G. W. GOODRIDGE.

FUSIBLE SWITCH.

APPLICATION FILED MAY 1, 1908.

947,677.

Patented Jan. 25, 1910.

Fig. 2.

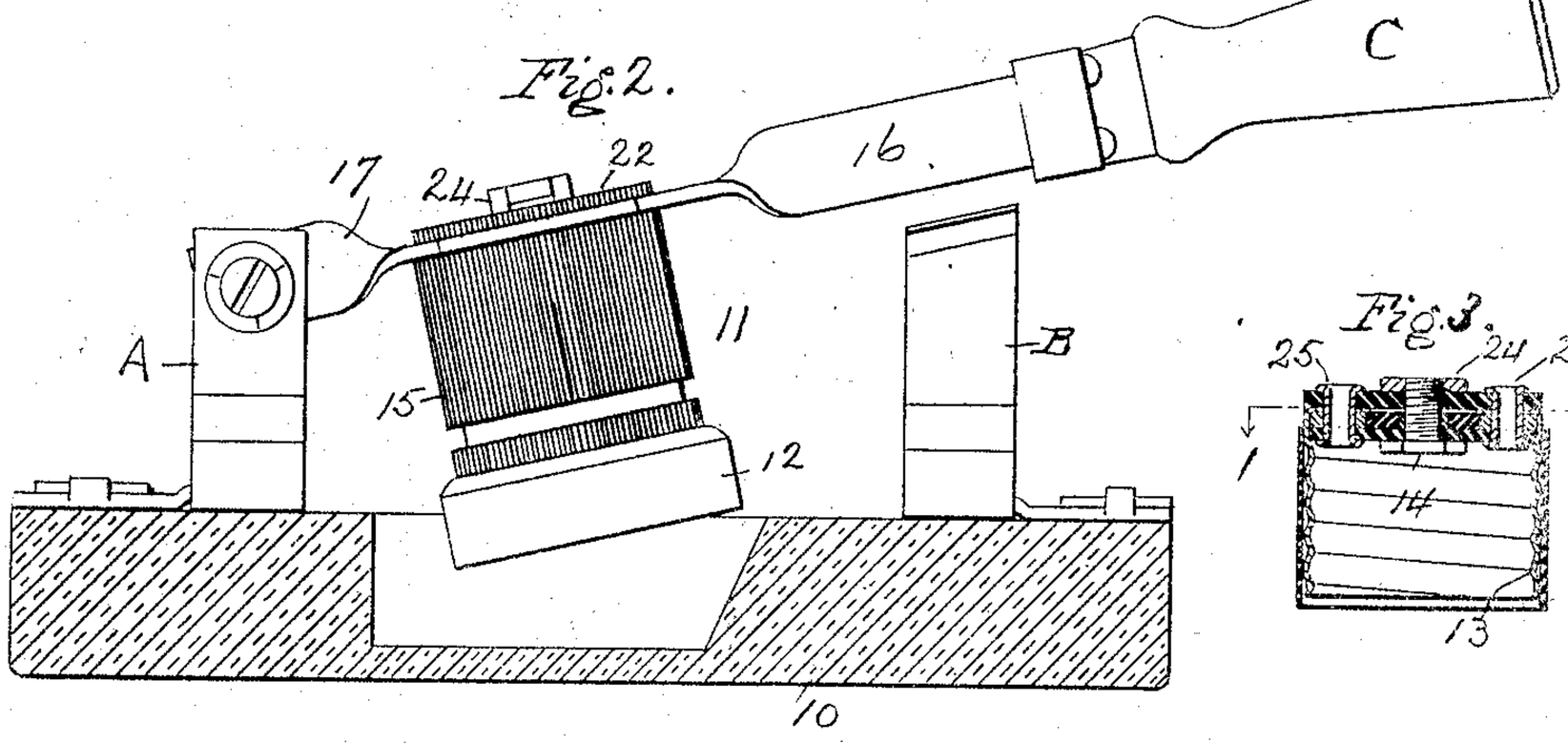


Fig. 3.

Fig. 1.

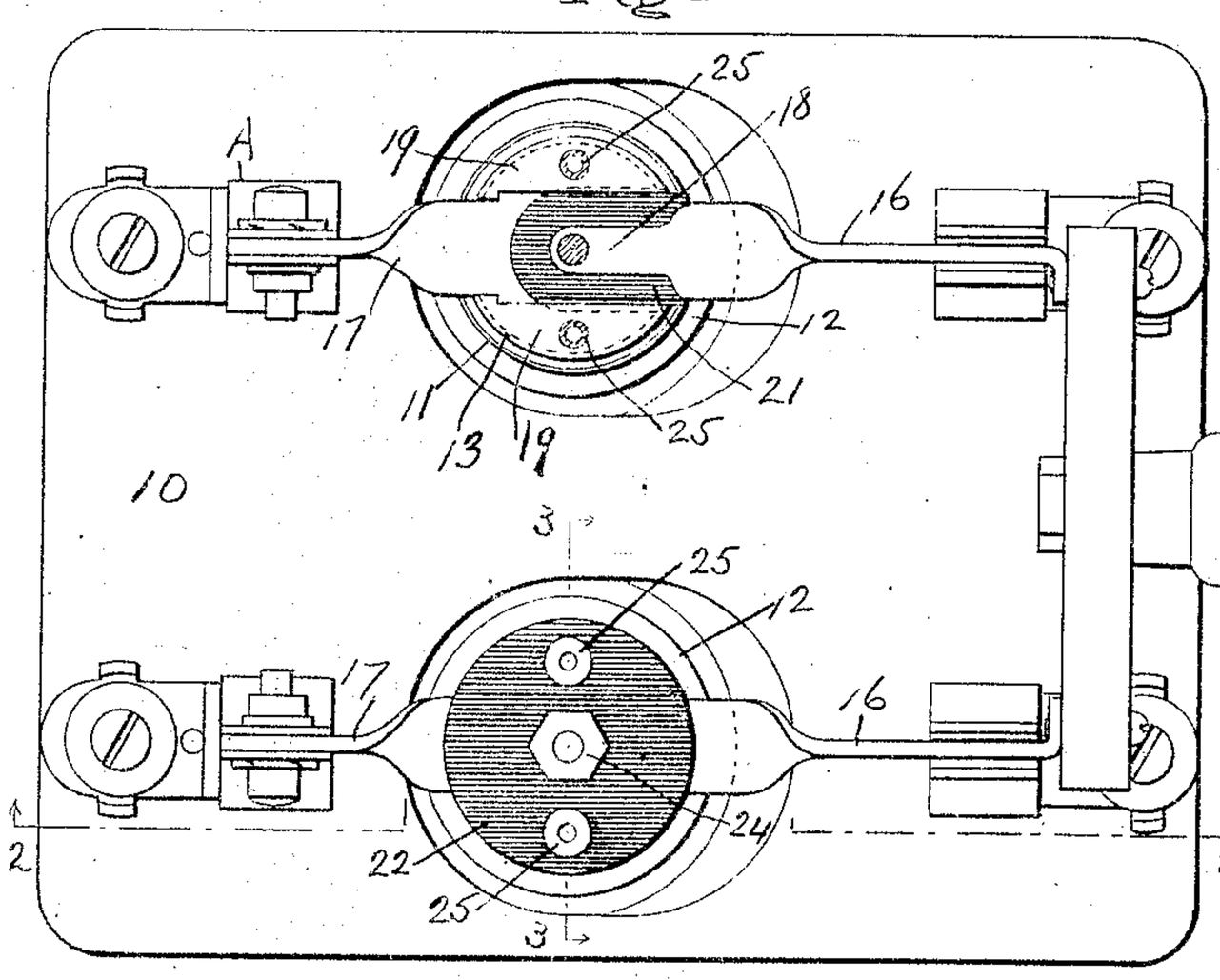


Fig. 4

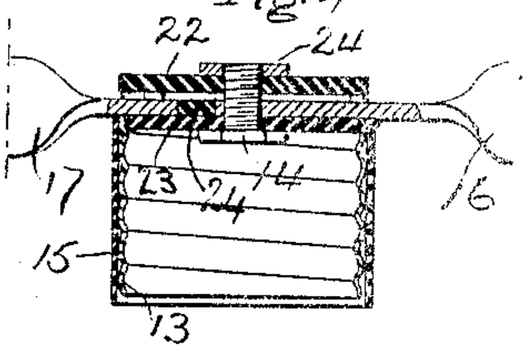


Fig. 5

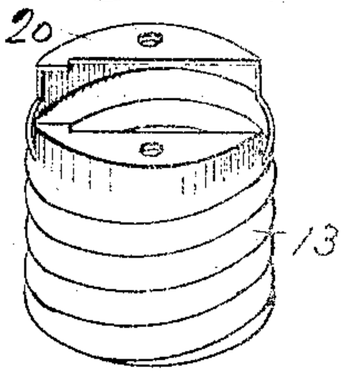
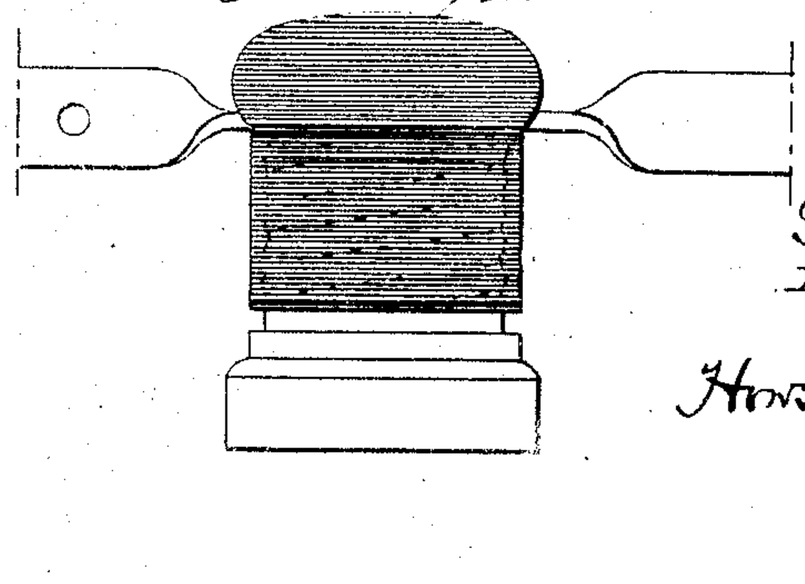


Fig. 6.



WITNESSES

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GILBERT W. GOODRIDGE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE BRYANT ELECTRIC COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

FUSIBLE SWITCH.

947,677. Specification of Letters Patent. **Patented Jan. 25, 1910.**

Application filed May 1, 1908. Serial No. 430,309.

To all whom it may concern:

Be it known that I, GILBERT W. GOODRIDGE, a citizen of the United States of America, and residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Fusible Switches, of which the following is a specification.

My invention relates to fusible switches, particularly fusible knife switches, the particular object of my invention being to provide a switch of this character adapted for the use of the standard Edison fuse plug.

The device is shown for convenience applied to a double pole main line knife switch but it may be applied to knife switches of any suitable character or to other electrical appliances to which it is adapted.

In the accompanying drawings Figure 1 is a plan view of a closed main line knife switch to which my invention is applied, the upper plug receptacle being in section on the line 1—1, Fig. 3; Fig. 2 is a sectional elevation thereof on the line 2—2, Fig. 1, the switch being slightly elevated; Fig. 3 is a section of one of the plug receptacles on the line 3—3, Fig. 1; Fig. 4 is a section at right angles thereto with the blade in broken elevation; Fig. 5 is a perspective view of the metallic shell lining the receptacle; and Fig. 6 is a side elevation of a blade with a modified construction of the plug receptacle.

The construction illustrated discloses a knife switch mounted upon an insulating base 10, each of the blades of the switch having a plug receptacle 11, interposed between its ends so that the passage of current through the blades is impossible until a fuse plug 12 has been inserted in the receptacle. The receptacle proper comprises a shell 13, preferably adapted to receive a standard Edison fuse plug, the shell being cut away at its base and sides as shown in Fig. 5 to admit the opposite ends of the blade and also the central contact pin 14, which together with an insulating cover 15, surrounding the shell, comprise the main features of the receptacle. In order to secure the latter to the opposite ends 16 and 17 of the blade, both ends are twisted at the middle ends into a substantially horizontal position and a tongue 18 stamped from one end 16, while the other end 17 is spread into a fork 19, (shown in dotted lines, Fig. 1) adapted to embrace the tongue, an insulating piece 21 being interposed. These parts are rigidly united by mounting the shell on the forked end 17 so that the portions 20 of the base of the shell rest upon and establish the contact with this end of the blade which is pivoted to the switch post A.

The contact pin 14 is screwed through the tongue thus establishing the contact with the free end 16 of the blade to which is secured the operating handle C, by means of which this end of the blade is moved into or out of contact with the other switch post B. Insulating disks 22 and 23 above and below these conducting parts protect as well as reinforce the joint, being held in place by any satisfactory means, as for instance a nut 24 on the end of the contact plug 14, and hollow rivets 25 passing through the shell and fork on both sides and being spread both above and below the disks 22 and 23. The construction described readily lends itself to manufacture and provides a complete and serviceable switch. An improved appearance as well as added rigidity is supplied if the parts, assembled in the manner indicated, are provided with a cap 26 of suitable insulating compound which is molded around the same, as shown in Fig. 6.

In order to save space as well as material in the switch posts, the base 10 upon which the switch is mounted is recessed to receive the head of the fuse plug when the switch is closed. One face of this recess may be angled as shown so that the recess may be made smaller than would otherwise be necessary in order to permit the free entrance of the plug.

The construction shown may be varied in many ways without departing from the scope of my invention, as stated in the claims eventually approved, and I do not limit myself to the details shown.

I claim as my invention:

1. A knife switch, comprising a base, switch posts secured thereon, and a switch blade pivoted to one of said posts, said blade being in two sections, insulation interposed between the adjacent ends thereof, plug contacts respectively connected to said ends and means for rigidly uniting said parts together, said contacts being carried beneath the switch blade so as to prevent the insertion or removal of a plug while the switch is closed.

2. A knife switch comprising a base,

switch posts secured thereon, said base being recessed between said posts, a switch blade pivoted to one of said posts, said blade being in two sections, insulation interposed between the adjacent ends thereof and an inverted plug receptacle having its contacts respectively connected to said ends and so arranged with relation to said base that a plug carried thereby extends into the recess in the base when the switch is closed.

3. A fusible switch having a fuse plug receptacle and a switch blade comprising independent end portions lying in substantially the same plane one of which is forked and the other tongued at the inner end and means for fastening said tongue and forked ends to the opposite contacts of the plug receptacle.

4. A fusible switch having a fuse plug receptacle comprising a screw shell to receive the plug and a contact pin insulated therefrom in combination with a switch blade having independent end portions lying in substantially the same plane, one of which is tongued and the other forked and means for securing one end to the shell and the other end to the contact post of the receptacle, substantially as described.

5. A fusible switch having switch posts, a fuse plug receptacle and a switch blade comprising independent twisted sheet metal end portions arranged to present substantially vertical portions to the switch posts and substantially horizontal portions to said fuse plug receptacle, and means for securing said ends to the opposite contacts of said receptacle to form a rigid unit together with means for pivoting said blade at one end to one of the switch posts, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

GILBERT W. GOODRIDGE.

Witnesses:
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