

C. D. GERVIN.  
 SWITCH FOR ELECTRIC LIGHT SOCKETS  
 APPLICATION FILED OCT. 28, 1909.

967,753.

Patented Aug. 16, 1910.

Fig. 1.

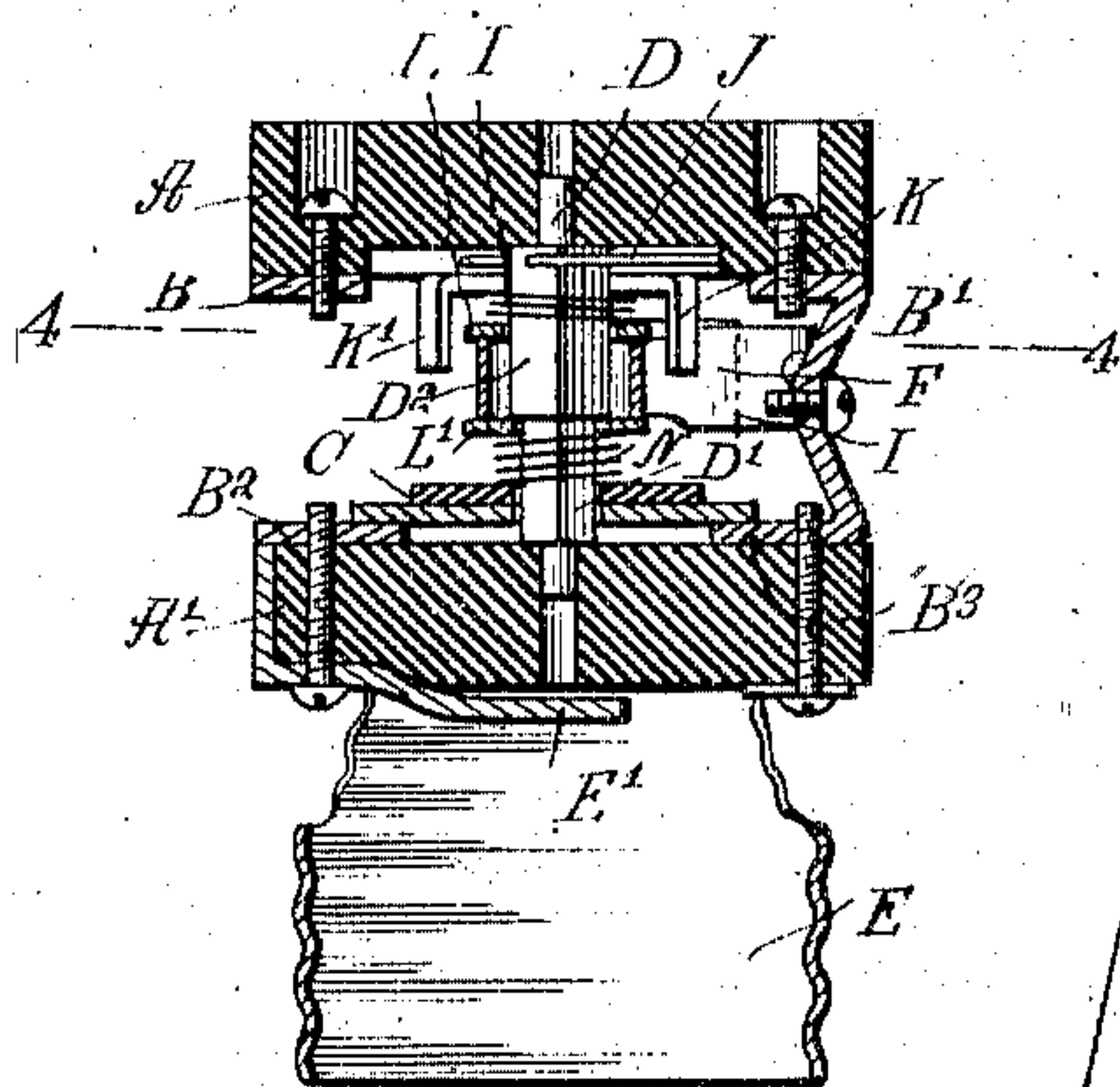


Fig. 3.

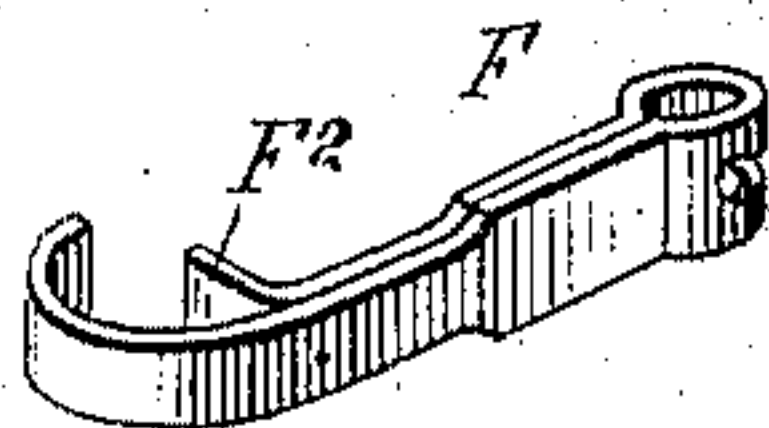


Fig. 5.

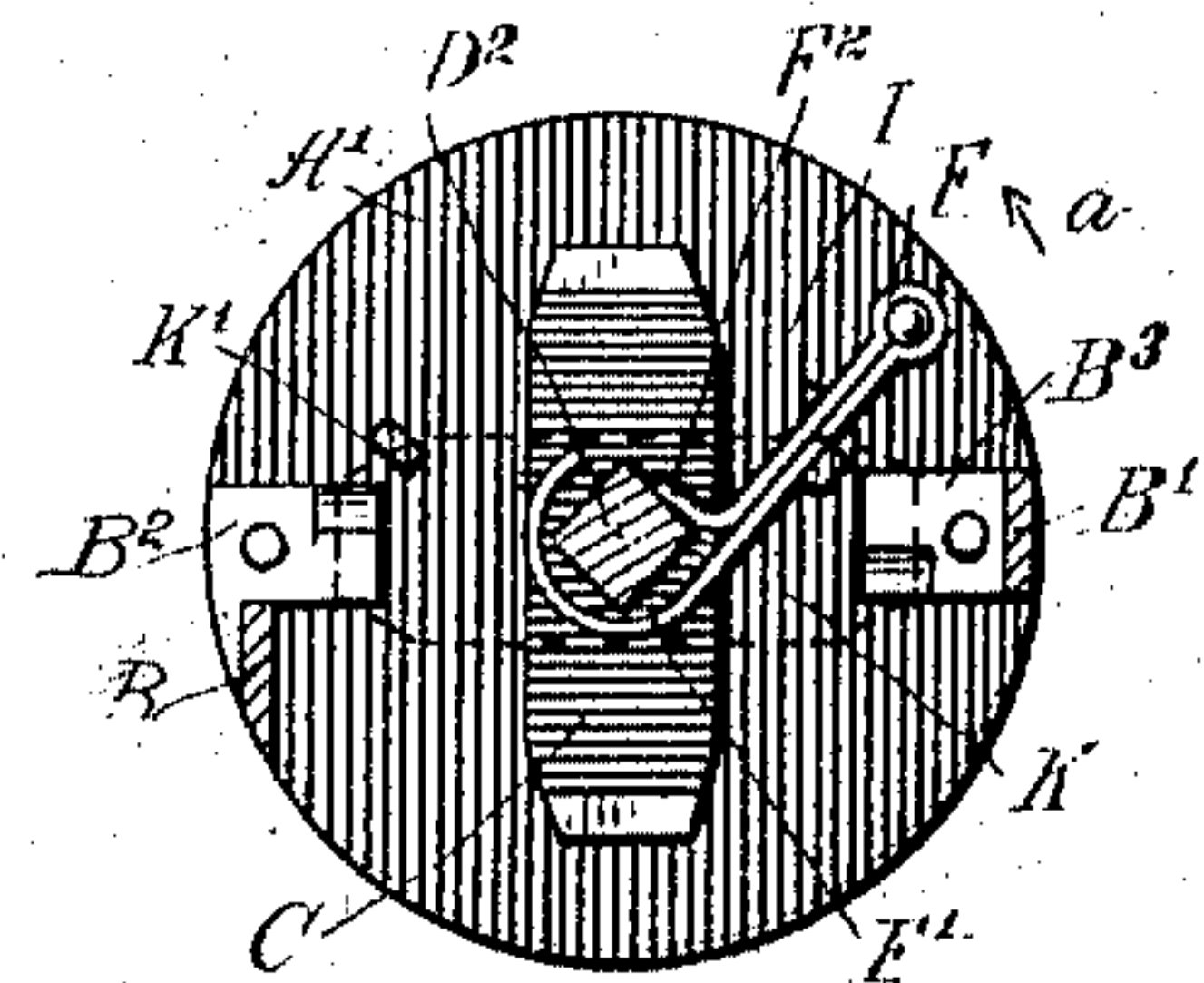
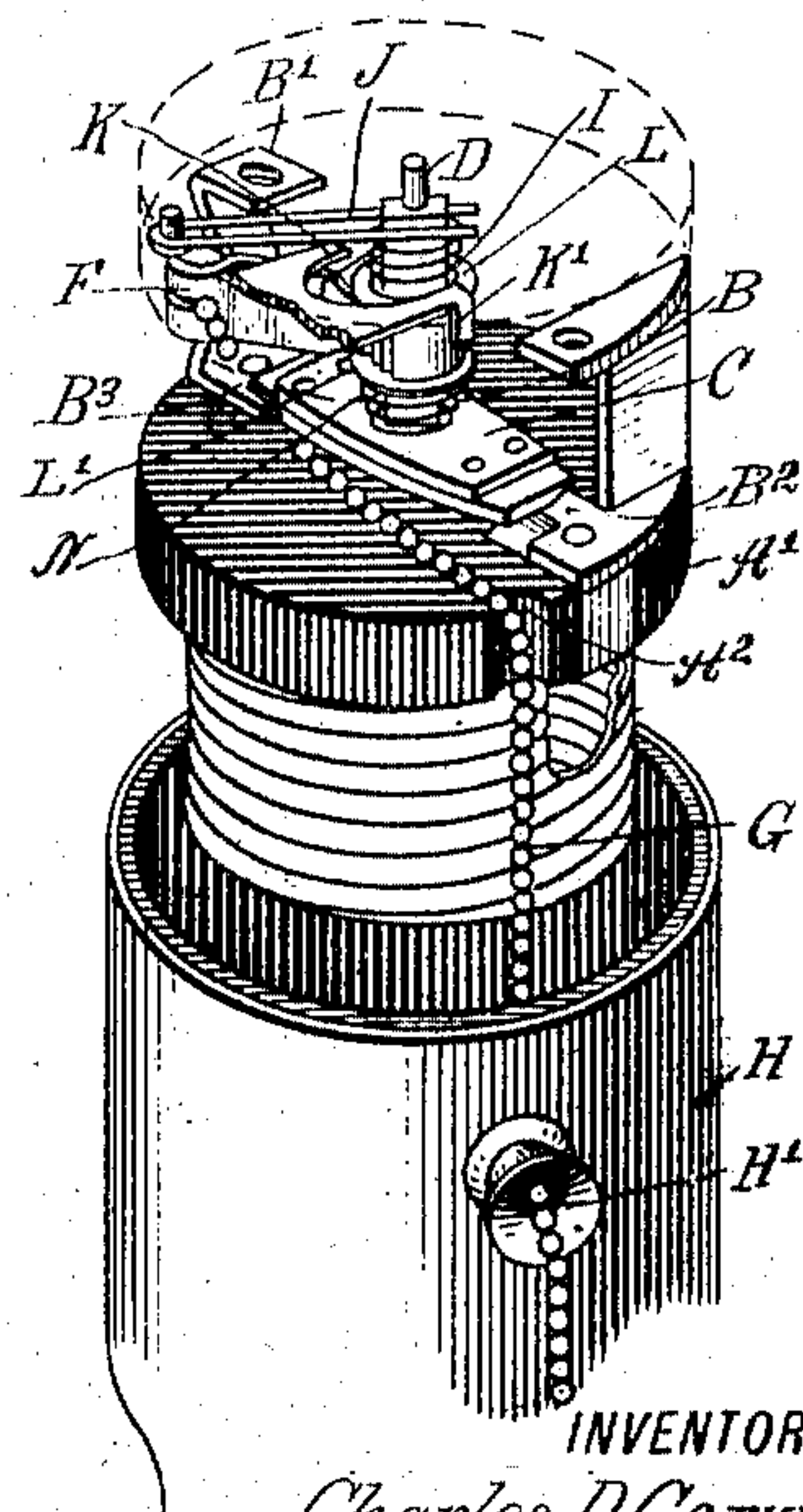


Fig. 4.

Fig. 2.



WITNESSES

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# UNITED STATES PATENT OFFICE.

CHARLES D. GERVIN, OF NEW YORK, N. Y.

SWITCH FOR ELECTRIC-LIGHT SOCKETS.

967,753.

Specification of Letters Patent.

Patented Aug. 16, 1910.

Application filed October 28, 1909. Serial No. 525,023.

*To all whom it may concern:*

Be it known that I, CHARLES D. GERVIN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Switch for Electric-Light Sockets, of which the following is a full, clear, and exact description.

- 10 The object of the invention is to provide a new and improved switch for electric light sockets, arranged to permit convenient manipulating of the switch for lighting and extinguishing purposes on successively pulling  
15 a flexible, depending, actuating means connected with the operating lever of the switch. For the purpose mentioned oppositely-disposed fixed contact plates are adapted to be engaged and disengaged by the terminals of  
20 a switch arm held on a shaft provided with a spring-pressed ratchet lever, capable of turning the shaft when moved in one direction and loosely turning on the shaft in the reverse direction by the action of its spring.  
25 A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification in which similar characters of reference indicate corresponding parts in all the views.  
30 Figure 1 is a perspective view of the switch as applied; Fig. 2 is a perspective view of the switch partly disengaged from the socket, the cap of which is removed; Fig. 3 is a sectional side elevation of the switch;  
35 Fig. 4 is a sectional plan view of the same on the line 4—4 of Fig. 3; and Fig. 5 is an enlarged perspective view of the actuating lever for the switch.

40 The spaced blocks A, A', of insulating material and forming part of the framework for the switch, are connected with each other by the metallic brackets B, B', terminating at the top of the lower block A' in fixed contact plates B<sup>2</sup>, B<sup>3</sup>, adapted to be  
45 engaged and disengaged by the ends of a switch arm C on a vertically-disposed shaft D, journaled in the blocks A, A', as plainly indicated in Fig. 3. The contact plate B' is connected with a threaded sleeve E secured  
50 to the under side of the block A, and the contact plate B<sup>2</sup> is connected with a tongue E' projecting into the sleeve E, in the usual manner, as indicated in Fig. 3. The shaft D is provided between its ends with the

polygonal portions D', D<sup>2</sup>, of which the 55 polygonal portion D' is engaged by the switch arm C, so that when the shaft D is turned the terminals of the switch arm C move in and out of engagement with the contact plates B<sup>2</sup> and B<sup>3</sup>. The polygonal 60 portion D<sup>2</sup> of the shaft D is engaged loosely by the eye F' of the operating lever F, connected at its free end with a chain G or other flexible connection, and which chain extends from the operating lever F through 65 a guideway A<sup>2</sup> formed on the peripheral face of the block A', the said chain then passing through a guide H' formed in the socket H in which the blocks A, A' are fastened in the usual manner. The eye F' of 70 the operating lever F is split, as plainly indicated in Fig. 4, and one end of the eye forms an integral spring pawl F<sup>2</sup>, engaging successively the sides of the polygonal portion D<sup>2</sup>, so that when the operating lever F 75 is swung in the direction of the arrow a', the pawl F<sup>2</sup> turns the shaft D so as to move the switch arm C in and out of engagement with the contact plates B<sup>2</sup> and B<sup>3</sup>. A spring I is fixed at one end and engages with its 80 other end the operating lever F, so as to return the latter, on the operator releasing the pull on the chain G, the pawl F<sup>2</sup> during its return movement gliding over the corresponding adjacent faces of the polygonal 85 portion D<sup>2</sup> without turning the shaft D. The polygonal portion D<sup>2</sup> is engaged between the arms of a U-shaped spring J, held on the under side of the block A, thus preventing return movement of the shaft D at 90 the time the lever F is on its return swinging movement. Stops K and K' attached to the under side of the block A serve to limit the forward and return swinging motion of the operating lever F. The eye F' extends 95 between the washers L and L', of which the washer L is attached to the polygonal portion D<sup>2</sup> of the shaft D, while the washer L' is held on the polygonal portion D', and is seated on the upper end of a spring N, pressing with its lower end on the switch arm C, so as to hold the latter in firm contact with the contact plates B<sup>2</sup> and B<sup>3</sup>. The free ends 100 of the switch arm C and the sides of the plates B<sup>2</sup>, B<sup>3</sup> are slightly beveled, as plainly indicated in Fig. 2, to permit the switch arm C to readily move into engagement with the upper faces of the plates B<sup>2</sup>, B<sup>3</sup> on turning 105



the switch arm C, by the operator pulling the chain G and actuating the lever F.

When the several parts are assembled, as shown in Fig. 1, and the switch is inactive, then the operating lever F rests on the stop K, as shown in Figs. 2, 3 and 4. Now in case the switch arm C is in contact with the contact plates B<sup>2</sup>, B<sup>3</sup>, as shown in Figs. 2 and 3, and lamp is lighted, and if it is desired to extinguish the light, the operator pulls on the chain G, to impart a swinging motion to the lever F, which by its pawl F<sup>2</sup> now gives a quarter turn to the shaft D, and as the switch arm C turns with the shaft D it moves out of engagement with the contact plates B<sup>2</sup>, B<sup>3</sup> and into the inactive position shown in Fig. 4, it being understood that as soon as the switch arm C moves out of contact with the contact plates B<sup>2</sup>, B<sup>3</sup>, the electric current of the lamp is broken and the light extinguished. As soon as the operator releases the pull on the chain G, the operating lever F swings back to its normal position of rest on the stop K by the action of the spring I. When it is desired to light the lamp, the operator again pulls the chain G, to impart another forward swinging motion to the lever F, to give another quarter turn to the switch arm C, whereby the latter is moved into engagement with the plates B<sup>2</sup>, B<sup>3</sup>, to close the circuit for lighting the lamp. As soon as the operator releases the pull on the chain G, the operating lever F returns to the stop K by the action of the spring I.

The switch shown and described is very simple and durable in construction and the working parts are not liable easily to get out of order.

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

1. A switch for electric light sockets, comprising fixed contacts, a switch arm adapted to alternately engage and disengage the said fixed contacts, a shaft mounted to turn and having a polygonal portion on which the said switch arm is mounted to turn with and to slide up and down, a spring pressing the said switch arm, an operating lever mounted to swing loosely on the said polygonal portion of the shaft and having a spring pawl in engagement with the sides of the said polygonal portion, and a spring for returning the said operating lever.

2. A switch for electric light sockets, comprising fixed contacts, a switch arm adapted to alternately engage and disengage the said fixed contacts, a shaft mounted to turn and having a polygonal portion on which the said switch arm is mounted to turn with and to slide up and down, a spring pressing the said switch arm, an operating lever mounted to swing loosely on the said polygonal portion of the shaft and having a spring pawl

in engagement with the sides of the said polygonal portion, a spring for returning the said operating lever, and stops for limiting the swinging motion of the said operating lever.

3. A switch for electric light sockets, comprising fixed contacts, a switch arm adapted to alternately engage and disengage the said fixed contacts, a shaft mounted to turn and having a polygonal portion on which the said switch arm is mounted to turn with and to slide up and down, an operating lever mounted to swing on the said polygonal shaft portion and having an integral spring pawl engaging the sides of the polygonal shaft portion, washers on the said shaft above and below the fulcrum end of the said operating lever, a spring fixed on one end and having its other end connected with the said operating lever, the spring having a coil intermediate its ends, and a coil spring interposed between the lower washer and the said switch arm.

4. A switch for electric light sockets, comprising fixed contacts, a switch arm adapted to alternately engage and disengage the said fixed contacts, a shaft mounted to turn and having a polygonal portion on which the said switch arm is mounted to turn with and to slide up and down, an operating lever mounted to swing on the said polygonal shaft portion and having an integral spring pawl engaging the sides of the polygonal shaft portion, washers on the said shaft above and below the fulcrum end of the said operating lever, a spring fixed on one end and having its other end connected with the said operating lever, the spring having a coil intermediate its ends, a coil spring interposed between the lower washer and the said switch arm, and a U-shaped spring straddling the said polygonal portion of the shaft.

5. In a switch for electric light sockets, a switch arm operating mechanism comprising a shaft carrying the switch arm and having a polygonal portion, and a spring-pressed operating lever having an open eye through which extends the said polygonal shaft portion, one end of the eye forming an integral pawl in engagement with the sides of the polygonal shaft portion.

6. In a switch for electric light sockets, an operating mechanism comprising a shaft carrying a switch arm and having a polygonal portion, and a spring pressed operating lever having a hooked portion loosely encircling the polygonal portion, and an angular lug on the opposite side of the said portion from the hooked portion for engaging the faces of the polygonal portion to rotate the shaft.

7. A switch for electric light sockets, comprising fixed contacts, a switch arm for connecting the contacts, a shaft carrying the

switch arm and having a polygonal portion,  
and a manually controlled lever having an  
eye loosely engaging the shaft, one of the  
ends of the eye having an angular portion  
5 for engaging the faces of the polygonal por-  
tion to rotate the shaft.

In testimony whereof I have signed my

name to this specification in the presence of  
two subscribing witnesses.

CHARLES D. GERVIN.

Witnesses:

THEO. G. HOSTER,  
JOHN P. DAVIS.