No. 850,402. PATENTED APR. 16, 1907.

C. E. SCRIBNER.

RELAY

APPLICATION FILED MAR. 31, 1906.

Fig. 1

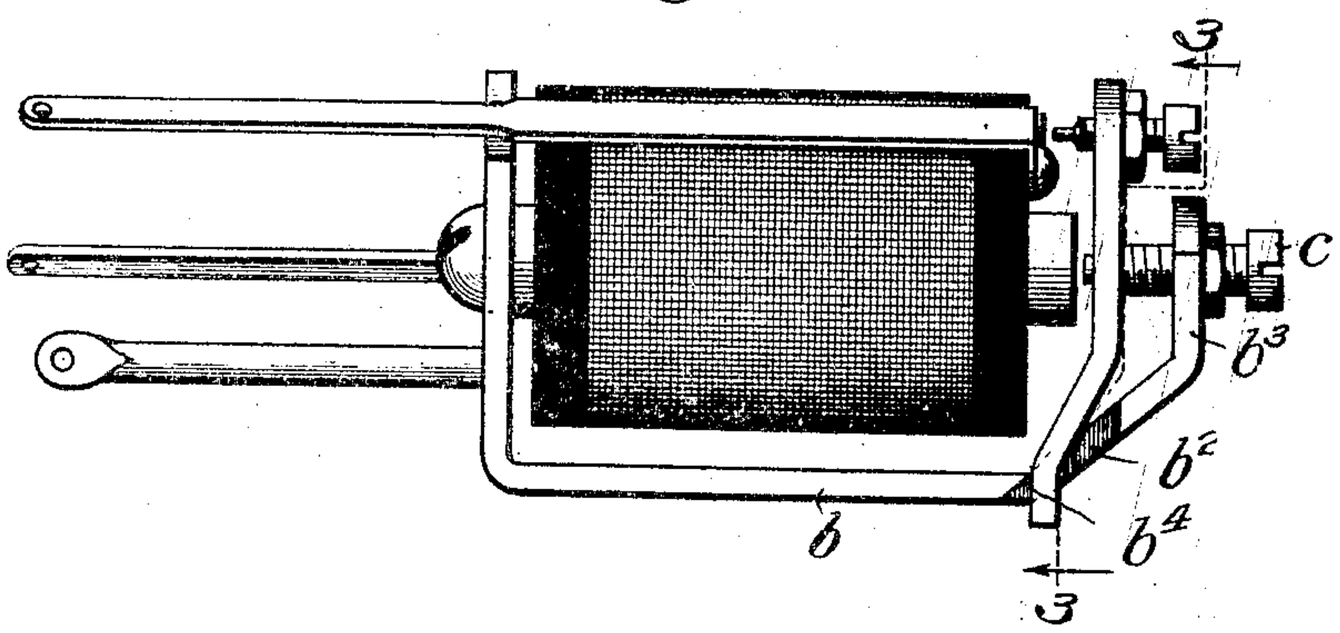


Fig. 2.

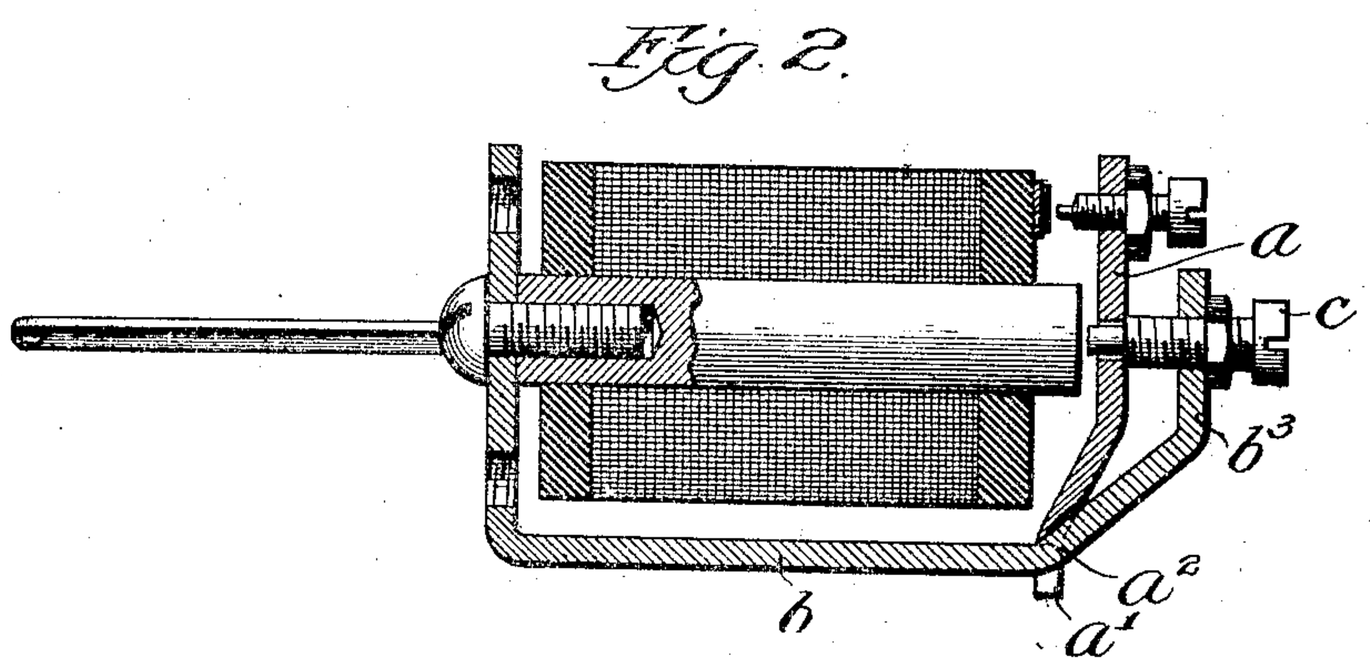


Fig. 3.

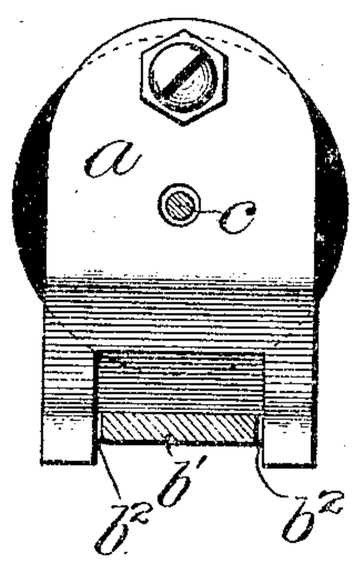
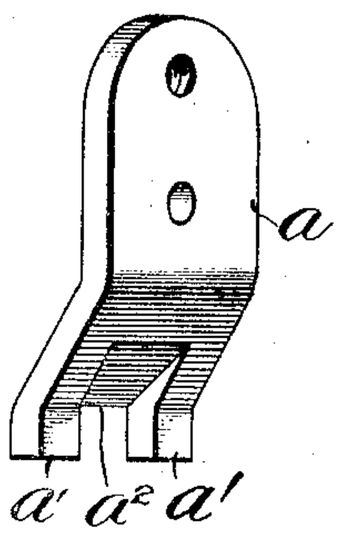


Fig 4



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES E. SCRIBNER, OF JERICHO, VERMONT, ASSIGNOR TO WESTERN ELECTRIC COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

RELAY.

No. 850,402. Specification of Letters Patent. Patented April 16, 1907.

Application filed March 31, 1906. Serial No. 309,060.

To all whom it may concern:

Be it known that I, CHARLES E. SCRIBNER, a citizen of the United States, residing at Jericho, in the county of Chittenden and State of Vermont, have invented a certain new and useful Improvement in Relays, of which the following is a full, clear, concise, and exact description.

My invention relates to a relay, and its object is to provide a construction in which the armature is delicately mounted so as to be accurately responsive to the energization or deënergization of the magnet.

My invention contemplates a structure in which there is a double-knife-edge arrangement of the armature and its seat, thereby reducing the friction of the parts to a minimum. This feature is important in view of the trouble which has been encountered in relays having light armatures, owing to the failure of said armatures to be restored by the slight force which gravity exerts.

A further feature of my invention consists in the upward inclination from the seating-point of the pole-piece which forms the seating member. With this construction, in case the armature is slightly displaced from its seat it is restored into position by the action of gravity.

I will describe my invention more particularly by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a relay embodying my invention. Fig. 2 is a central longitudinal section thereof. Fig. 3 is a section on line 3 3 of Fig. 1, and Fig. 4 is a detail perspective view of the armature of the relay.

Similar letters of reference refer to similar parts in all the figures of the drawings.

The armature *a* has a tongue-and-groove seat on the pole-piece *b*, the lower end of the armature between the lugs *a'* *a'* having a knife-edge a^2. The pole-piece *b* has a tongue *b'*, formed by cutting away portions of the pole-piece on its opposite sides, forming grooves b^2 b^2. The tongue is inclined obliquely upward for a slight distance, and the pole-piece has a vertical extension b^3, forming a mounting-post for a stop-screw *c*. The particular form of stop-screw shown is no part of my invention.

The armature *a* is seated upon the pole-piece *b*, the lugs *a'* *a'* straddling the tongue *b'*. The lower walls b^4 of the grooves b^2 are knife-edged, the armature and pole-piece thus having each a knife-edge bearing against the other.

The armature extends obliquely upward for a short distance from its seating edge and then extends vertically. By this construction the line of center of gravity is in front of the seating-point of the armature, causing the same to retract when the magnet is deenergized.

In case the armature becomes slightly unseated the inclined tongue *b'* causes the same to be returned by gravity to its seating position.

Having thus described my invention, I claim—

1. In a relay, the combination with a magnet, of an armature having a knife-edge, a pole-piece forming a seat for said armature, said pole-piece being inclined upwardly from the seating-point of the armature.

2. In a relay, the combination with a magnet, of an armature having a knife-edge, a pole-piece forming a seat for said armature, said pole-piece being inclined obliquely upward from the seating-point of the armature.

3. In a relay, the combination with a magnet, of an armature and a pole-piece, each having a knife-edge bearing against the other.

4. In a relay, the combination with a magnet, of an armature, a pole-piece forming a seat therefor, said armature and pole-piece each having a knife-edge bearing against the other, and said pole-piece being inclined upwardly from the seating-point of the armature.

5. In a relay, the combination with a magnet, of an armature, a pole-piece forming a seat therefor, said armature and pole-piece each having a knife-edge bearing against the other, and means for retaining the armature in its seated position.

6. In a relay, a magnet, an armature, a pole-piece forming a tongue-and-groove seat for the armature, said pole-piece and armature each having a knife-edge bearing against the other.

7. In a relay, a magnet, an armature, a pole-piece forming a tongue-and-groove seat for the armature, said pole-piece and arma-

ture each having a knife-edge bearing against the other, and said pole-piece being inclined upwardly from the seating-point of the armature.

8. In a relay, a magnet, an armature, a pole-piece forming a tongue-and-groove seat for the armature, said pole-piece and armature each having a knife-edge bearing against the other, and each extending obliquely upward from said bearings.

In witness whereof I hereunto subscribe my name this 29th day of March, A. D. 1906.

CHARLES E. SCRIBNER.

Witnesses:

ROY T. ALLOWAY,

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