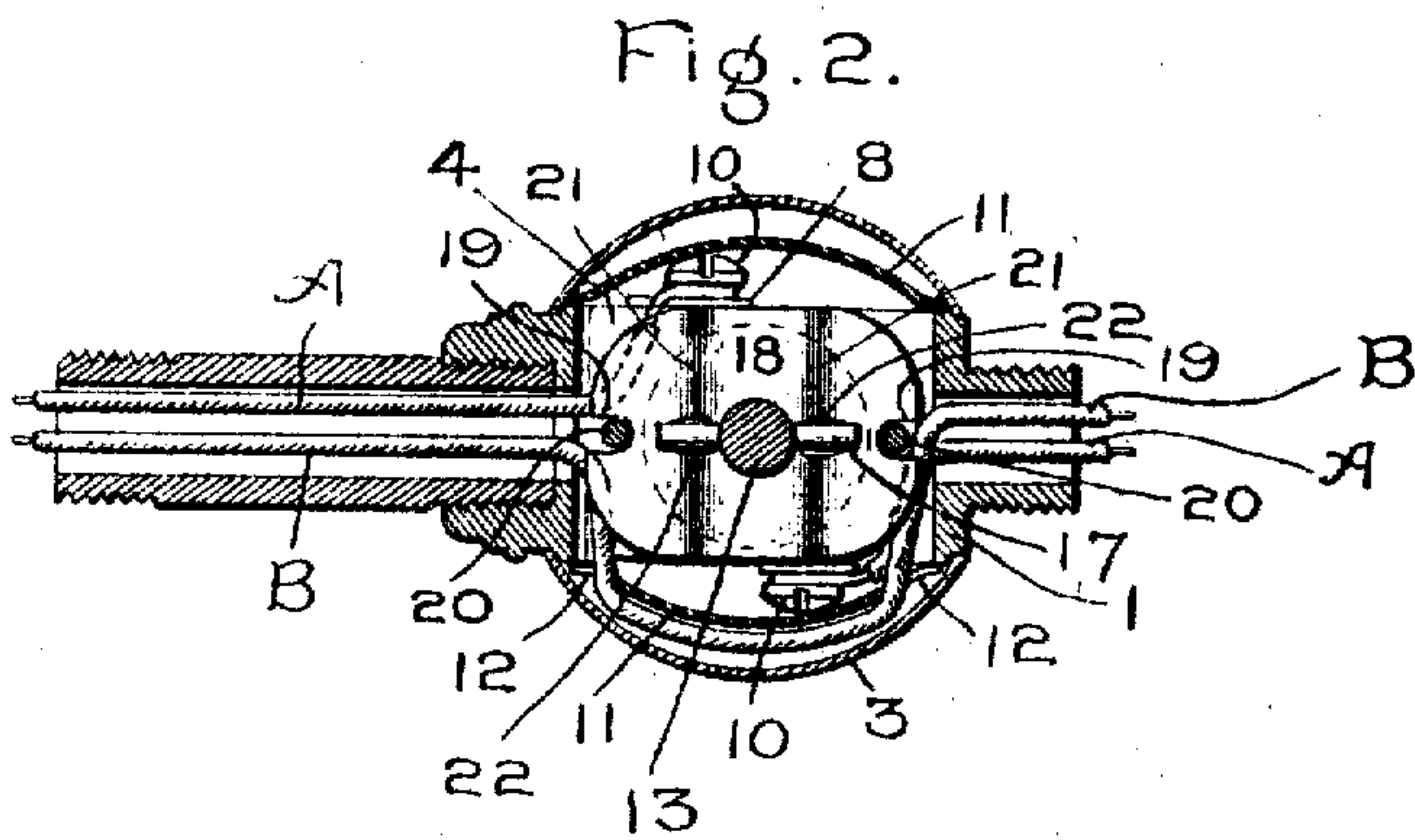
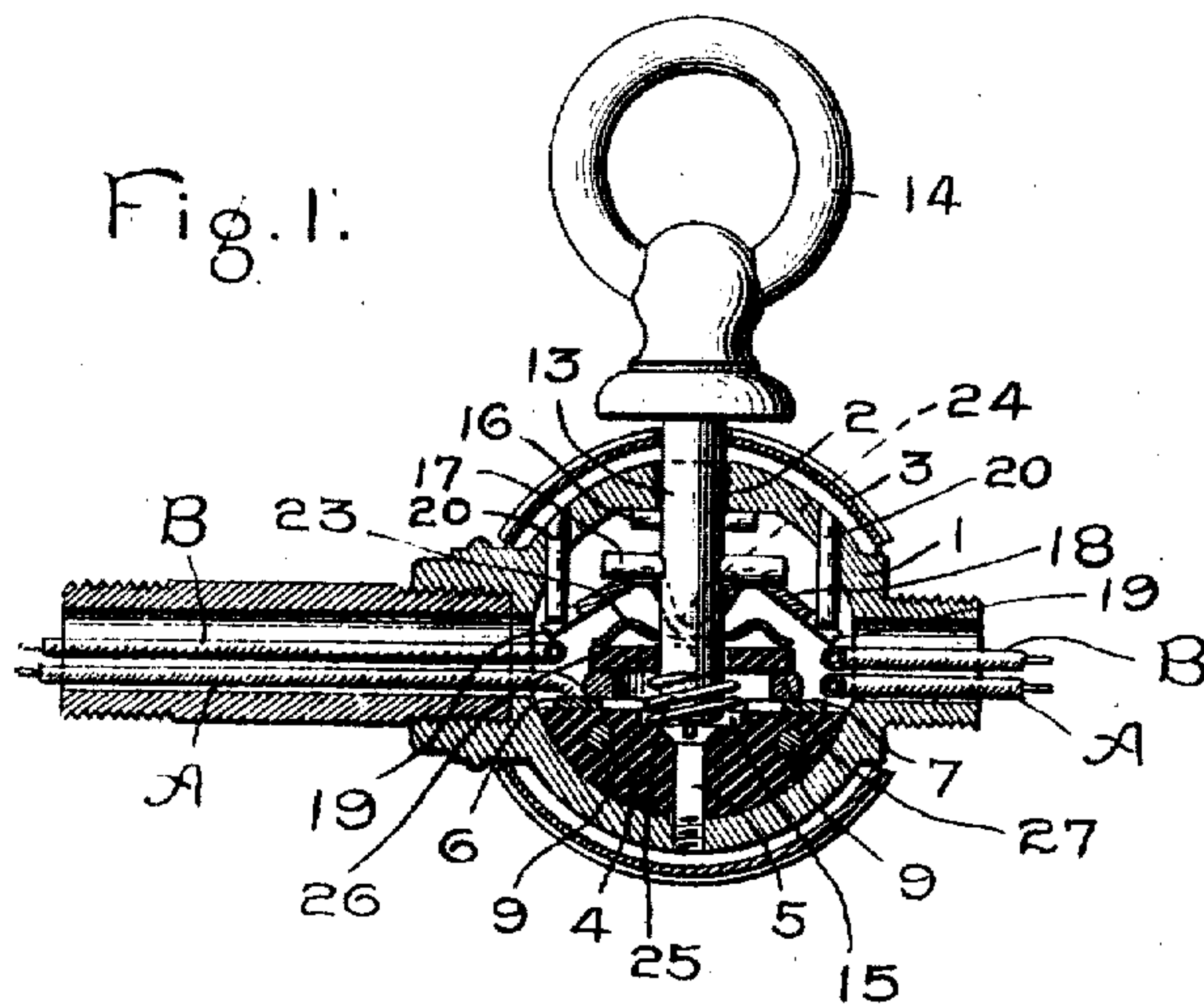


No. 829,806.

PATENTED AUG. 28, 1906.

H. R. SARGENT.
FIXTURE SWITCH.

APPLICATION FILED DEC. 1, 1902.



Witnesses:

Marcus L Byng.
Allen Oxford

Inventor:

Inventor:
Howard R. Sargent,
by *Albert H. Davis*
Att'y.

UNITED STATES PATENT OFFICE.

HOWARD R. SARGENT, OF SCHENECTADY, NEW YORK, ASSIGNOR TO
GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

FIXTURE-SWITCH.

No. 829,806.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed December 1, 1902. Serial No. 133,378.

To all whom it may concern:

Be it known that I, HOWARD R. SARGENT, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Fixture-Switches, of which the following is a specification.

My invention relates to electric switches adapted particularly for use in connection with fixtures for incandescent lighting, in which it is desirable to have the switch located at some point in the fixture instead of in the lamp-socket.

The object of my invention is to provide a strong compact switch which may be cheaply manufactured and adapted for use in substantially the same manner as the cock of the ordinary gas-fixture.

The invention will be more readily understood by reference to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a vertical longitudinal section of a switch embodying one form of my invention, and Fig. 2 is a horizontal longitudinal section of the same.

As shown in the drawings, the switch is mounted in a ring-frame 1, having threaded sleeve projections at opposite ends for attachment with the ordinary piping of the fixture and through which the conductor-wires are led, and an aperture 2 in one side for the passage of the switch-stem, and surrounding the frame 1 is a pressed-metal shell 3, consisting of two hemispherical parts, one of which may be provided with a bead about its edge and the other with an outturned flange or smaller bead adapted to be sprung into the bead of the other part.

Within the ring-frame 1 and at the side opposite the aperture 2 an insulating base-block 4 is secured by means of a screw 5, extending therethrough and engaging a tapped hole in the frame. Extending across the upper surface of the base 4 and near its respective ends are two metal contacts 6 and 7, each having one end 8 bent down at right angles and engaging a side of the base and secured in place by a screw 9, passing transversely through the base 4 and engaging a tapped hole in the contact. Each of the bent-down ends 8 carries a binding-screw 10, whereby the ends of the line-wire A may be connected to the switch.

On each side of the frame 1 is placed a disk or cup-shaped piece 11 of sheet insulation, adapted to close the ends of the chamber of the ring-frame and prevent any projecting end of the conductor from coming in contact with the shell 3. One of the pieces 11 of insulation is provided with two diametrically-located notches 12, through which the continuous conductor B is led out between the outside of the piece 11 and the inclosing shell 3, and thereby held out of the way of the switch parts in the main chamber.

The operative parts of the switch comprise a plain spindle 13, provided with a handle or thumb-piece 14, extending through hole 2 and the main chamber of the frame into a recess 15 in the base-block 4 and rests at its lower end upon the head of the screw 5. A transverse pin 16 is secured in the spindle 13 just inside of the frame 1, which serves to hold the spindle from moving endwise, and just below the pin 16 is a second pin 17. Surrounding the spindle 13, just below pin 17, is a cam-piece 18, consisting of a metal punching bent into M shape and provided with a notch 19 in each end adapted to receive a guide-pin 20, secured in the upper part of frame 1, and in the two uppermost bends 21 are transverse depressions 22. Mounted loosely on the spindle 13, just below the cam-piece 18, is an M-shaped spring 23, made from sheet metal and adapted to be pressed upon by the lower bend 24 of the cam-piece 18. Resting in the recess 15 in the base-block 4 and surrounding the lower end of spindle 13 is a helical spring 25. Loosely surrounding the spindle 13 is a disk 26 of insulation, which rests upon the upper end of helical spring 25 and is pressed down upon by the ends of the M-shaped spring 23. To the lower side of disk 26 is secured a metallic ring 27, which constitutes the movable contact.

When the spindle stands in the position shown in Fig. 1, with the pin 17 resting in the slight depressions 22 of the highest portions of the cam-piece 18, the several movable parts mounted upon the spindle 13 are crowded into their lowermost position against the tension of the helical spring 25 and with the contact-ring 27 in engagement with both stationary contacts 6 and 7. When the spindle is turned through an angle of ninety degrees, the pin 17 will permit the cam-piece 18 and the other movable parts to rise under the

pressure of the helical spring 25 until the lowermost bend 24 of the cam-piece 18 engages the pin 17, thereby breaking the contact between ring 27 and the stationary contacts 6 and 7.

It is to be noted that in my device the switch-spindle may be turned in either direction to operate the switch, that the parts are so constructed that they may be cheaply made and easily assembled, and that interference with the conductors is avoided in the operation of the switch.

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

1. The combination of a circular frame, a segmental base secured therein, metal contacts mounted on said base, an actuating-spindle journaled in said frame diametrically opposite said base and provided with a side projection, an insulating-disk journaled upon said spindle and provided with a bridging contact, a helical spring surrounding said

spindle below said disk and normally acting to force the bridging contact out of engagement with the stationary contacts, a leaf-spring surrounding said spindle above said disk, and an M-shaped cam member surrounding said spindle between said side projection and said leaf-spring and engaging at its ends with the said frame.

2. The combination of an open-sided frame for an electric switch, and a disk adapted to close one of said open sides and provided with recesses to permit the passage of a conductor-wire from the inside of the frame along the outside of the disk and back into the interior of the frame.

In witness whereof I have hereunto set my hand this 24th day of November, 1902.

HOWARD R. SARGENT.

Witnesses:

ALEX. F. MACDONALD,
HELEN ORFORD.