No. 649,308. Patented May 8, 1900.

H. HUBBELL.

INCANDESCENT LAMP SOCKET.

(Application filed Oct. 9, 1899.)

(No Model.)

Fig. 1.

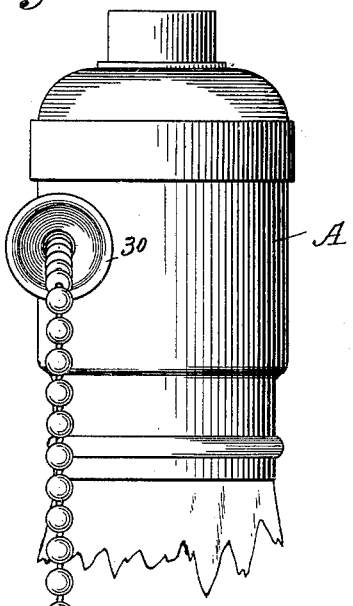


Fig. 2.

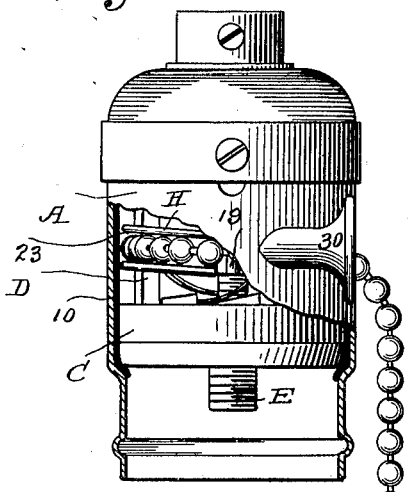


Fig. 3.

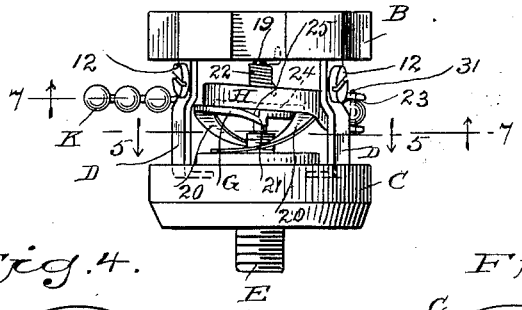


Fig. 4.

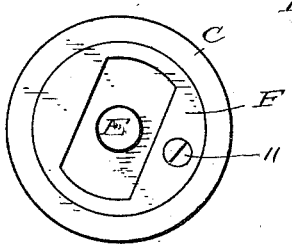


Fig. 5.

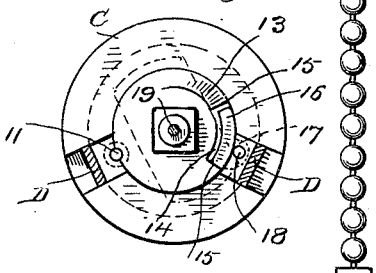


Fig. 6.

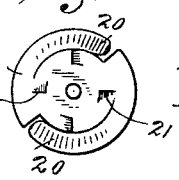
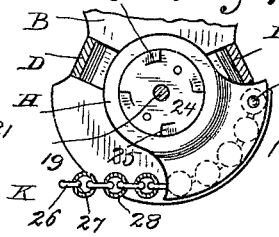


Fig. 7.



WITNESSES

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HARVEY HUBBELL, OF BRIDGEPORT, CONNECTICUT.

INCANDESCENT-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 649,308, dated May 8, 1900.

Application filed October 9, 1899. Serial No. 733,034. (No model.)

To all whom it may concern:

Be it known that I, HARVEY HUBBELL, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Incandescent-Lamp Socket, of which the following is a specification.

My invention relates to the class of pull-sockets illustrated and described in Letters Patent No. 565,541, granted to me August 11, 1896, and has for its object to generally improve their construction and mode of operation and to permit the use of a metallic chain as an operating device. The cord by which sockets of this class have usually been operated heretofore has been a source of inconvenience and dissatisfaction, and the use of a metallic chain has not been successful, owing to the fact that the chain was itself an admirable conductor and no practical means had been devised for insulating it. In order to overcome this objection and provide a simple, inexpensive, easily-operated, durable, and perfectly-insulated pull-socket that may be operated by a metallic chain, I have devised the novel socket which I will now describe in connection with the accompanying drawings, forming part of this specification, and using reference characters to designate the several parts.

Figure 1 is an elevation of my novel socket on an enlarged scale, an ordinary incandescent lamp being attached thereto and broken away; Fig. 2, an elevation from a point of view at right angles to the point of view in Fig. 1, a portion of the shell being broken away to show portions of the switch; Fig. 3, an elevation of the switch detached; Fig. 4, an inverted plan view of the switch detached; Fig. 5, a section on the line 5 5 in Fig. 3 looking down; Fig. 6, a plan view of the contact-plate detached, and Fig. 7 is a section on the line 7 7 in Fig. 3 looking up.

A denotes the shell, which is provided with an insulating-lining, as 10; B, the upper insulating-block; C, the lower insulating-block; D, standards by which the insulating-blocks are connected; E, a threaded hub rigidly secured in the lower insulating-block, to which a lamp may be attached and through which the current passes to the filament, (not shown;) F, a plate secured to the lower insulating-block by a screw 11, which also secures one of the standards thereto, and 12 denotes binding-screws in the standards.

Upon the upper surface of the lower insulating-block are inclines 13 and 14, which are arc-shaped, as seen in plan. These inclines both terminate in abrupt shoulders 15, and incline 14 has a metallic plate 16. This plate is provided with an extension 17, which is so shaped as to lie in contact with the base of one of the standards and is retained in place by a screw 18, which also secures that standard to the lower insulating-block. It should be noted that screw 18 is not in contact with plate F and is therefore not in the circuit.

19 denotes a vertical central rod, the ends of which are suitably secured in the upper insulating-block and in the threaded hub.

G denotes a contact-plate which turns freely on the rod and is provided with two downwardly-extending spring-arms 20, which engage the inclines, and with shoulders 21. (See Fig. 6 in connection with Figs. 2 and 3.) Above the contact-plate is an insulating operating-plate H, which also turns freely on the rod and is held closely in engagement with the contact-plate by means of a spring 22, one end of which engages the upper insulating-block, the other end engaging the operating-plate and acting to return it to its normal position after each actuation and also to retain the arms of the contact-plate closely in engagement with the inclines upon the lower insulating-block. The movement of the insulating operating-plate in either direction is limited by one of the standards, as will readily be understood from Fig. 7, in which the operating-plate is shown at its normal or retracted position and in engagement with one of the standards, the movement in the opposite direction being stopped by the other standard. In shape this insulating operating-plate is preferably a segment, as clearly shown in Fig. 7, and is provided in its periphery with the groove 23, which receives the metallic operating-chain K. On the under side of the insulating operating-plate and rigidly secured thereto is a plate 24, having lugs 25 extending downwardly therefrom and adapted to engage the shoulders 21 on the contact-plate. Any strong and flexible metallic chain may be used to operate plate H. I preferably,

however, on account of its great strength and flexibility, use a chain of the style illustrated in the drawings. (See Fig. 7 in connection with Fig. 2.) This chain consists of bars 26, headed at each end, as at 27, and balls 28, having openings in opposite sides into which the heads upon the bars are passed, after which the metal of the balls is closed inward upon the bars outside of the heads, as is clearly indicated in Fig. 7. The chain is preferably provided with an ornamental pendant 29 and passes through a trumpet-shaped guard 30 and corresponding openings (not shown) in the shell and lining. Within the shell the chain lies in groove 23 in the periphery of the insulating operating-plate, and the inner end of the chain is attached to the operating-plate at the edge opposite to the point of entrance by means of a rivet 31, which passes through one of the balls and through the opposite walls of the groove in the operating-plate.

It will be readily understood from the drawings that when the chain is pulled the insulating operating-plate will oscillate from the position shown in Figs. 2, 3, and 7 to a position in which the opposite side thereof will engage the other standard, and through the engagement of lugs 25 upon the operating-plate with shoulders 21 upon the contact-plate the latter will be carried forward with it. When either of the arms 20 of the contact-plate is in engagement with plate 16 upon incline 14, the circuit is closed. When neither of the arms 20 of the contact-plate is in engagement with plate 16, the circuit is open. It is obvious, therefore, that if the circuit is closed a pull upon the chain will open it, and if the circuit is open a pull upon the chain will close it.

Having thus described my invention, I claim—

1. In a pull-socket the combination with an insulating-block having inclines, one of which is provided with a metallic plate, of a rotatable contact-plate having arms adapted to engage the inclines, an insulating operating-plate which actuates the contact-plate to open or close the circuit, a spring acting to retain the contact-plate and the operating-plate in operative position and to return the latter to its normal position and a metallic operating-chain attached to the insulating operating-plate and passing through the shell.

2. In a pull-socket the combination with an insulating-block having inclines, one of which is provided with a metallic plate, of a rotatable contact-plate having arms adapted to engage the inclines, an insulating operating-plate adapted to oscillate concentrically with the contact-plate and having lugs adapted to engage the latter to move it forward and a groove in its periphery, a spring acting to return the operating-plate to its normal position after each actuation and a metallic operating-chain attached to the insulating operating-plate and lying in the groove and the outer end thereof passing through the shell.

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

HARVEY HUBBELL.

Witnesses:
A. M. WOOSTER,
S. W. ATHERTON.