the adjustable lever *d*, carrying the movable poles *g g*, substantially as and for the purposes shown and described.

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Witnesses:

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