

C. WAGNER.
ELECTRIC LIGHT SWITCH.
APPLICATION FILED MAR. 9, 1910.

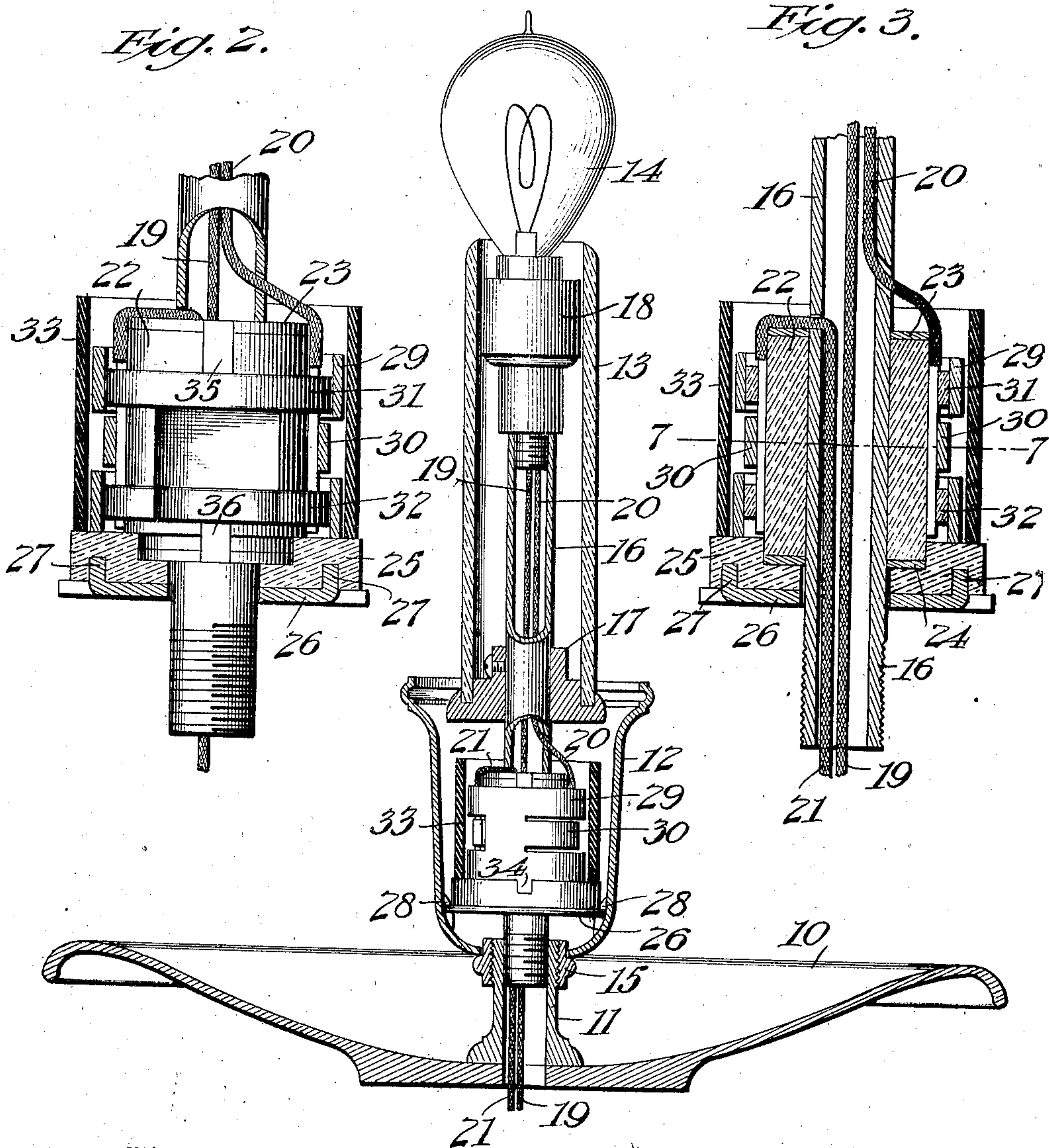
985,234.

Patented Feb. 28, 1911.
2 SHEETS-SHEET 1.

Fig. 1.

Fig. 2.

Fig. 3.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 5.

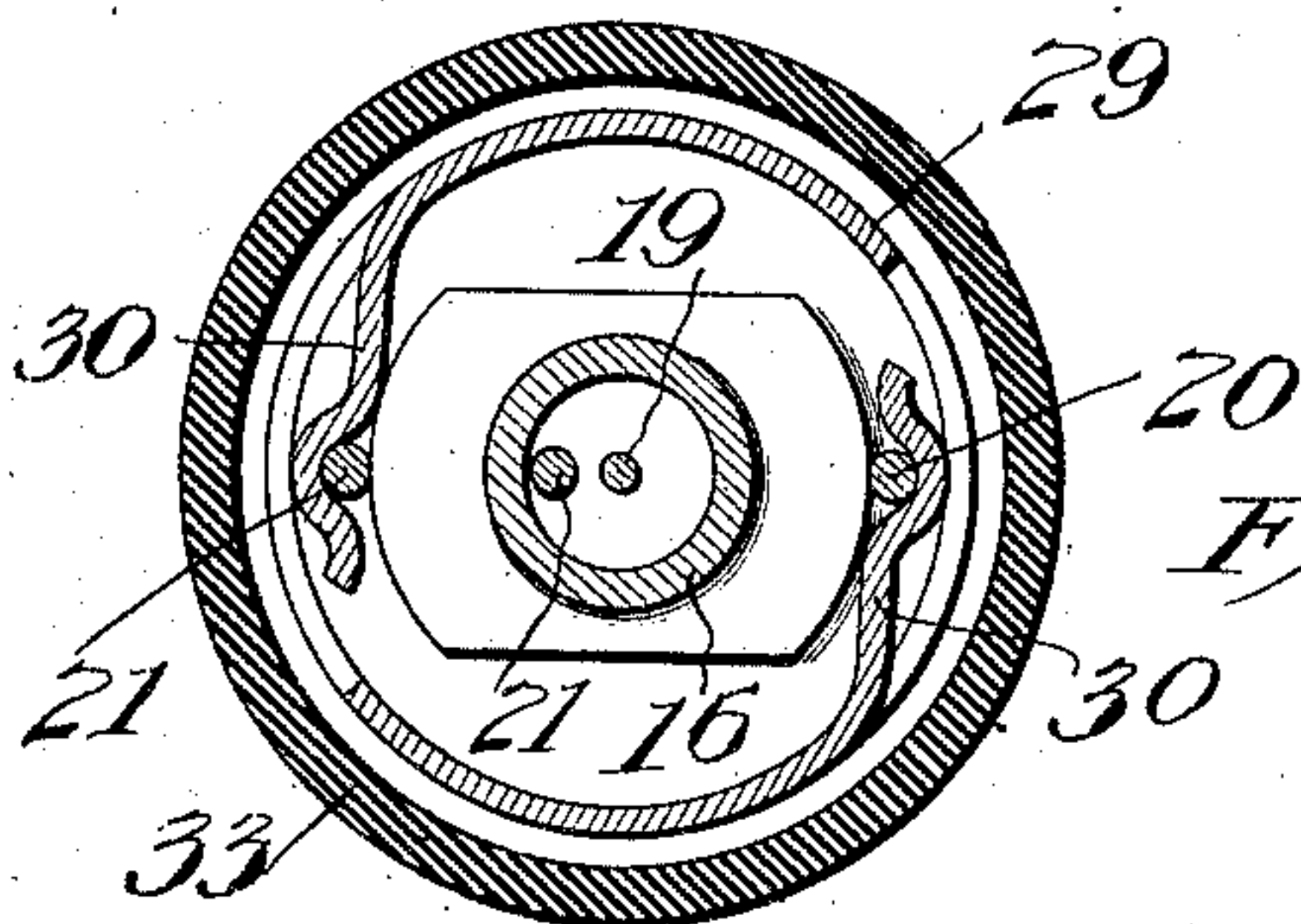
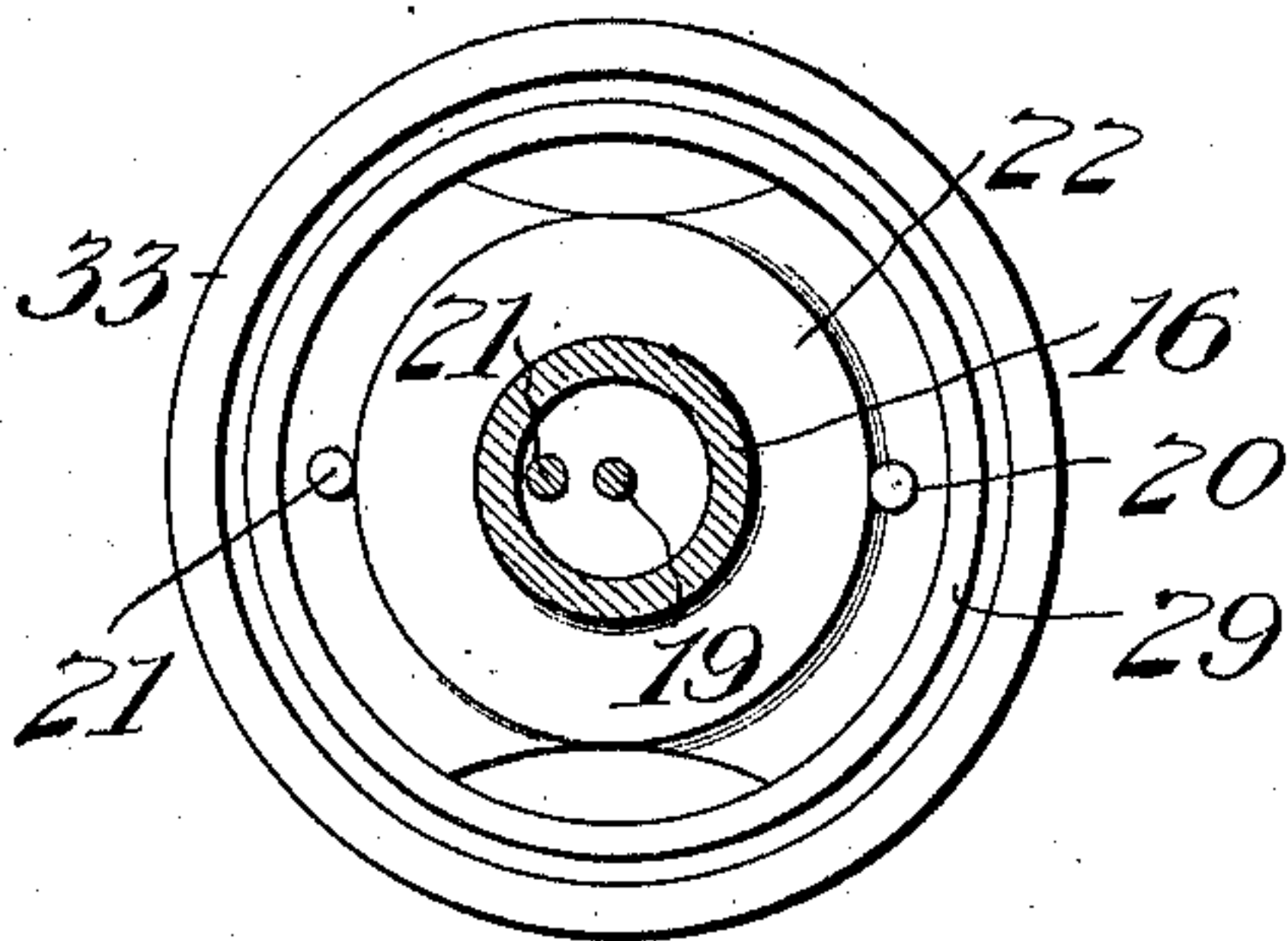


Fig. 7.

Fig. 4.

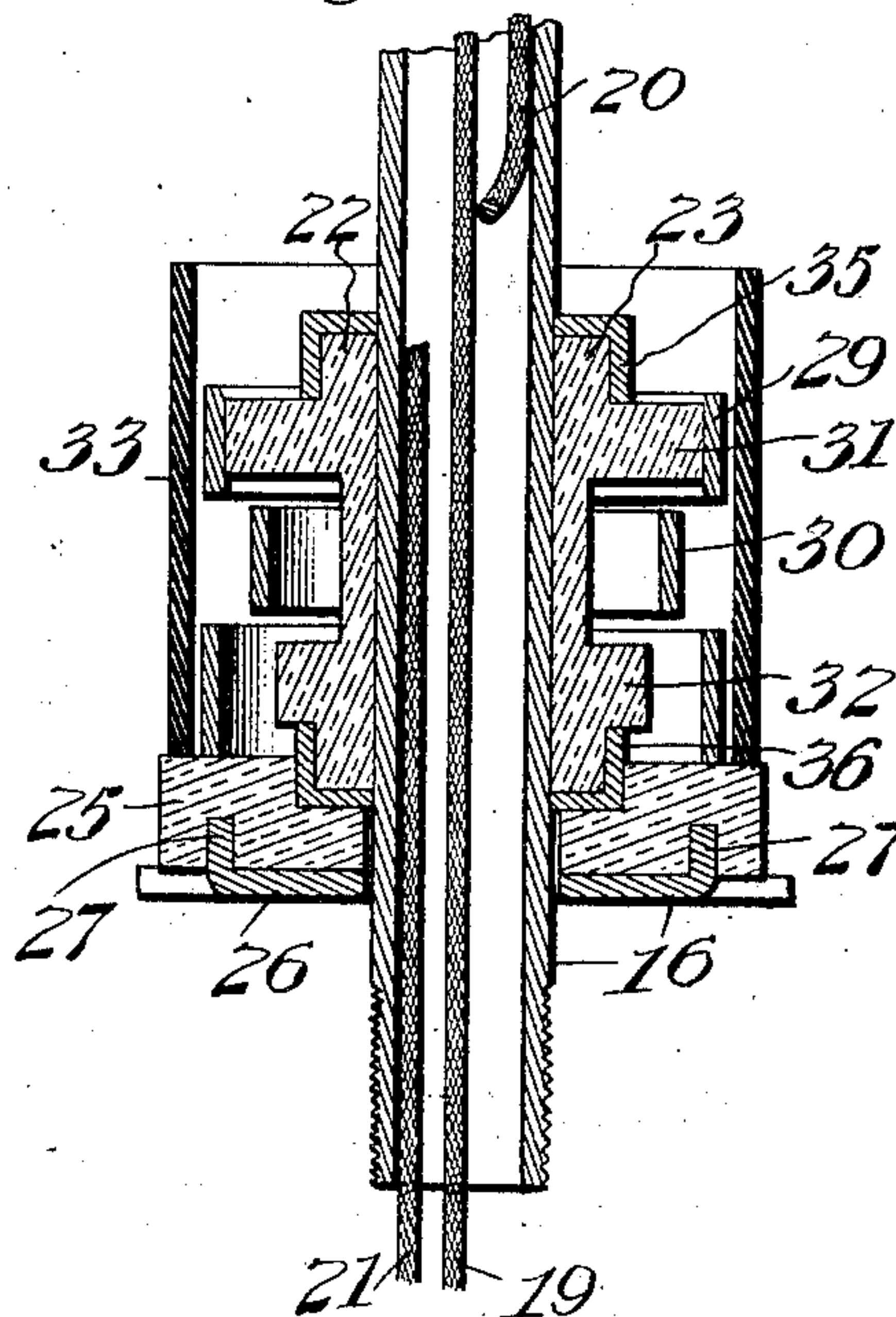


Fig. 6.

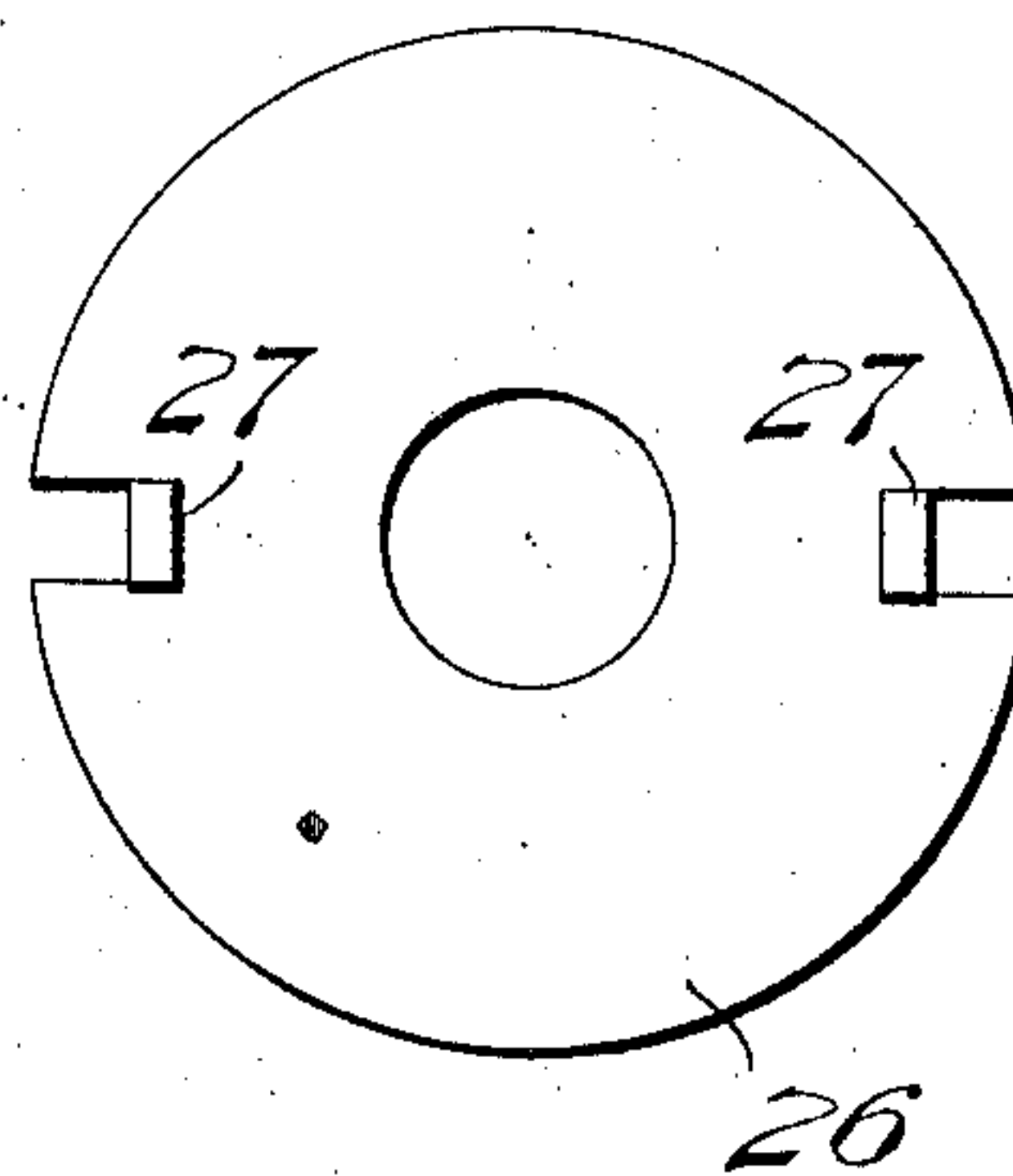
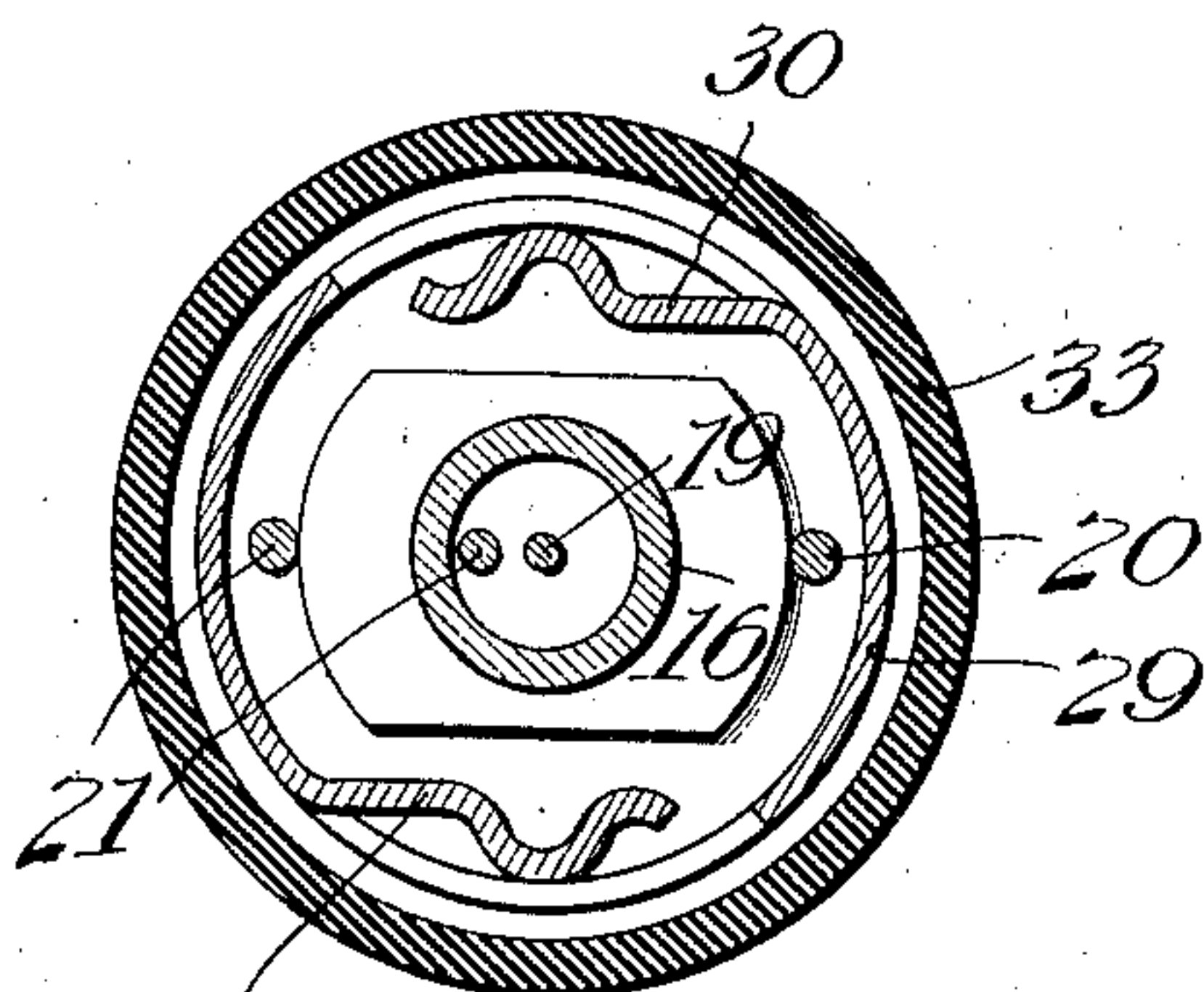


Fig. 8.



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UNITED STATES PATENT OFFICE.

CHARLES WAGNER, OF NEW YORK, N. Y., ASSIGNOR TO STERLING BRONZE COMPANY,
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ELECTRIC-LIGHT SWITCH.

985,234.

Specification of Letters Patent. Patented Feb. 28, 1911.

Application filed March 9, 1910. Serial No. 548,249.

To all whom it may concern:

Be it known that I, CHARLES WAGNER, a citizen of the United States, residing at the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Electric-Light Switches; 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.

This invention relates to improvements in switches for use in incandescent electric lighting, and particularly to that class of switches for this purpose in which a part of the fixture is rotated in turning on or turning off the current and therefore dispenses with what is commonly known as a key.

One of the objects of this invention is to adapt a switch of this sort to an electric lamp having the similitude of a candle, though this form of switch may be applied to any ordinary electric lamp socket.

The invention, therefore, consists in the structure of the parts and their combination substantially as hereinafter described and claimed.

In the accompanying drawings which form a part of this specification: Figure 1 represents a vertical, median section of the improved switch applied to an incandescent fixture simulating a candle. Fig. 2 is an enlarged representation partly in elevation and partly in vertical, median section with the parts in the same position as in Fig. 1. Fig. 3 is a complete vertical, median section of said parts in the same position as in Fig. 1. Fig. 4 is a complete vertical, median section of the switch taken at right angles to the section in Fig. 3. Fig. 5 is a plan of the switch as seen in Fig. 2. Fig. 6 is a view from the end side of the switch as seen in Fig. 4. Fig. 7 is a horizontal, transverse section through Fig. 3. Fig. 8 is a like section showing the rotary parts of the switch turned through an angle of 90 degrees, which position is that occupied when the current through the lamp is cut off.

In the simulation of a candle, Fig. 1, 10 represents a base or drip catcher, 11 the stem of a pedestal, 12 a socket for the candle, 13 a candle and 14 the blaze of the candle consisting of an incandescent lamp.

To the stem 11 a collar as 15 is connected by screw-threads and upon this collar is supported the candle-socket 12, which though but a shield for the switch may be used to operate it. This shield is mounted to rotate about a collar 15. Within the stem 11 is secured a tube 16; upon which is mounted, by means of a collar 17, the tube-section 13 of porcelain which simulates the candle. In the upper end of tube 16 is secured the incandescent lamp, at the base of which is a collar 18 forming a lateral support for the upper end of the tube-section 13. Through the tube 16 pass the conductors extending to the lamp socket within the collar 18. One of these conductors, as 19, extends uninterruptedly through the tube 16, while the other is interrupted at the switch where its ends 20 and 21 are so located as to be engaged by the movable contacts of the switch. The switch, in the preferred form illustrated, has a porcelain body 22 held to the tube 16 between collars 23 and 24, which are soldered or otherwise fixed to the tube 16. About the tube 16 and recessed to receive the lower end of the porcelain body 22 is a porcelain base 25, designed to carry the rotatable members of the switch. This base piece is mounted upon a plate as 26, and is fixed thereto as by lugs 27 struck up therefrom and entering holes in the base 25. The notches formed in the periphery of the plate 26 by the striking up of said lugs enter suitable projections as 28 formed upon opposite sides of the socket 12. By this means of connection between the plate 26 and the socket 12 the two parts can be rotated.

Upon the porcelain base 25, and mounted in any suitable way, is a metal cylinder as indicated at 29 from the body of which are formed contact springs 30 for engagement with the ends 20 and 21 of the interrupted conductor. The ends of said conductor are brought out through suitable openings in the tube 16 and passed down through vertical holes in flanges 31 and 32 formed upon the porcelain body 22. The ends of these wires which pass through said flanges are stripped of their insulation so that the contact springs 31 may make suitable electrical engagement therewith. The means shown for securing cylinder 29 to the base 25 may be lugs such as indicated at 34, Fig. 1, entering a recess in the base 25. The upper flange 31 on the body 22 also forms a lateral

support for the upper end of the cylinder 29. An insulating cylinder 33 is mounted on the base 25 and serves as a protector or shield for the parts of the switch. As a means for positively preventing the porcelain body 22 from rotating about the tube 16, lugs as 35 and 36 may be provided upon the collars 23 and 24 respectively, Figs. 2 and 4, entering into suitable recess on the ends of the porcelain body 22.

It will be noted that the bared portions of the conductors 20 and 21 lie against the sides of the porcelain body 22 and are exposed between the collars 31 and 32 of said body, and that nothing lies between the ends of the conductors 20, 21 and the springs 30 which are formed from the substance of the cylinder. Therefore, upon the rotation of the cylinder 29 the springs will engage the conductor ends 20 and 21, and since the said springs are in electrical connection with one another through the body of the cylinder 29 they will join electrically the two ends 20 and 21 of the interrupted conductor and thereby complete the lamp circuit. To insure the retention of the springs in engagement with the conductors suitable depressions may be made in the springs as indicated in Figs. 7 and 8 and the free ends of said springs may be upwardly turned to provide for ready passage thereof over the conductor ends. To turn the current on to the lamp the candle-socket 12 is rotated until the springs 30 partly engage the bared portions of the conductor, which engagement will be indicated by a slight click. To turn the current off the socket 12 will be again rotated. To turn the current on or off the socket 12 may be rotated in either direction at will. To get at the terminals of the switch the collar 15 may be unscrewed and the socket or shield 12 lowered.

I claim:—

1. In an electric switch, the combination of conductors, an insulating cylinder through which pass the conductors, and a rotatable conducting cylinder about the insulating cylinder and bearing spring contacts.

2. In an electric switch, the combination of a conductor, a rotatable candle socket

and a rotatable cylinder operated by the socket and circumferentially cut to form spring contacts for engagement with the conductor.

3. In an electric switch, the combination of an insulating cylinder through which pass conductors, the cylinder having flanges at the top and bottom, the flanges being perforated to receive a conductor, a conducting cylinder about the insulating cylinder and bearing on the flanges of the insulating cylinder and having a substantially central portion on the spring contacts.

4. In an electric switch, the combination of a tube for the conductors, an insulating cylinder receiving the ends of one conductor, a rotatable metal cylinder about the insulating cylinder having its central part formed into opposing spring contacts so that the switch may be controlled by turning the metal cylinder in either direction.

5. In an electric switch, the combination of a tube for the conductors, a fixed non-conducting cylinder surrounding the tube and having exterior bearing flanges through which pass the conductors, a rotatable metal cylinder surrounding the porcelain cylinder and cut to form substantially central spring contacts, a rotatable base engaging the metal cylinder, and a rotatable socket enclosing the cylinder and engaging the base.

6. In an electric switch, the combination of conductors, a tube receiving the conductors and having openings through which opposite ends of one of the conductors pass, an insulating cylinder about the tube receiving the ends of the conductor which pass through the sides of the tube, a rotatable cylinder bearing spring contracts, surrounding the insulating cylinder and turning upon it to bring the contacts into and out of engagement with the ends of the conductor.

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

CHARLES WAGNER.

Witnesses:

S. WEISS,
GEO. RULAND.