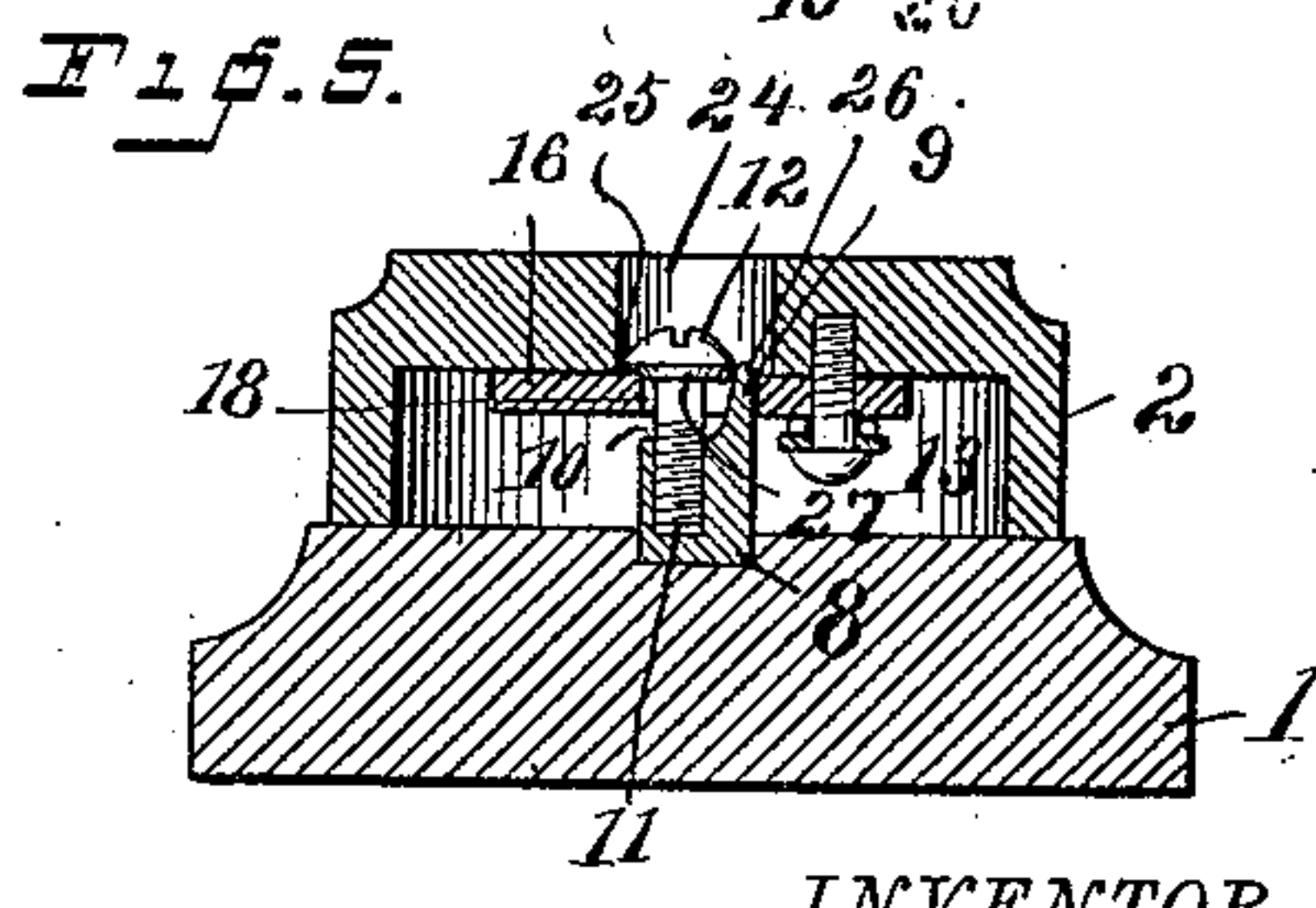
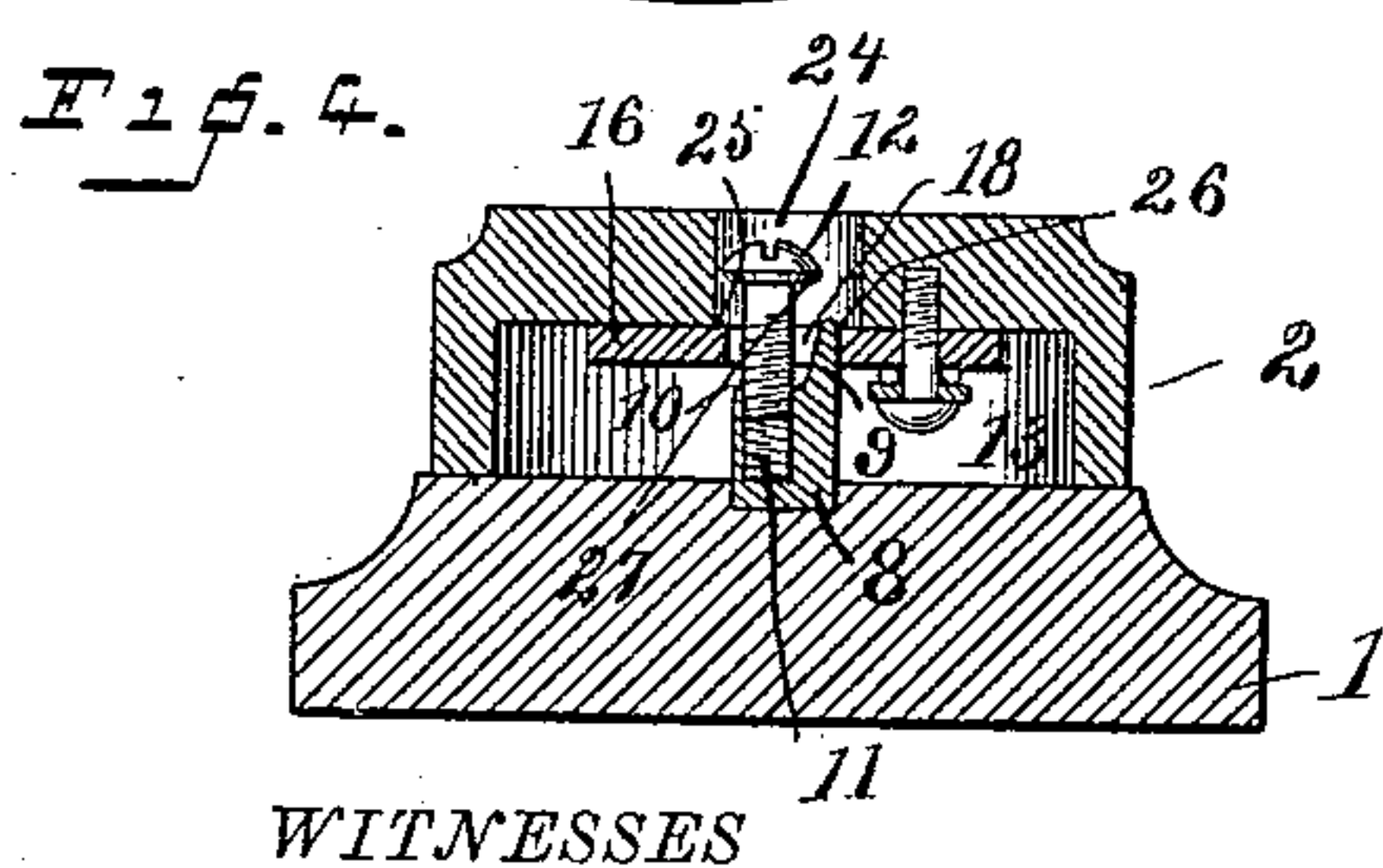
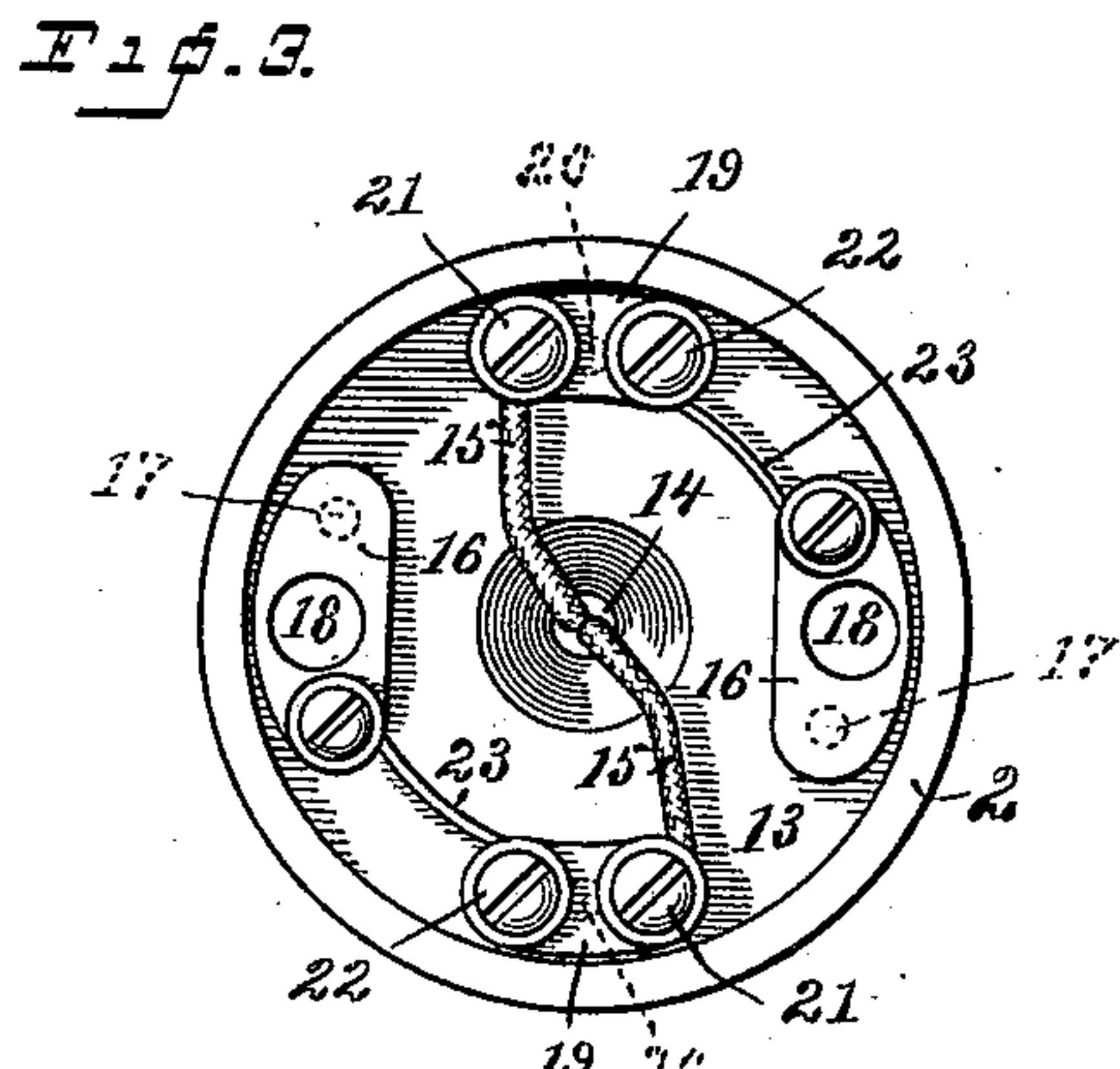
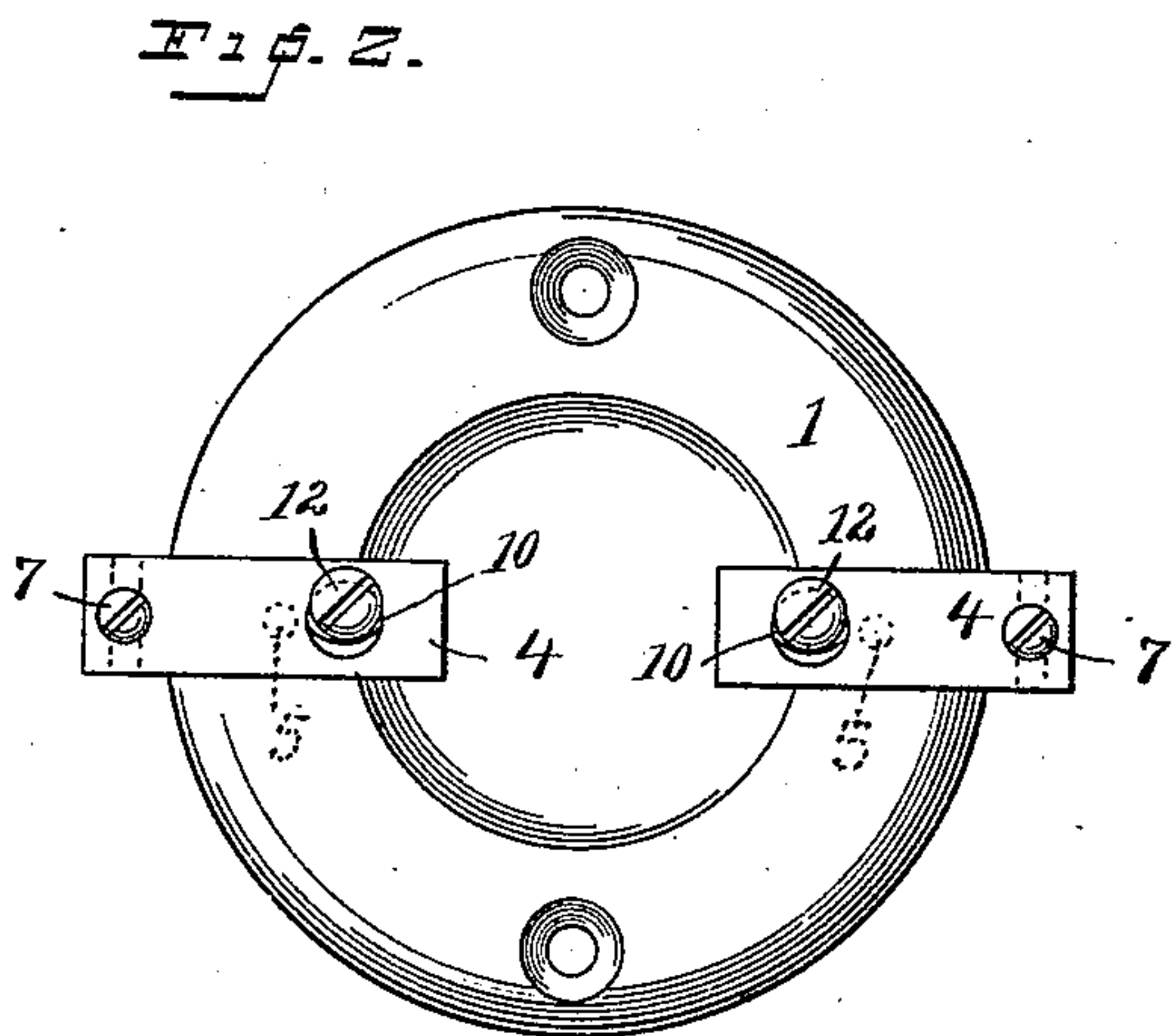
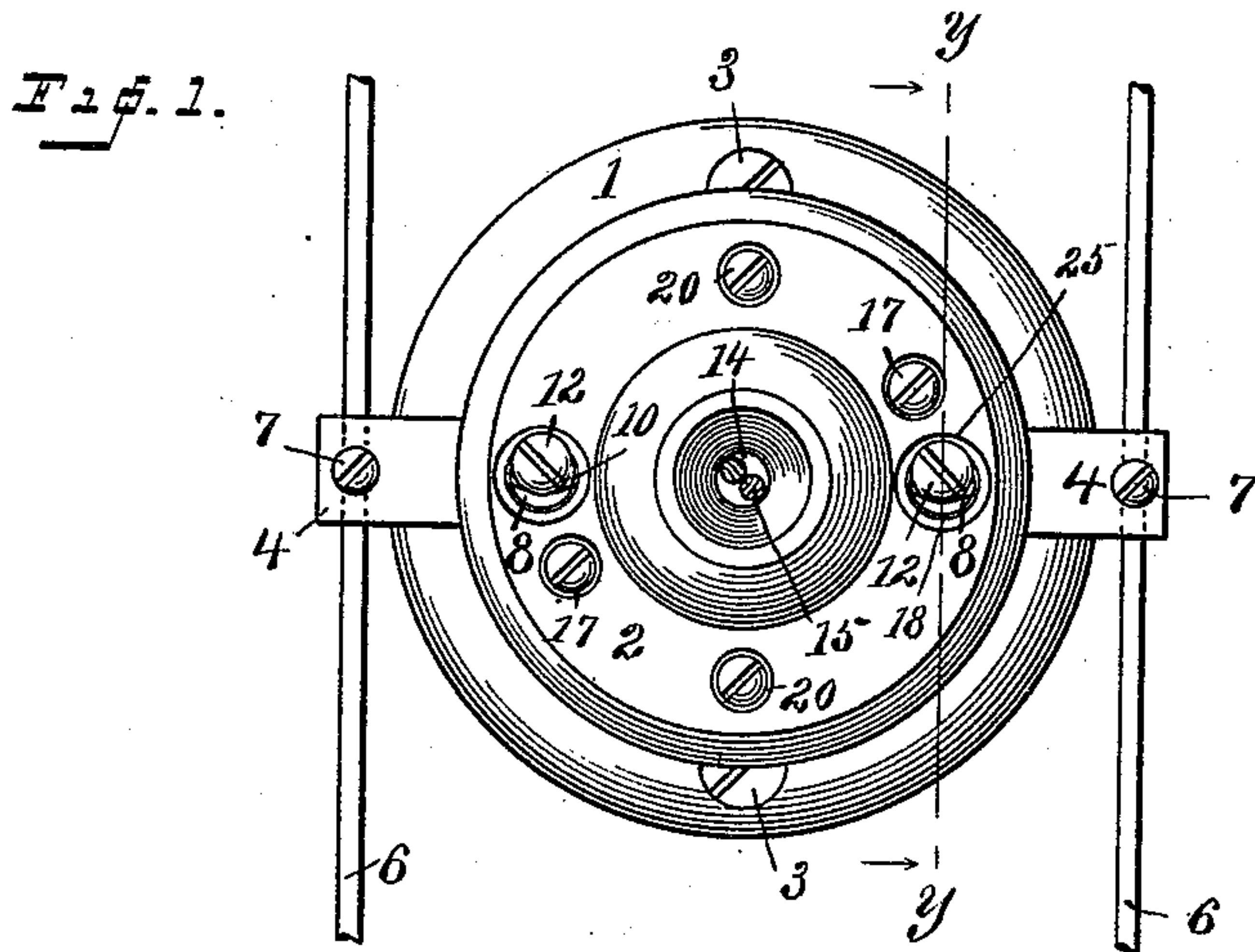


(No Model.)

W. C. BRYANT.
ELECTRIC CEILING BLOCK.

No. 431,551.

Patented July 8, 1890.



WITNESSES

INVENTOR

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UNITED STATES PATENT OFFICE.

WALDO C. BRYANT, OF BRIDGEPORT, CONNECTICUT.

ELECTRIC CEILING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 431,551, dated July 8, 1890.

Application filed May 15, 1890. Serial No. 351,844. (No model.)

To all whom it may concern:

Be it known that I, WALDO C. BRYANT, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Fusible Cut-Outs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to incandescent electric service-wires generally, and has for its object to produce a simple and inexpensive means for connecting the caps of fusible cut-outs to the bases, which will enable connection to be made instantly at both sides of the cap, and when tightened up will hold the cap rigidly in place. With this end in view I have devised the simple and novel construction of which the following description, in connection with the accompanying drawings, is a specification, numbers being used to denote the several parts.

Figure 1 is a plan view of my novel cut-out in operative position; Fig. 2, a plan view of the base detached; Fig. 3, an inverted plan view of the cap detached; Fig. 4, a section on the line *y y* in Fig. 1, the cap being in position on the base, but not secured; and Fig. 5 is a similar section showing the cap secured in place.

It is of course well understood that it is now required that all incandescent-electric-lighting systems be protected by what is known as a "fusible cut-out" between the service-wire leading from the main and the interior system, and also that a fusible cut-out be provided for each lamp in the system. These cut-outs are ordinarily made double-poled, the positive service-wire being connected to one binding-screw, the negative or return service-wire to another, and the positive and negative wires leading to and returning from each lamp in the smaller cut-outs and leading to and returning from the interior system in the larger cut-outs being connected to the two other binding-screws, the sole connection between the two positive binding-screws being a piece of fusible metal, and the sole connection between the two negative or return-

current binding-screws being another piece of fusible metal. By the term "fusible connection" in the art is meant a connection made of any suitable alloy fusible at a low temperature, so that in the event of a crossing of lines, or an increased volume of current from any cause whatever, the fusible connections, or one of them, will burn out, thereby breaking the circuit and preventing any damage to the building.

When a cut-out burns out, it is necessary to replace the fusible connections before the current can be carried to the lamp or lamps. In order that the connections may be made in the simplest manner possible, it is customary to provide each cut-out with a detachable cap and to place the fusible connections in the cap. The electrician is thus enabled to avoid the inconvenience, as well as the danger, of accidentally completing the circuit while adjusting the fusible connections. In practice the electrician removes the cap, places the fusible connections therein, then replaces the cap, and secures it in place. It is of course important that this connection should be made in the quickest and simplest manner possible, so as to avoid the formation of an arc while adjusting the cap in place.

My novel connection enables the operator to place the cap in position, so as to complete the circuit by a single movement, thus avoiding the danger of the accidental forming of an arc while placing the cap in position.

The special advantage of my novel construction is that both the positive and negative wires are connected at the same instant, and when the connection is once made it does not have to be broken in attaching the cap in place.

1 denotes the base, ordinarily made of porcelain, and 2 the cap, which is ordinarily made of wood, although either part may be made of wood, porcelain, hard rubber, or any suitable non-conducting material that may be preferred. The base is permanently secured in position by means of screws 3 or in any suitable manner.

4 denotes plates secured to the base in any suitable manner, ordinarily by screws in the bottom, as indicated by dotted lines at 5 in Fig. 2.

The service-wires (denoted by 6) are connected to plates 4 by binding-screws 7. Each of the plates is provided with an upwardly-extending stud 8, one side of said stud being provided with an extension 9, the inner side of which is an incline extending down to a surface 10 at the top of the main portion of the stud.

11 denotes a threaded opening extending downward from surface 10 into the body of the stud, and 12 a screw engaging said opening, whereby the cap is secured in place, as will presently be more fully explained.

The cap is provided in its under side with a recess 13 and with a central opening 14, through which the light-wires 15, or, in case of a main cut-out, the interior system wires, pass out. Upon the inner side of the cap within the recess and directly opposite each other are plates 16, which I secure in place by screws 17. These plates are provided with openings 18, registering with corresponding openings 24 through the cap which receive studs 8. It will be noticed (see Figs. 1 and 5) that the openings through the cap are slightly greater in diameter than the openings 18 through plates 16, so that a shoulder 25 is formed at the bottoms of the openings through the cap. These shoulders are engaged by screws 12 to hold the cap in place, as will presently be fully explained.

19 denotes other plates on the inner side of the cap within the recess. These plates also are directly opposite each other between plates 16.

Plates 19 are secured in place by screws 20, each plate being provided with a binding-screw 21, to which one of the light or system wires 15 is connected, and each of plates 16 and 19 are provided with binding-screws 22, to which the opposite ends of fusible wires or strips 23 are connected—that is to say, a fusible wire extends from each plate 16 to one of the plates 19, as is clearly shown in Fig. 3.

The circuit is made as follows: Suppose either of the wires 6 to be positive. The current from this wire passes through the plate 4, to which that wire is connected, and thence through the corresponding stud and screw 12 to one of the plates 16. From thence it passes through one of the fusible wires 23 to the plate 19, to which the positive light or system wire 15 is connected, from which point it follows the positive light-wire to the lamp or system, as may be, thence by the negative light or interior system wire 15 back to the other plate 19, from whence it passes by a fusible wire 23 to the other plate 16, stud 8, plate 4, and screw 12, and to the negative service-wire.

The operation of my novel connection is as follows, (see more especially Figs. 1, 4, and 5:) It will be noticed that the head of screw 12 projects outward over surface 10, and that when said screw is turned downward to place, as in Fig. 5, the combined width or transverse thickness of the screw-head and extension 9

is greater than the width of opening 18 in plate 16. The screws alone, however, and the studs alone pass freely through said openings 18. Suppose that a cut-out has "burned out," or, as it is frequently called, "blown out," the electrician turns screws 12 outward, as in Fig. 4. This permits him to lift the cap away from the base. It will be noticed that the outer edge of extension 9 is beveled off, as at 26, so that as the cap is lifted it may be moved laterally slightly and the side of shoulder 25 that has been engaged by the head of the screw moved away from the screw, and the opposite side of the shoulder may be moved toward the head of the screw, passing over the top of extension 8. This permits the cap to be entirely removed, as the heads of the screws are of less diameter than openings 18. After placing new fusible connections in place, the electrician replaces the cap upon the base in the same manner that it was removed. The heads of screws 12 are first passed through openings 18, and then the cap is moved laterally slightly to permit shoulders 25 to pass under the overhanging heads, as in Fig. 4. When the cap is seated upon the base, screws 12 are turned down to place, as in Fig. 5. It will be noticed that the edge of each screw engages extension 9 near the top thereof, and also engages shoulder 25, thereby locking the cap firmly in place and rendering it impossible for it to become loosened in the slightest until the screws are turned upward again.

In practice the heads of the screws are beveled slightly on the under side, as at 27. These bevels engage the edges of shoulders 25 and crowd said shoulders outward, thereby drawing the opposite sides of said shoulders closely against the backs of extensions 9 and bracing every part firmly in place.

Having thus described my invention, I claim—

1. In an electric cut-out, a base having plates 4, studs 8, with extensions 9 and surfaces 10, and screws 12, engaging the studs and having edges projecting outward from the surfaces, in combination with a cap having openings through it, and plates 16 on the inner side of the cap, having openings coincident with the openings in the cap whose edges form shoulders 25, so that when the screws are turned outward plates 16 may be passed over the heads thereof and then over extensions 9, and when said screws are turned inward to place the parts will be securely locked.

2. In an electric cut-out, the combination, with a base having studs provided with extensions, of a cap having openings through it, and plates on the inner side of said cap having openings to receive the studs, and screws 12 passing through the openings in the cap and plates, the heads thereof when tightened up engaging the extensions and the plates, as and for the purpose set forth.

3. In an electric cut-out, a base having studs

provided with extensions 9, screws 12, adapted to engage the studs, the heads thereof projecting over the edges of the studs, in combination with a cap having openings through it, and plates on the inner side of the cap having openings coincident with the openings in the cap through which the screws and extensions may be passed when the screws are retracted, the heads of said screws being adapted when turned to place to engage the extensions and also the inner sides of the plates, so that the parts are firmly braced together and the cap is held rigidly in place.

4. In an electric cut-out, the combination, with a base having studs provided with extensions inclined upon their inner sides and threaded openings at the base of the inclines, of a cap having openings through it, and on the inner side of said cap plates having corresponding openings, the edges of which constitute shoulders 25, and screws 12, having inclines under their heads which are adapted when turned to place to engage the inclines and the shoulders, as and for the purpose set forth.

5. In an electric cut-out, the combination, with a base having studs provided with inclines upon their inner sides and bevels 26 at their outer ends, and screws engaging said studs at the base of the inclines, the heads of the screws projecting over the tops of the studs, of a cap having openings through it, and on the inner side of said cap plates having openings of less diameter than the combined width of the screw-heads and extensions, but adapted to receive the screw-heads and extensions when the screws are turned outward or to permit the ready removal of the cap by first moving the latter outward, and then laterally slightly to permit the bevels and the screw-heads to pass through the openings in the plates, substantially as described.

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

WALDO C. BRYANT.

Witnesses:

A. M. WOOSTER,
ARLEY I. MUNSON.