F. B. COREY.

RELAY.

APPLICATION FILED JUNE 1, 1906.

912,079.

Patented Feb. 9, 1909.

Fig. 2.

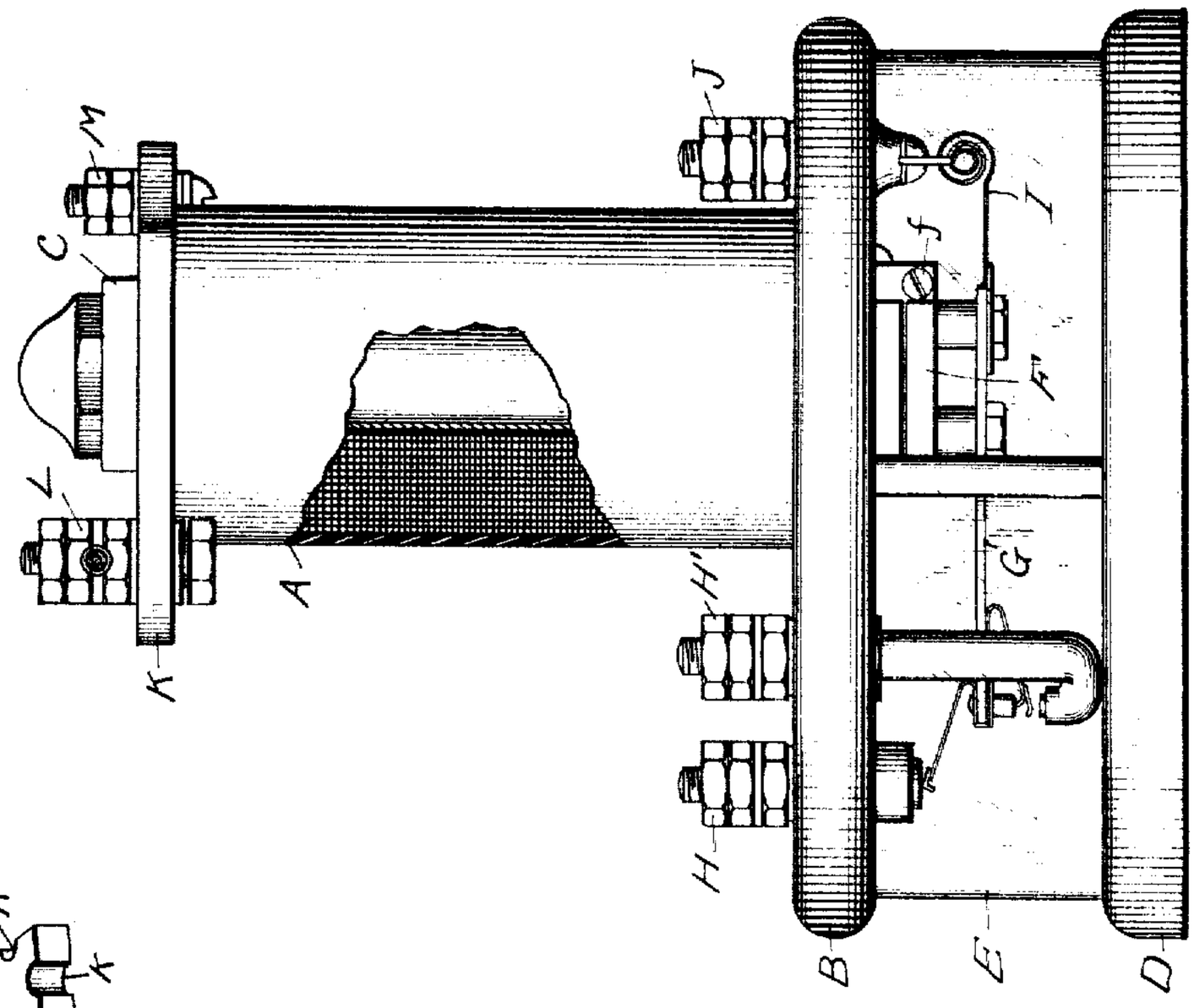



Fig. 3.

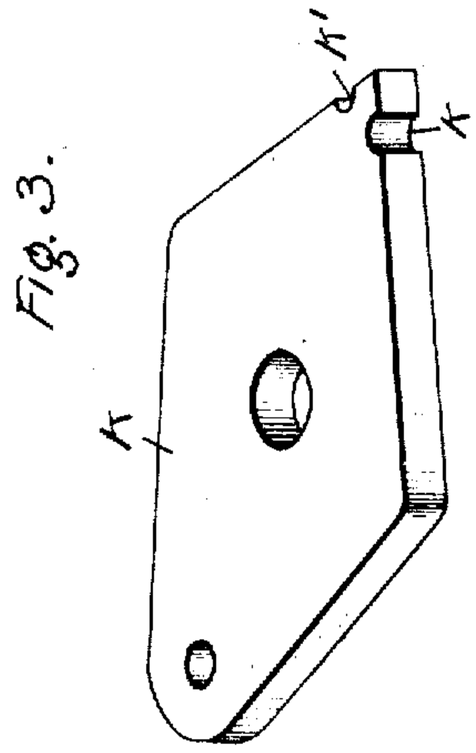
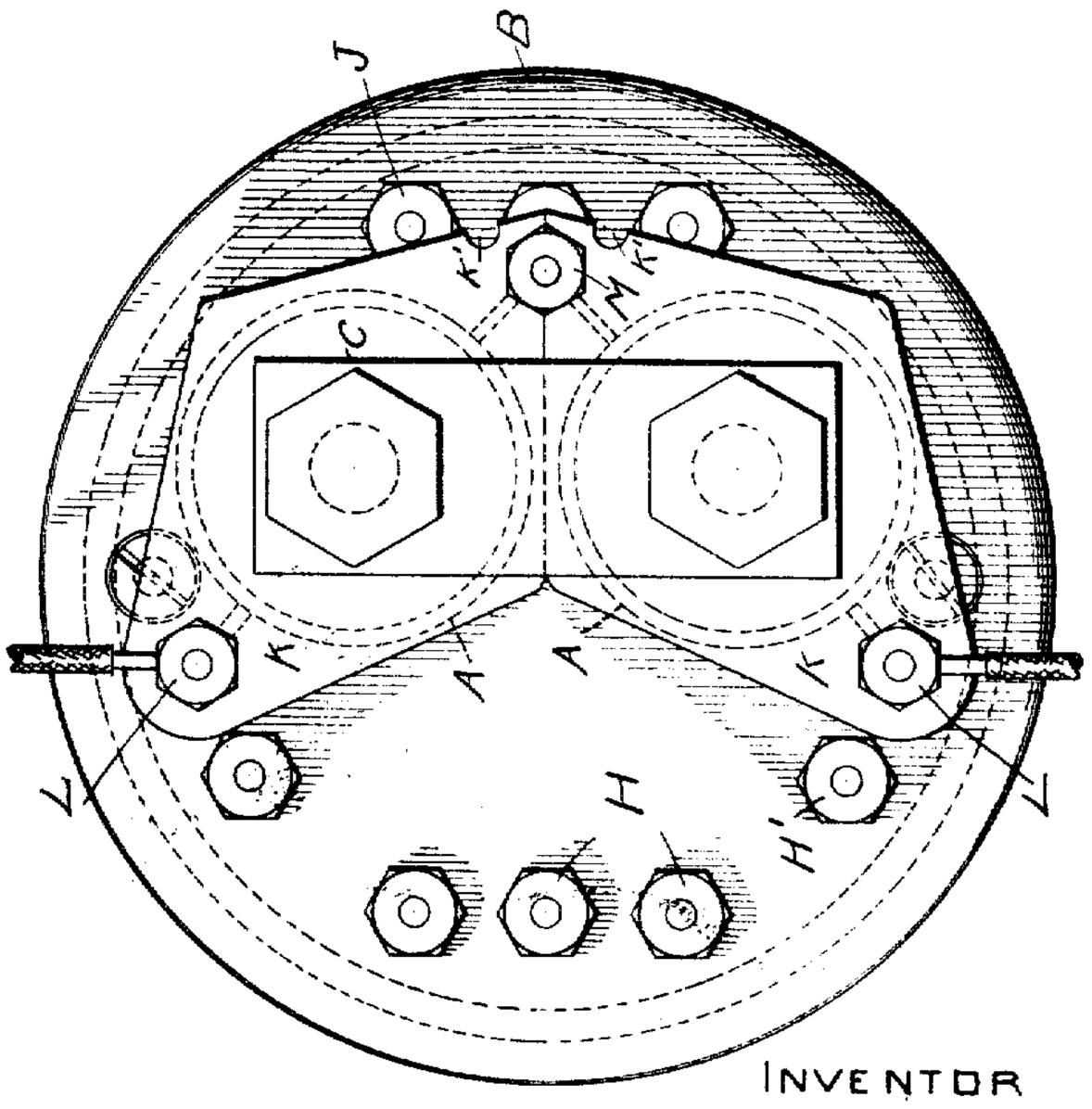



Fig. 1.




WITNESSES.

M Ray Taylor.

Helen Defoud

INVENTOR

FRED B. COREY.

by Albert G. Davis

Atty.

# UNITED STATES PATENT OFFICE.

FRED B. COREY, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

## RELAY.

No. 912,079. Specification of Letters Patent. Patented Feb. 9, 1909.

Application filed June 1, 1906. Serial No. 319,754.

*To all whom it may concern:*

Be it known that I, FRED B. COREY, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Relays, of which the following is a specification.

My invention relates to electromagnets, and particularly to magnets for use in track-relays; and its object is to provide a novel, simple and economical arrangement for securely supporting the terminal binding-posts for the coils.

My invention consists in providing the two magnet spools of a relay with end-flanges of insulating material having portions extending beyond the magnet coils for supporting the terminal binding-posts, and adapted to support a binding-post between the flanges of the two spools.

My invention further consists in shaping each end symmetrically, so that the two magnet-spools are interchangeable in position.

My invention will best be understood by reference to the accompanying drawings, in which—

Figure 1 shows a plan-view of a relay arranged in accordance with my invention; Fig. 2 shows a side-elevation of the same; and Fig. 3 shows a perspective view of one of the end-flanges.

The relay shown in the drawings, comprises two magnet-spools A A mounted side-by-side on an insulating supporting base B, with their cores joined at the top of the spools by a magnetic yoke C. The moving parts of the relay are inclosed between the base-plate B and a second base-plate D; the intermediate member E being preferably formed of glass, so as to permit the inspection of the moving parts.

F represents the armature pivoted at *f*, carrying a contact member G adapted to engage the front contacts H or back contacts H'. The current is led to or from the contact member G by a flexible spiral member I, which connects the contact member to the binding-post J. The construction, thus far described, is similar to that ordinarily employed in devices of this character, and forms no part of my invention.

The upper end-flanges K, of the magnet coils are formed of insulating material, as usual, but are made somewhat heavier, and are extended beyond the coil so as to receive binding-posts L, to each of which one terminal of one magnet-coil is connected. These binding-posts act as connections between the relay terminals and the track or source of current. The end-flanges of the two magnet-spools are arranged to engage each other along a line between the two spools, and are provided with opposite recesses *k*, in which the binding-post M is clamped between the two end-flanges. To this binding-post are connected the other terminals of both coils, so that the two coils are connected in series through this binding-post. It will be seen that each end-flange is provided with a second recess *k'* symmetrically arranged with respect to the first recesses. These recesses *k'* are not used with the two coils in the position shown, but render the two spools interchangeable in potion, which is a material advantage in replacing damaged coils.

When a cylindrical casing is employed for inclosing the relay contacts, as shown in the drawings, with the magnet spools mounted eccentrically, it is desirable that the flanges at the upper ends of the magnet spools should not project beyond the periphery of the casing. The quadrilateral form of flange, which I have shown in the drawing, with one diagonal longer than the other, affords a support for the terminals at some distance from each other and from the magnet yoke, without projecting over the edge of the casing.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. In a relay, two magnet spools mounted side by side having end-flanges of insulating material, and a terminal binding-post clamped between said end-flanges.

2. In a relay, two magnet spools mounted side by side having similar end-flanges of insulating material engaging each other along one side, each of said end-flanges being of quadrilateral shape with unequal diagonals, and terminal binding posts mounted on said flanges near the ends of the longer diagonals.

3. In a relay, two magnet-spools mounted side-by-side having end-flanges of insulating material engaging each other, and a terminal binding-post clamped between said end flanges.

4. In a relay, two magnet-spools mounted side-by-side having end-flanges of insulating

material engaging each other, said flanges being provided with opposite recesses, and a terminal binding-post clamped between said end flanges in said recesses.

5. In a relay, two magnet-spools mounted side-by-side having end-flanges of insulating material engaging each other, said flanges being provided with opposite recesses, and a terminal binding-post clamped between said end-flanges in said recesses, each of said flanges having a second recess arranged symmetrically with respect to the first, whereby said magnet-spools are interchangeable in position.

6. In a relay, two magnet-spools mounted side-by-side having end-flanges of insulating material engaging each other, and a terminal binding-post clamped between said end-flanges, said flanges being symmetrically shaped, whereby the magnet-spools are interchangeable in position.

7. In a relay, two magnet-spools mounted side-by-side having end-flanges of insulating material engaging each other, a binding-post clamped between said end-flanges and connected to a terminal of both magnet-coils, and two binding-posts mounted on extensions of the flanges respectively and respectively connected to the other terminals of the two magnet-coils.

8. In a relay, two magnet-spools mounted side-by-side having end-flanges of insulating material engaging each other, a binding-post clamped between said end-flanges and connected to a terminal of both magnet-coils, and two binding-posts mounted on extensions of the two flanges respectively and respectively connected to the other terminals of the two magnet-coils, said flanges being symmetrically shaped, whereby the magnet-spools are interchangeable in position.

9. In a relay, two magnet-spools mounted side-by-side having end-flanges of insulating material engaging each other, said flanges being provided with opposite recesses, a binding-post clamped to a terminal of both magnet-coils, and two binding-posts mounted on extensions of the two flanges respectively and respectively connected to the other terminals of the two magnet coils, said flanges each having a second recess arranged symmetrically with respect to the first, whereby the magnet-spools are interchangeable in position.

10. In a relay, a cylindrical casing, contacts inclosed therein, a pair of magnet spools for actuating said contacts mounted eccentrically on said casing, and having similar end flanges of insulating material engaging each other along one side, each of said end flanges being of quadrilateral shape with unequal diagonals, and terminal binding posts mounted on said flanges near the ends of the longer diagonals.

In witness whereof, I have hereunto set my hand this 31st day of May, 1906.

FRED B. COREY.

Witnesses:

BENJAMIN B. HULL,

HELEN ORFORD.