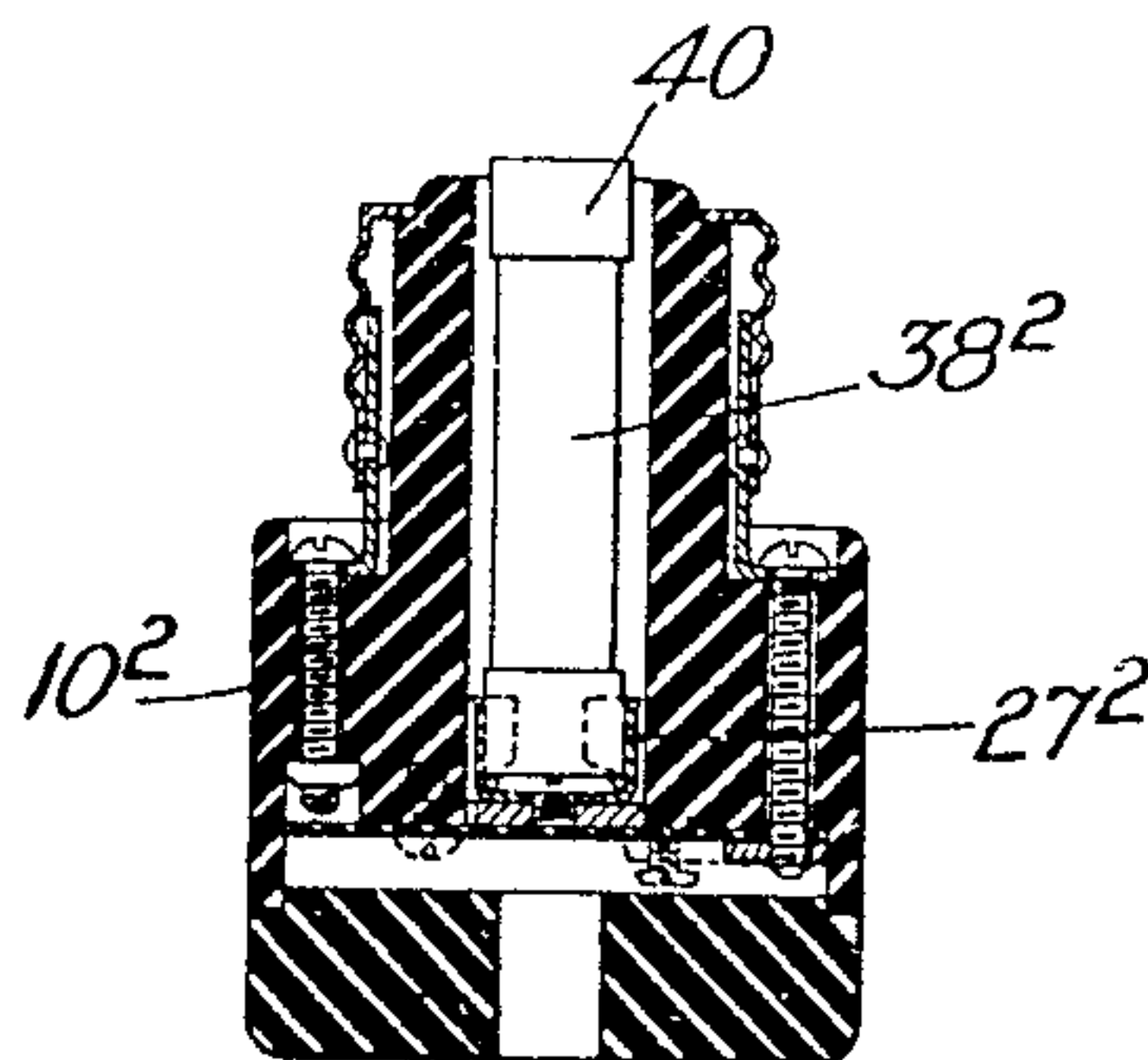
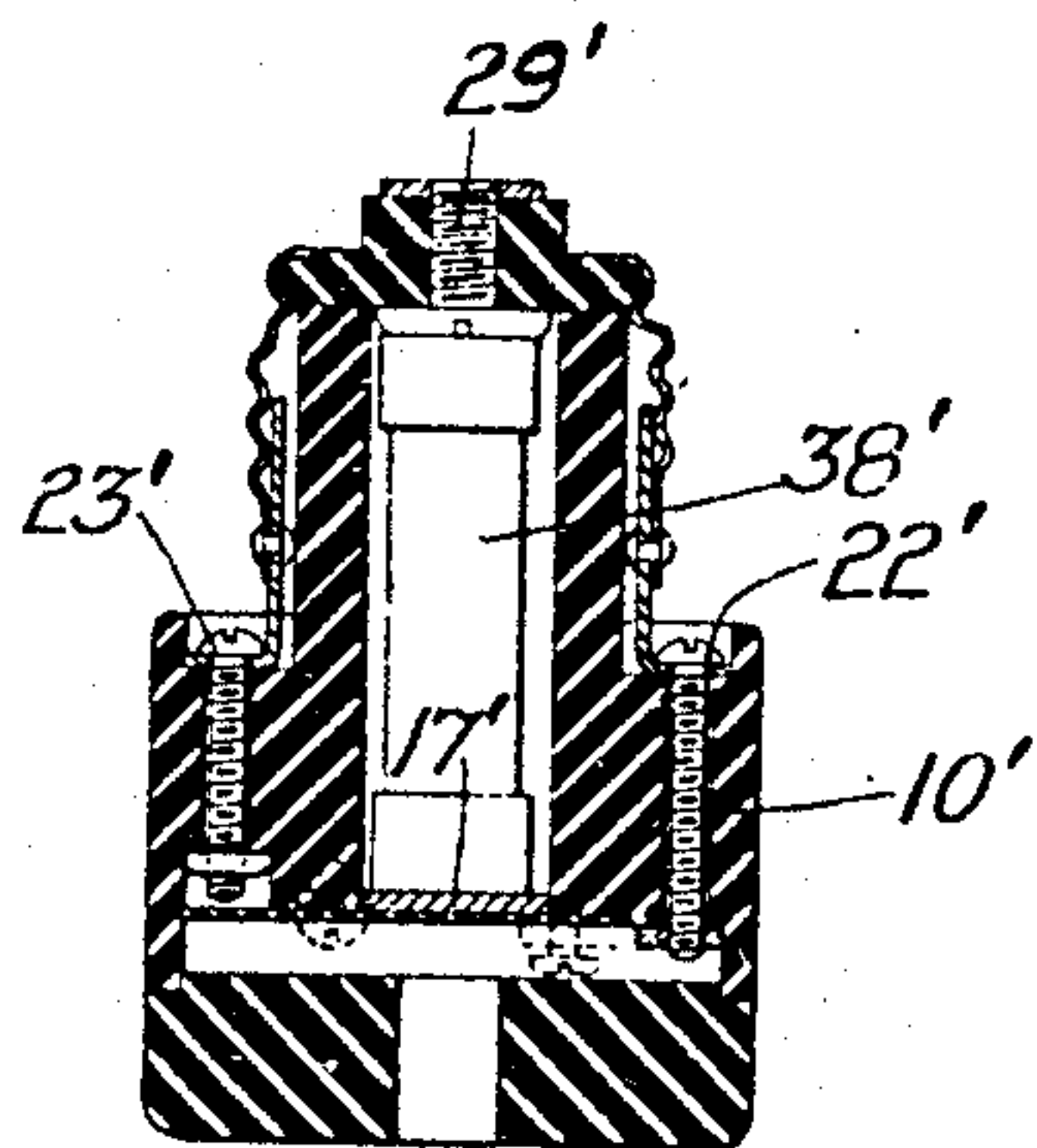
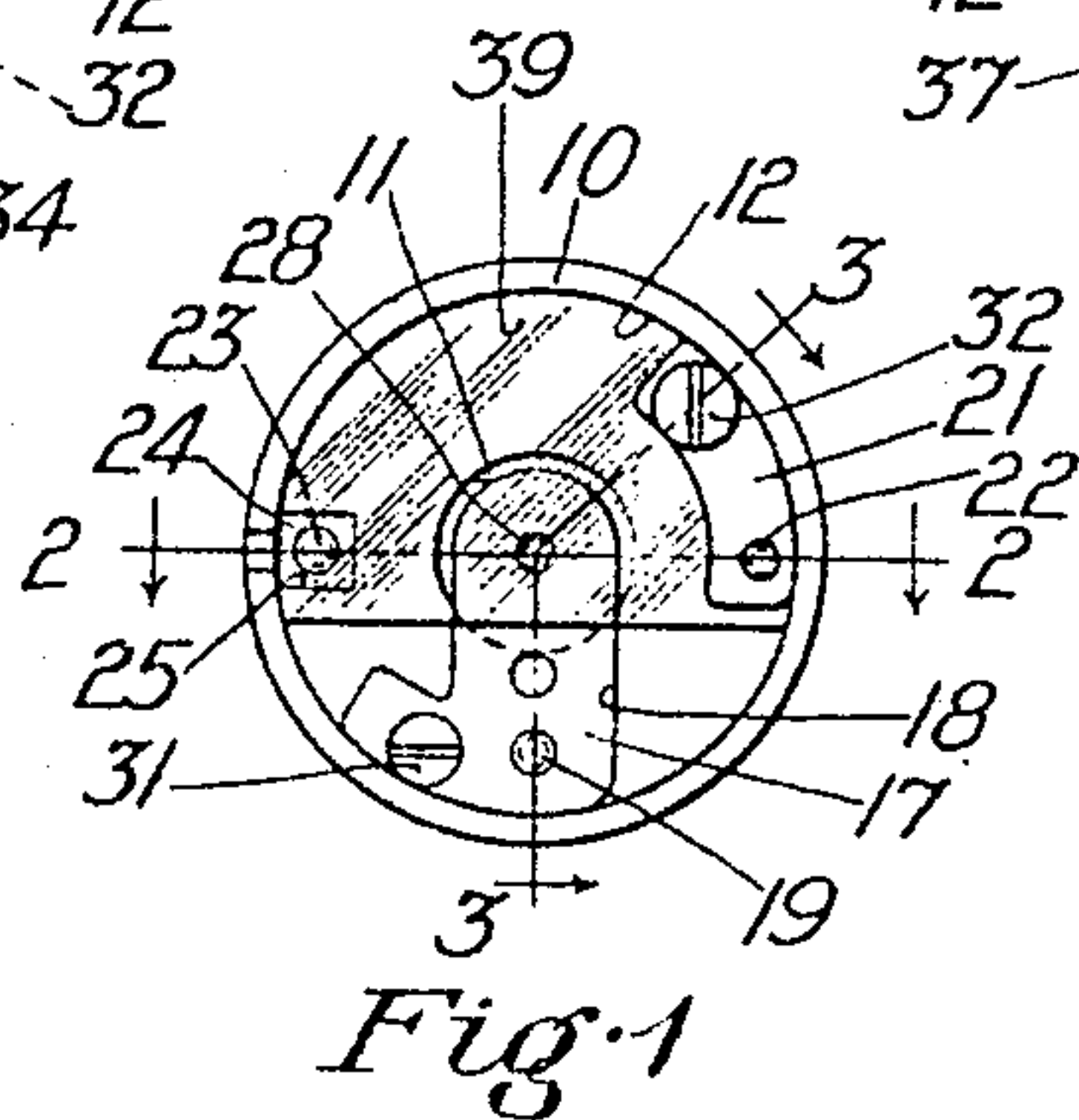
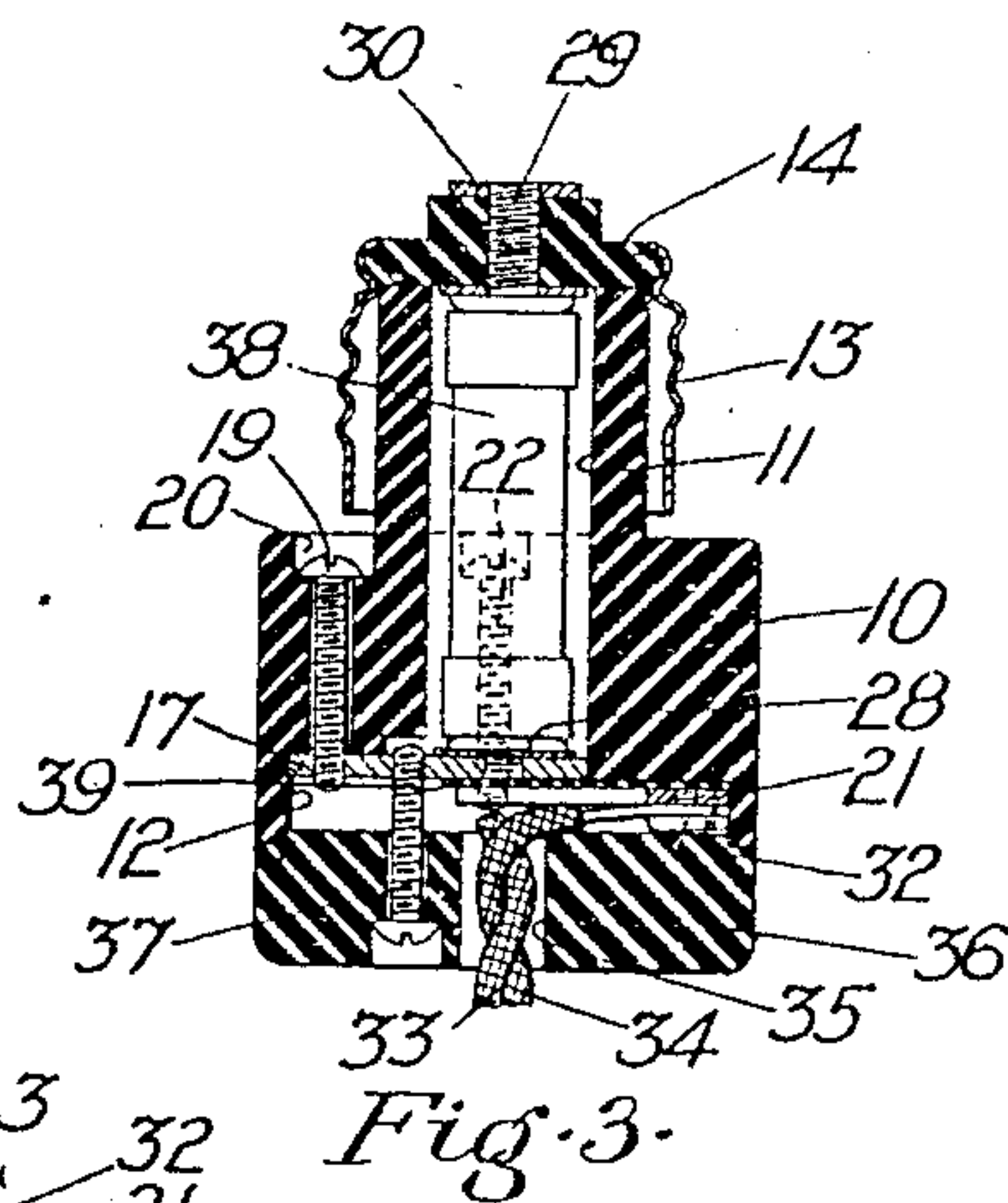
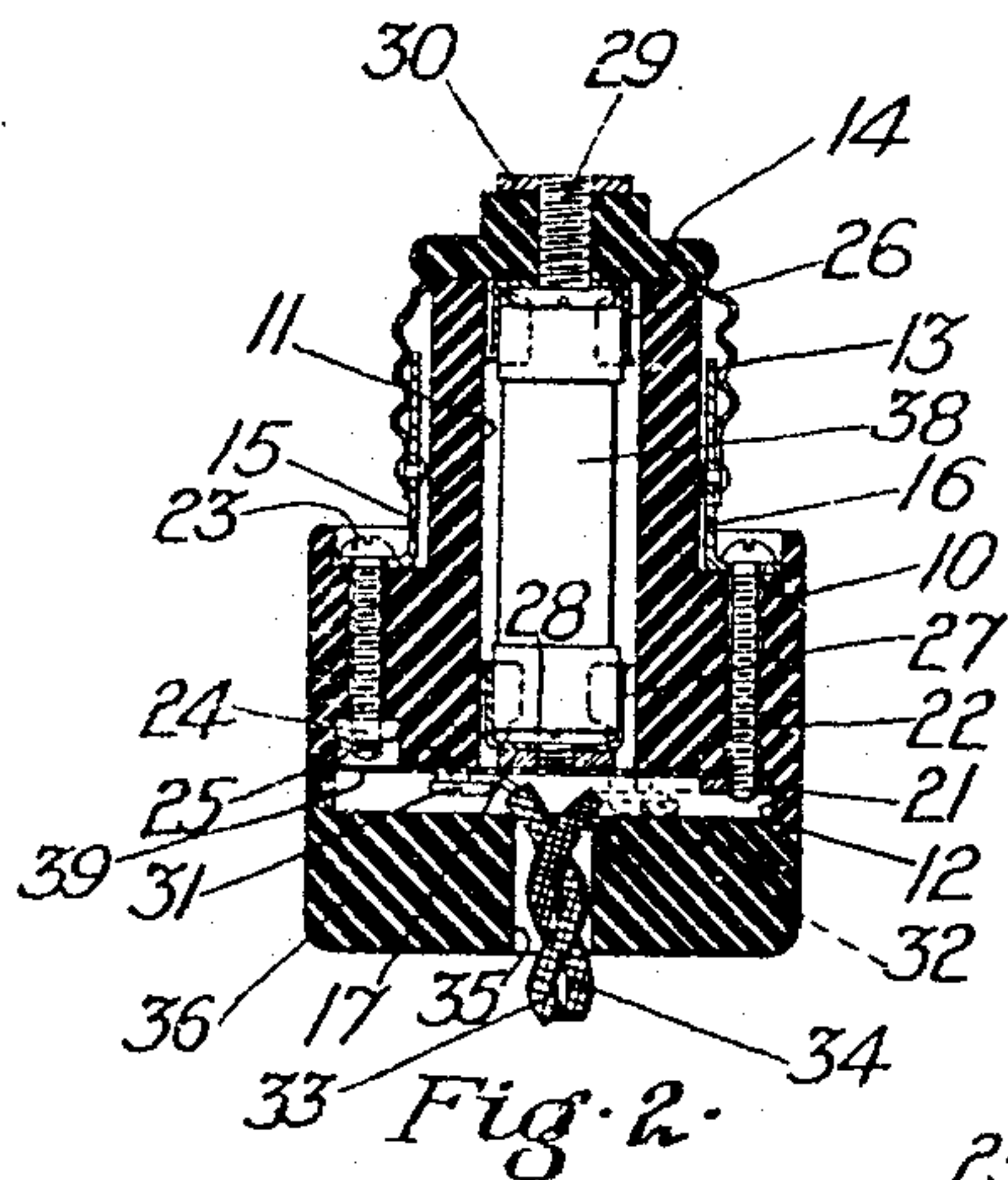


No. 873,846.

PATENTED DEC. 17, 1907.

R. A. CULTRA.
CARTRIDGE FUSE ATTACHMENT PLUG.

APPLICATION FILED JULY 3, 1907.



Witnesses:

Francis H. Bishop.

William C. Glass.

Fig. 4.

Inventor:

Robert A. Cultra

by his attorney

Paul S. Fording.

UNITED STATES PATENT OFFICE.

ROBERT A. CULTRA, OF CAMBRIDGE, MASSACHUSETTS.

CARTRIDGE-FUSE ATTACHMENT-PLUG.

No. 873,846.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed July 3, 1907. Serial No. 381,958.

To all whom it may concern:

Be it known that I, ROBERT A. CULTRA, a citizen of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Cartridge-Fuse Attachment-Plugs, of which the following is a specification.

This invention relates to improvements in 10 cartridge fuse attachment plugs, and the object is to provide an attachment plug which shall not be destroyed by the burning of the fuse.

The invention consists in the combination 15 and arrangement of parts set forth in the following specification and particularly pointed out in the appended claims.

Referring to the drawings: Figure 1 is a bottom plan of the plug with the cap removed. Fig. 2 is a sectional elevation taken on line 2—2 of Fig. 1. Fig. 3 is a sectional elevation taken on line 3—3 of Fig. 1. Fig. 4 is a detail perspective view of one of the spring clips. Fig. 5 is a sectional elevation 25 of a modified form of my invention. Fig. 6 is a sectional elevation of a second modified form of my invention.

Like numerals refer to like parts throughout the several views of the drawings.

30 In the drawings, 10 is the body portion of a plug preferably formed of porcelain provided with a hole 11 extending longitudinally therethrough, said body portion being also preferably provided with a recess 12. 35 A screw-threaded metal shell 13 surrounds the body portion 10 adjacent to one end thereof, there being an insulating button 14 preferably formed of porcelain, secured in said shell by crimping or beading the metal 40 of said shell over the outer end of said button. The shell 13 is provided with two ears 15 and 16 which may be formed separately therefrom and secured thereto by rivets or may be formed integral therewith, if desired. 45 A plate 17 is embedded in a recess 18 in the body portion 10, said plate extending nearly across the hole 11, said plate being secured to said body portion by a screw 19 having screw-threaded engagement with said plate, 50 the head of said screw being located in a recess 20. A second plate 21 is secured to the body portion 10 by a screw 22 which passes through the ear 16, through the body portion 10 and has screw-threaded engagement with

said plate. The ear 15 is secured to the 55 body portion 10 by a screw 23 which passes through said ear, through said body portion and has screw-threaded engagement with a nut 24 embedded in a recess 25 formed in said body portion. 60

There are two spring clips 26 and 27 which are identical in form, the clip 27 being secured to the plate 17 by a screw 28 having screw-threaded engagement with said plate, while the clip 26 is secured to the button 14 65 by a screw 29 which passes through said button and has screw-threaded engagement with a nut 30, said nut constituting one of the contacts of the plug while the shell 13 constitutes the other contact. Two screws 31 and 70 32 having screw-threaded engagement with the plates 17 and 21, respectively, serve to secure the ends of the wires 33 and 34, respectively, to said plates, said wires passing through a hole 35 formed in a cap 36. The 75 cap 36 which is preferably formed of porcelain is preferably secured to the body portion 10 by a screw 37 having screw-threaded engagement with the plate 17. A cartridge fuse 38 is located in the hole 11, the ends of 80 said fuse being located in the clips 26 and 27, respectively. A sheet of insulating material 39 preferably formed of mica extends across the end of the body portion 10 covering a portion of the plate 17 and being interposed 85 between the plate 21 and the body portion 10, said insulating material serving to prevent arcing of the current from one of said plates to the other of said plates.

Referring now to Fig. 5 showing a modified 90 form of my invention, the plug is in all respects like the plug hereinbefore described except that the fuse 38' bears at one end against the plate 17' and at the other end against the screw 29', the spring clips being 95 omitted in this case. The screws 22' and 23' draw the screw 29' and the plate 17' tightly against the ends of the fuse 38'. The remaining features of this form of my invention are identical with the form first described and it will not be necessary for me to describe this form any more in detail. 100

In Fig. 6 I have shown a second modified form of my invention, in which the porcelain button shown in the two preceding forms 105 is omitted and the fuse 38² is provided with a ferrule 40 which when the plug is screwed into a lamp makes the contact, while the

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other end of said fuse is located in a clip 27² the same as the form first described. In its other features this plug is similar to the one first described and any more detailed description of it will be unnecessary.

Having thus described my invention, what I claim and desire by Letters Patent to secure is:

1. In a device of the character described, 10 an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said 15 shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, 20 a cartridge fuse located within said hole and electrically connected to one of said plates, and a cap fast to said last-named end of said body portion.

2. In a device of the character described, 25 an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said shell provided with two ears, two terminal 30 plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, 35 an insulating button located in the outer end of said shell, a screw extending through said button, a nut having screw-threaded engagement with said third-named screw, a cartridge fuse located within said hole electrically connected at one end to one of said plates 40 and at its other end to said third-named screw, and a cap fast to said last-named end of said body portion.

3. In a device of the character described, 45 an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said shell provided with two ears, two terminal 50 plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, an 55 insulating button located in the outer end of said shell, a screw extending through said button, a nut having screw-threaded engagement with said third-named screw, a spring clip secured to said button by said third-named screw, a second spring clip secured to 60 one of said plates, a cartridge fuse located within said hole, the ends of said fuse being located in said spring clips, respectively, and a cap fast to said last-named end of said body 65 portion.

4. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body portion adjacent to one end thereof, said 70 shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which secures said other ear to said body portion, 75 said screws extending parallel to said hole, an insulating button located in the outer end of said shell, a spring clip located on the inner face of said button, a screw extending through said clip and said button, a nut having 80 screw-threaded engagement with said third-named screw, said nut bearing against the exterior face of said button, a second spring clip secured to the inner face of one of said plates, a cartridge fuse located within 85 said hole, the ends of said fuse being located in said spring clips, respectively, a cap on said last-named end of said body portion, and a screw passing through said cap, said last-named screw having screw-threaded en- 90 gagement with one of said plates.

5. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, a screw-threaded shell surrounding said body 95 portion adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears to one of said plates, a second screw which 100 secures said other ear to said body portion, said screws extending parallel to said hole, an insulating button located in the outer end of said shell, a screw extending through said button, a nut having screw-threaded engagement 105 with said third-named screw, a spring clip secured to said button by said third-named screw, a second spring clip secured to one of said plates, a cartridge fuse located within said hole, the ends of said fuse being 110 located in said spring clips, respectively, a cap fast to said last-named end of said body portion, and a sheet of insulating material extending across said last-named end of said body portion, across one of said plates, and 115 interposed between the other of said plates and said body portion.

6. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, 120 a screw-threaded shell surrounding said body portion adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears 125 to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, an insulating button located in the outer end of said shell, a spring clip located on the in- 130

ner face of said button, a screw extending through said clip and said button, a nut having screw-threaded engagement with said third-named screw, said nut bearing against
5 the exterior face of said button, a second spring clip secured to the inner face of one of said plates, a cartridge fuse located within said hole, the ends of said fuse being located in said spring clips, respectively, a cap on
10 said last-named end of said body portion, and a screw passing through said cap, said last-named screw having screw-threaded engagement with one of said plates, said last-named end being provided with a recess
15 adapted to receive a corresponding projection on said cap.

7. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough,
20 a screw-threaded shell surrounding said body portion, adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears
25 to one of said plates, a second screw passing through said other ear and through said body portion, a nut having screw-threaded engagement with said second screw, said screws extending parallel to said hole, a cartridge fuse
30 located within said hole and electrically con-

nected to one of said plates, and a cap fast to said last-named end of said body portion.

8. In a device of the character described, an insulating body portion provided with a hole extending longitudinally therethrough, 35 a screw-threaded shell surrounding said body portion, adjacent to one end thereof, said shell provided with two ears, two terminal plates located on the other end of said body portion, a screw connecting one of said ears 40 to one of said plates, a second screw which secures said other ear to said body portion, said screws extending parallel to said hole, an insulating button located in the outer end of said shell, a spring clip located on the in- 45 ner face of said button, means to secure said spring clip to said button, said means extending through said button, a second spring clip secured to one of said plates, a cartridge fuse located within said hole, the ends of said 50 fuse being located in said spring clips, respectively, and a cap fast to said last-named end of said body portion.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses. 55

ROBERT A. CULTRA.

Witnesses:

LOUIS A. JONES,
SADIE V. MCCARTHY.