

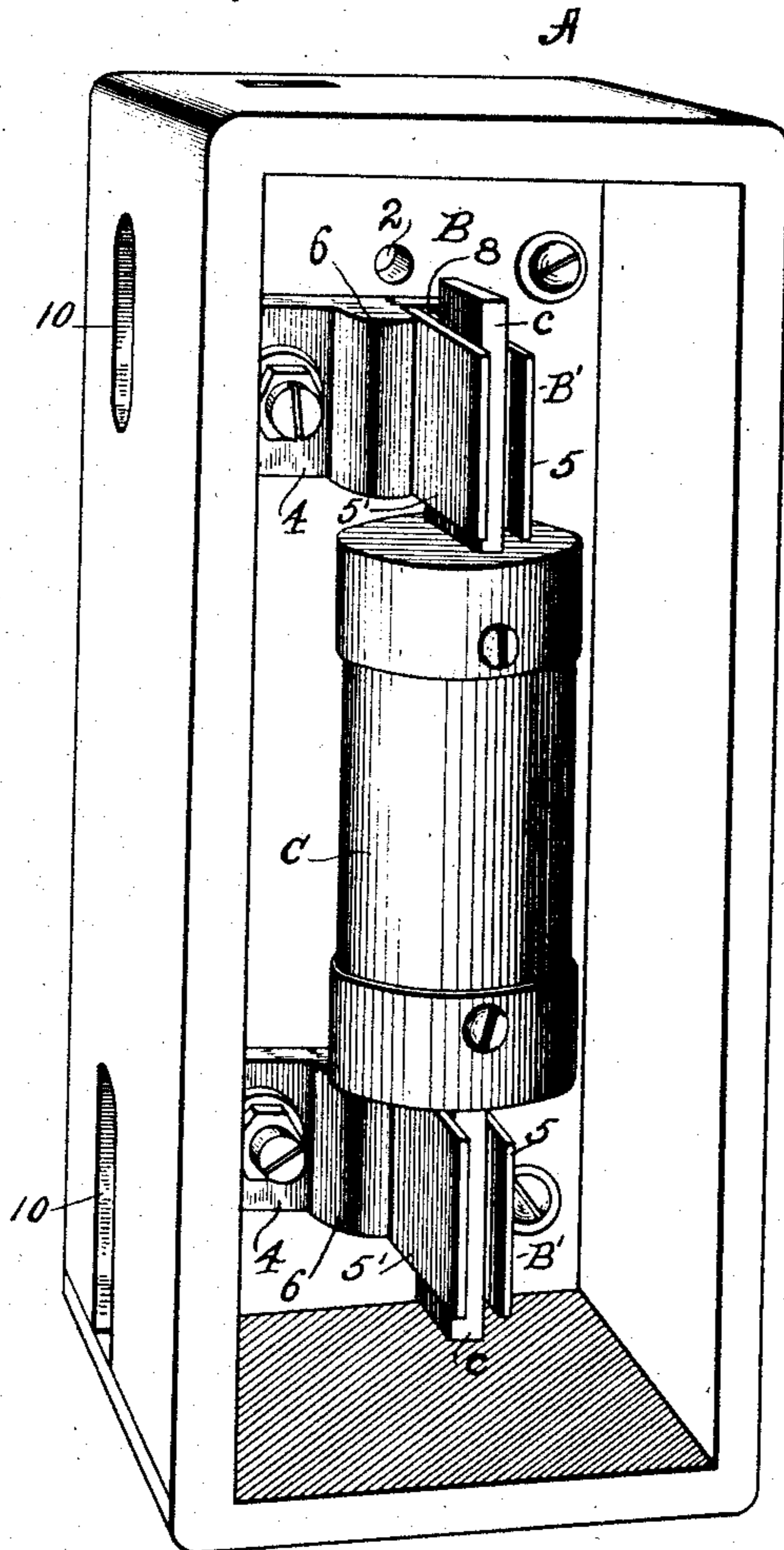
No. 881,965.

PATENTED MAR. 17, 1908.

F. L. SESSIONS.
FUSE AND FUSE BOX.
APPLICATION FILED OCT. 20, 1905.

2 SHEETS—SHEET 1.

Fig. 1.



Witnesses
Jos. Gregory
N. Curtis Lammond

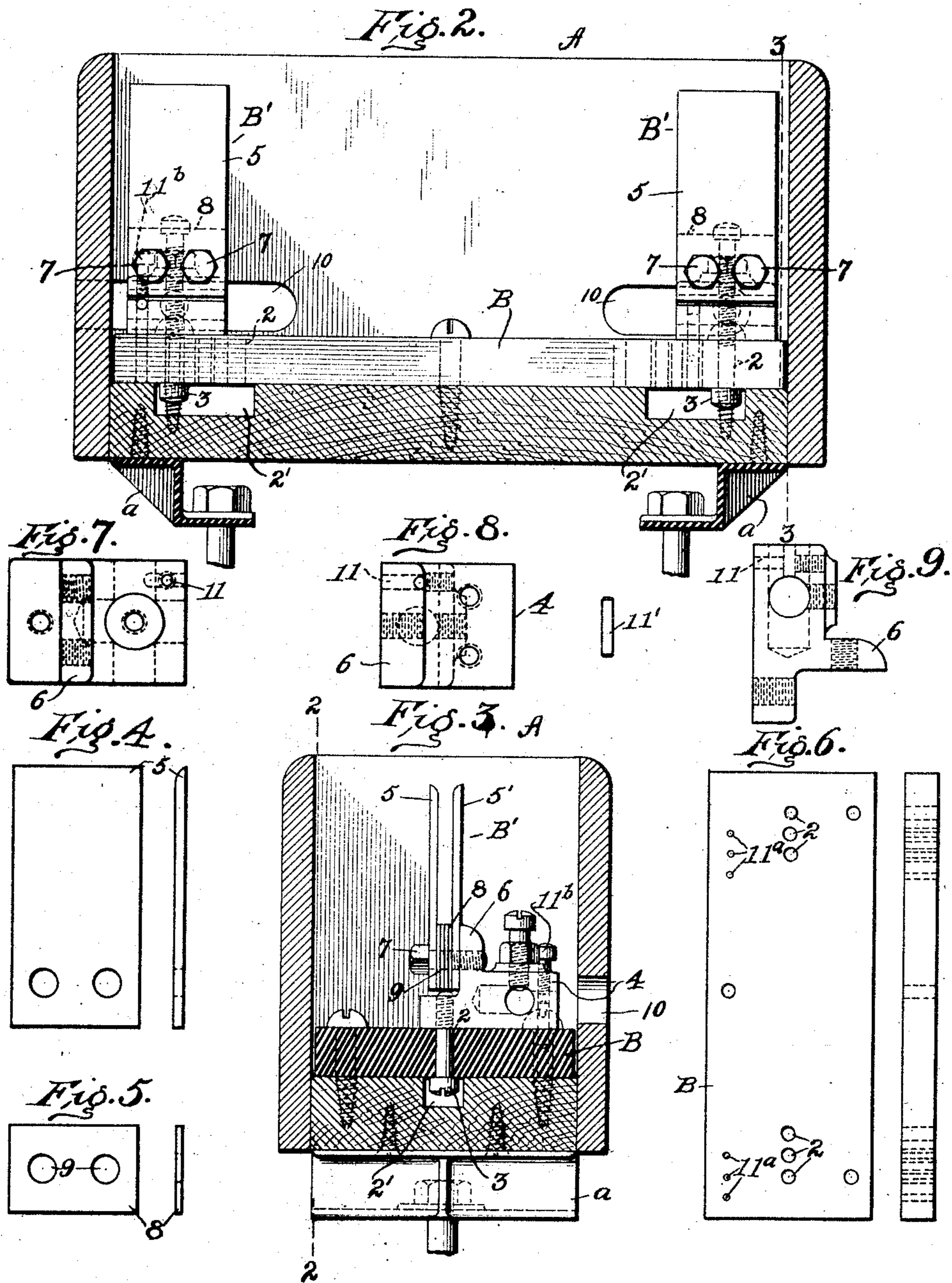
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

FRANK L. SESSIONS, OF COLUMBUS, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE JEFFREY MANUFACTURING COMPANY, A CORPORATION OF OHIO.

FUSE AND FUSE-BOX.

No. 881,965.

Specification of Letters Patent.

Patented March 17, 1908.

Application filed October 20, 1905. Serial No. 283,661.

To all whom it may concern:

Be it known that I, FRANK L. SESSIONS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Fuses and Fuse-Boxes, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to fuses or cut-outs.

It has for its object to produce a fuse box provided with adjustable contact devices adapted to accommodate fuses of varying contact-carrying capacities, which fuses differ in thickness and length.

In the drawings, Figure 1 is a perspective view looking into a fuse box embodying my improvements and showing a fuse in position. Fig. 2 is a vertical section, taken on the line 2—2 of Fig. 3, the fuse being removed. Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 2. Fig. 4 shows a contact plate in side and end elevation. Fig. 5 shows a spacing strip or plate in side and end elevation. Fig. 6 shows the insulating base plate in side and end elevation. Figs. 7, 8, and 9 are views of one of the binding posts.

In the drawings, A represents a fuse box or inclosure constructed of suitable insulating material and adapted to be supported in any desired position by brackets *a* attached to the back wall thereof. Detachably secured to the back wall of the box is an insulating block or base B to which the contact devices, represented as a whole by B', are attached. The base B near either end is provided with a series of centrally arranged apertures 2 which are preferably all in line with each other. The back wall is grooved or recessed immediately adjacent to each of said series of apertures, as indicated at 2', to accommodate the heads of the bolts 3, which extend through said apertures and are adapted to secure the binding posts 4 to the base plate B. By providing the base with a series of apertures, as shown, the contact devices or fuse-carrying elements, comprising the binding posts and the contact members for the fuse terminals, may be adjusted toward or from each other according to the length of the fuse to be used by inserting the bolts 3 through the proper apertures of each series.

5, 5', indicate the contact members or forks between which the terminals *c, c*, of the cartridge fuse C are supported. The contact

members preferably consist of a pair of separable parallel parts formed of metal which is a good conductor of electricity, and removably secured to the projection 6 of the binding post 4 by clamping bolts 7, 7.

8 indicates comparatively thin removable spacing plates adapted to be arranged between the contact members 5, 5', near their inner ends and provided with apertures 9 through which pass the bolts 7, the said bolts being adapted to bind the said contact members and spacing plates together. To adjust the space or distance between the contact members, the bolts 7 are removed and the desired number of spacing plates 8 are inserted between the said contact members, as shown in Fig. 3. These parts are then firmly bound together in electrical contact with each other and with the binding post 4 by the clamping bolts 7.

The fuse C may be of any desired shape or size and the contact members or fuse-carrying elements 5, 5' may be shaped to correspond with and to receive the ends of the said fuse. I prefer, however, to use a fuse such as shown in the drawings, having extending from either end thereof a flat rectangular contact terminal above referred to as *c*. The side walls of these terminals are preferably parallel and flat, and adapted to be inserted between and to be yieldingly engaged by the parallel walls of one of the contact members. It will be noted that the insertion and withdrawal of a fuse from the contact members is readily accomplished in view of the arrangement of the parts of the said contact members and the construction of the fuse. The operator simply needs to grip the fuse near its center and force its terminals between the plates of the contact members in order to properly position the fuse.

I have found it desirable to insure the proper positioning of the binding posts upon the base plate B and their proper alignment with each other, to provide detachable pins 11' which are adapted to be inserted in the holes 11 in the binding posts and to engage the walls of the holes 11^a in the base plate. These holes 11^a in the base plate are so arranged in relation to the holes 2 at the adjacent end of the base plate as to insure that when the binding post at that end of the device is connected to the plate through any one of the holes 2, it can be swung about the axle of its connecting bolt 3 until the hole 11

through the binding post registers with one of the holes 11^a, and a pin 11' may then be dropped into place, insuring that the binding posts will be properly positioned. 11^b is a screw fitting the threaded outer end of the hole 11 and adapted to retain the pin 11' in position. The conductors leading to the binding posts 4, 4, preferably enter the box through elongated openings 10, 10, in one side wall of the box and near either end thereof, these elongated openings permitting the conductors to move longitudinally within the box to permit the adjustment of the contact devices therein.

It will be noted that the mechanism embodying my improvements is capable of adjustment longitudinally to accommodate various lengths of fuses, and that the fuse-carrying contacts are each in themselves laterally adjustable to accommodate various widths of fuses.

I have found the fuse-carrying mechanism embodying my improvements to be of great importance where the loads on the circuits in which the fuses are inserted, vary considerably, and where it is advisable and often necessary at different times to use fuses of different capacities.

What I claim is—

1. A fuse-carrying device comprising a base plate, a pair of fuse-carrying elements, and means for securing each of said fuse-carrying elements to said base plate in various positions longitudinal of the plate.

2. A fuse-carrying device comprising a base plate, a pair of fuse-carrying contacts each consisting of a pair of plates adapted to yieldingly engage one terminal of a fuse, and means for adjusting the fuse-engaging surfaces of each of said contacts toward and away from each other to accommodate fuses having terminals of different thickness.

3. A fuse-carrying device comprising a pair of fuse-carrying elements, each element comprising a pair of plates arranged side by side and adapted to receive one terminal of a fuse between them, means for adjusting said plates toward and away from each other, and means for adjusting said contact elements toward and away from each other.

4. A fuse-carrying device comprising a pair of fuse-carrying elements, each element consisting of a pair of flat plates arranged parallel to each other and adapted to receive between them one terminal of a fuse, means for adjusting the plates of each carrying element relatively to each other, and means for adjusting the pairs of plates relatively to each other.

5. A fuse-carrying device comprising a base plate, a pair of forked fuse-carrying elements adapted to be adjusted longitudinally of said base plate and to be secured thereto in their various positions of adjustment, and means for adjusting the fork arms of each

contact-carrying element relatively to each other to adapt the said element for carrying fuse terminals of different thickness.

6. A fuse-carrying device comprising a pair of binding posts, means for adjusting the binding posts relatively to each other to vary the distance between them, and fuse-carrying elements each secured to one of said binding posts and each adapted to receive and carry one terminal of a fuse.

7. A fuse-carrying device comprising a pair of binding posts, means for adjusting said binding posts relatively to each other to vary the distance between them, and fuse-carrying elements each secured to one of said binding posts and each adjustable to accommodate fuse terminals of different thickness.

8. A fuse-carrying device comprising a base plate of insulating material, a pair of binding posts adjustable relatively to each other along said base plate, and fuse-carrying elements each secured to one of said binding posts and each adjustable to accommodate fuse terminals of different thickness.

9. A fuse-carrying device having contact members for yieldingly engaging the opposite ends of a fuse, means for adjusting said contact members relatively to each other, and means for adjusting each of said contact members to accommodate different sizes of fuse, substantially as set forth.

10. The combination with a base, of a pair of binding posts secured thereto, a pair of separable contact members for each binding post between which the fuse terminals rest, bolts for securing the contact members to the binding posts, and a fuse arranged between the said contact members, substantially as set forth.

11. The combination with a base, of a pair of binding posts mounted thereon and adjustable toward and from each other, a pair of removable contact members for each binding post between which the fuse terminals are mounted, bolts for securing the contact members to the binding posts, and a fuse arranged between the said contact members, substantially as set forth.

12. The combination with a base, of a pair of binding posts mounted thereon, a pair of contact members for each binding post, a fuse supported by said contact members, and removable plates arranged between each pair of contact members for adjusting the distance between the said members according to the size of the fuse terminals, substantially as set forth.

13. The combination with a base, of a pair of adjustable binding posts mounted thereon, a pair of separable contact members for each binding post, a fuse arranged between the said contact members, removable plates arranged between each pair of contact members for adjusting the size of the space there-

between, and bolts arranged to pass through the contact members, and the removable plates for securing the said parts to the binding posts, substantially as set forth.

5 14. In a cut-out, the combination with a base, of a binding post supported thereon, a pair of contact members for supporting a fuse terminal one of which members is adjustable, removable plates arranged between the said contact members for adjusting the distance therebetween, and a bolt
10 for holding the said parts in position, substantially as set forth.

15. In a cut-out device, the combination

of a pair of contact members for engaging a 15 fuse terminal, one of said contact members being adjustable relatively to the other, and means for holding the contact members in position after the said adjustable contact member has been adjusted, substantially as 20 set forth.

In testimony whereof I affix my signature, in presence of two witnesses.

FRANK L. SESSIONS.

Witnesses:

F. E. VAN SLYKE,
R. R. DUNLOP.