

No. 847,939.

PATENTED MAR. 19, 1907.

J. H. HANSON.
COMBINED PULL AND KEY SOCKET.
APPLICATION FILED JULY 16, 1906.

Fig. 1

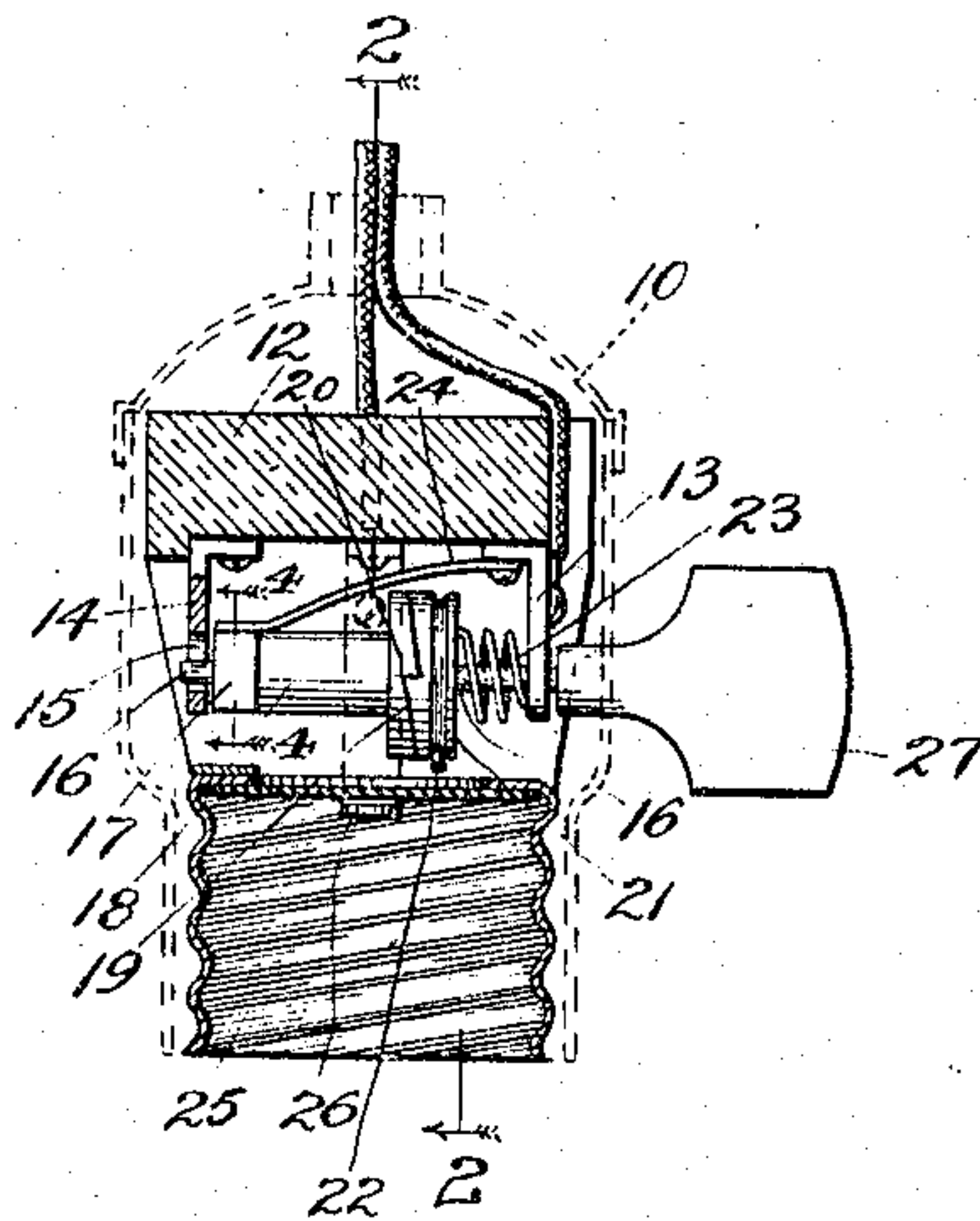


Fig. 2.

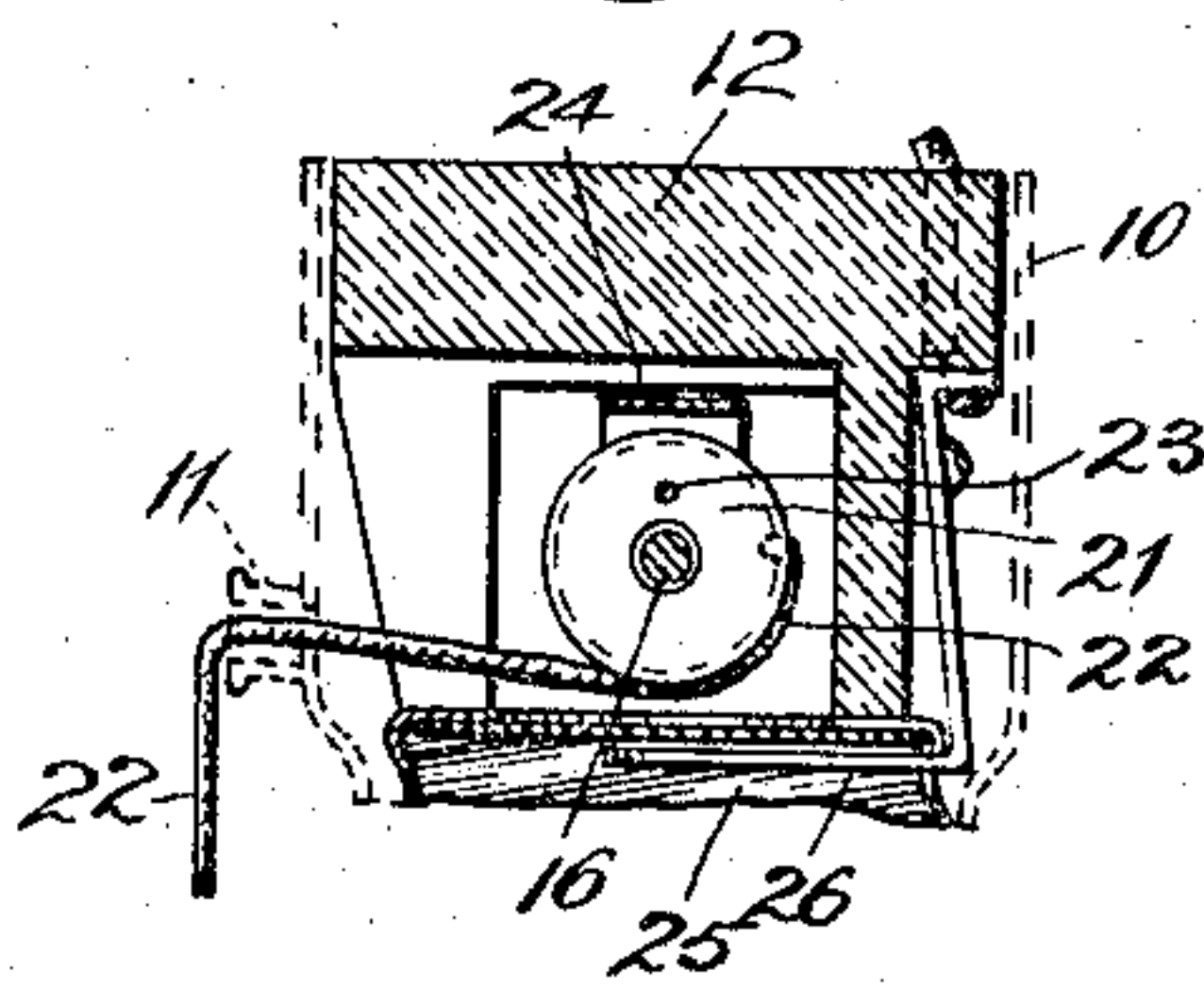


Fig. 4.

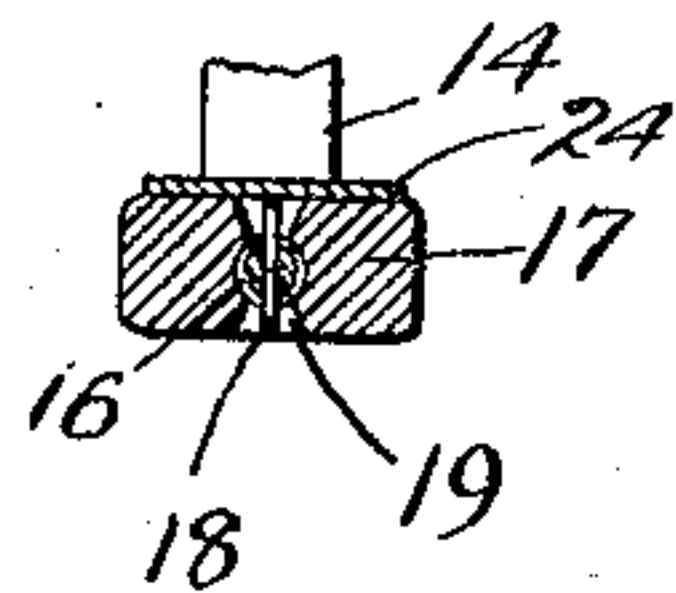
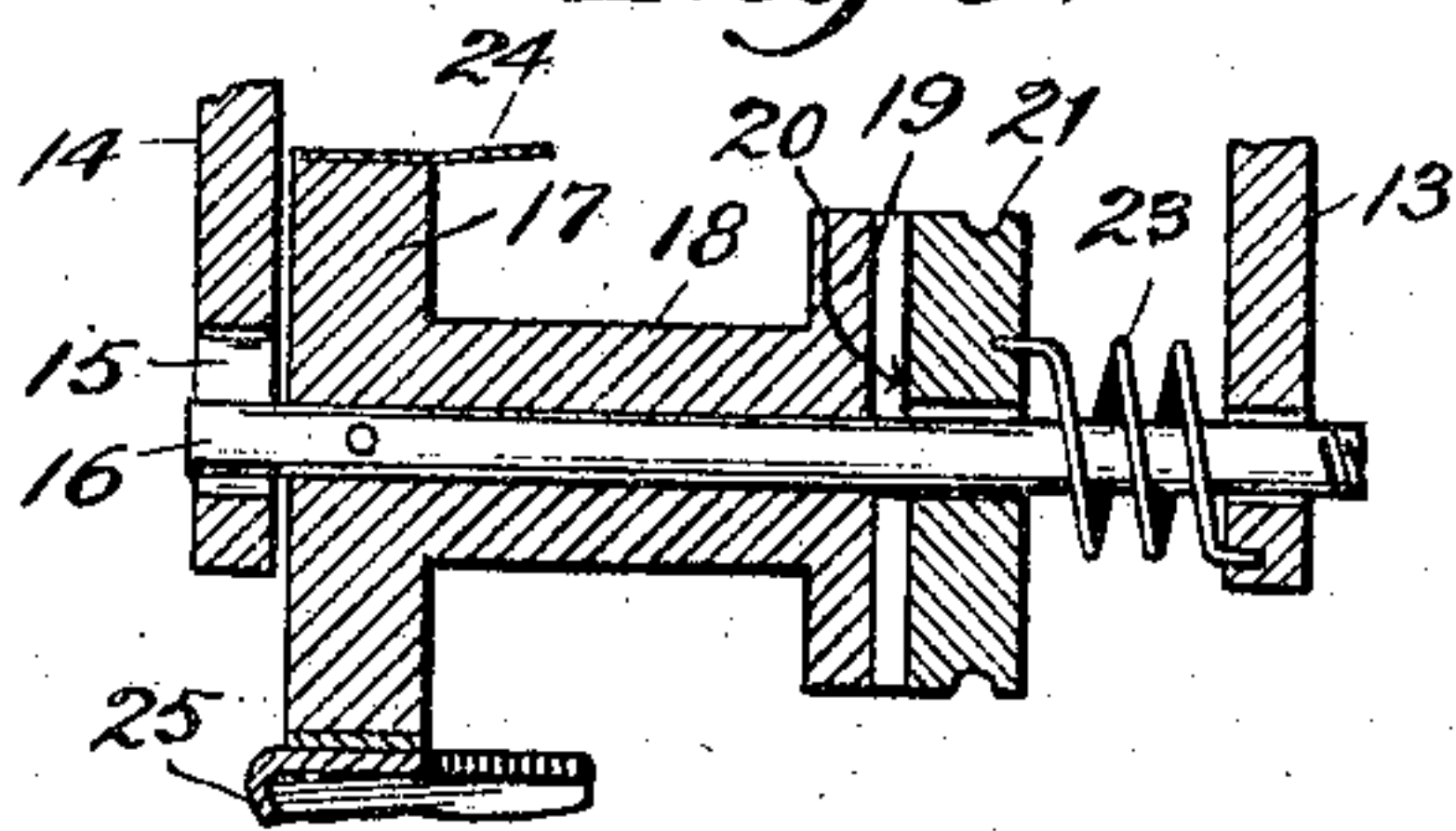


Fig. 3.



Witnesses
Ray White.
Harry R. L. White.

Inventor
John H. Hanson
By Fred Dainoff May

UNITED STATES PATENT OFFICE.

JOHN H. HANSON, OF CHICAGO, ILLINOIS.

COMBINED PULL AND KEY SOCKET.

No. 847,939.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed July 16, 1906. Serial No. 326,330.

To all whom it may concern:

Be it known that I, JOHN H. HANSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Combined Pull and Key Sockets, of which the following is a specification.

My invention relates to improvements in combined pull and key sockets for electric lamps, and has for its salient object to provide a socket which may be operated either through the instrumentality of the usual turning key or through the instrumentality of a pull-cord.

Another object of my invention is to provide a construction of the character described wherein the parts may be embodied in the area afforded in ordinary key-socket construction so that fittings of standard size may be employed.

A further object of my invention is to provide a construction involving the smallest possible number of parts in simple and effective arrangement.

Other and further objects of my invention will become apparent to those skilled in the art from the following description, taken in conjunction with the accompanying drawing, wherein—

Figure 1 is a central vertical section of a socket embodying my invention. Fig. 2 is a section on line 2 2 of Fig. 1. Fig. 3 is a sectional detail of the actuating mechanism, and Fig. 4 is a sectional detail on line 4 4 of Fig. 1.

Throughout the drawing like numerals of reference refer always to like parts.

In the drawing, 10 indicates in dotted lines a socket-shell, which is preferably of the usual or standard size and configuration and provides in suitable position an aperture 11 for the pull-cord. 12 indicates the usual insulating-base, to which are secured frame-pieces 13 14, the latter provided with an elongated bearing-slot 15 to receive one end of the actuating-shaft 16, the opposite end of which is journaled in the frame member 13. The usual oblong snap-switch contact head or member 17 is secured to the shaft 16 in the usual manner by a pin 18 passing through the shaft and taking into enlarged apertures 19 in the contact-head, said contact-head being mounted adjacent the end bearing 14 of the shaft. From said contact-head there projects inwardly an integral sleeve 18, carrying an integral positive clutch member 19, hav-

ing four crown-teeth or serrations 20. Co-acting with the clutch member 19 is a toothed loose clutch member 21, freely rotatable and axially movable upon the shaft 16, said member 21 having secured thereto a pull-cord 22, which partially surrounds the periphery of the clutch member and is adapted when pulled to rotate said clutch member in such direction that its teeth coacting with the teeth 20 serve to rotate the contact-head 17. For returning the movable clutch member 21 to normal position I provide a helical torsion-spring 23 at one end secured to the movable clutch member and at its other end secured to the frame member 13. Thus the single spring acts both as a return-spring and as a means for holding the clutch member 21 normally in engagement with the clutch member 19, secured to the contact-head.

24 indicates a leaf-spring arranged in general parallelism to the shaft 16, at one end secured to the frame member 13 and at its opposite extremity bearing constantly upon the contact-head 17. Thus the spring 24 acts as a contact member for said contact-head and also as a means for stopping the movements of the manually-operable clutch member 21 in proper position.

The lamp-contacts are, as usual, provided by the threaded shell 25, with which the contact-head 17 makes electrical connection when it stands with its greater diameter in position parallel to the axis of the shell, and by a center contact 26, connected to the exterior wiring in any usual way. The circuit-leg to be controlled by the contact-head 17 is connected with the exterior wiring by attachment of the outside wire to frame member 13, so that the shaft and clutch mechanisms are not depended upon to form any part of the circuit.

27 indicates a finger-key threaded to the shaft in such manner that it will be unscrewed if the shaft be sought to be rotated in a direction opposite to that in which it is moved by the operation of the pull-cord. Thus it will be seen that my device may be used either as a pull-socket or as a key-socket.

The operation of the device will be obvious. As the cord is pulled the clutch member 21, to which the cord is attached, is rotated, carrying with it the clutch member 19, so that the contact-head 17 is turned, and when said contact-head has effected a quarter-turn it is yieldingly held by the spring 24.

This turning of the head changes the condition of the circuit in the usual manner. Now as the pull-cord is released the spring 23 returns the manually-operable clutch member 21 toward initial position, yielding said spring axially to permit the requisite axial movement of the clutch member, so that the teeth of the actuating clutch member 21 move back one tooth with respect to the clutch member 19 and reengage the last said member for further operation.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a combined pull and key socket, the combination of a contact-head, an actuating-shaft for said contact-head, a finger-key upon said shaft, a clutch member operatively associated with the contact-head to move the latter, an actuating clutch member rotatable and axially movable on the shaft, and a cord connected directly with said actuating clutch member and arranged when pulled to rotate said clutch member.
2. In a device of the character described, a base, a transverse shaft, a contact-head mounted for rotation with the shaft, a sleeve integral with said contact-head, a clutch member carried by said sleeve, an operating coacting-clutch member, mounted on said shaft, and a spring 23 surrounding the shaft secured to said operating clutch member, and a pull-cord secured to said operating clutch member.
3. In a device of the character described, the combination of an insulating-base, frame members thereon, a transverse shaft mounted in said frame members, an oblong contact-head having its longer sides flat carried by said transverse shaft, a sleeve integral with

said contact-head, a clutch member integral with said sleeve, a coacting clutch member, a cord secured to said coacting clutch member to actuate the same, a spring for effecting the return movements of the actuating clutch member, a spring 24 constantly coacting with the contact-head and a lamp-contact where-with said head coacts only when turned to disengage spring 24 from its longer flat side.

4. In a lamp-socket, a socket-shell having therein a cord-guiding aperture, within the shell a contact-head, an actuating-shaft having lost-motion connection with said head, a conducting-spring constantly coacting with the contact-head to snap it to and hold it in predetermined positions, a lamp-contact wherewith said head coacts when in alternate positions, a clutch member associated for rotation with the contact-head, a coacting clutch member loose on the actuating-shaft, a spring normally holding the loose clutch member in engagement with the first said clutch member and in definite position of rotary movement; and a cord connected to the loose clutch member and arranged to rotate said member in direction to move the opposing clutch member when pulled, said cord extending at substantial right angles to the actuating-shaft through the aperture in the shell, whereby a pull upon said cord in any direction with respect to the shell functionally operates the parts to advance the contact-head to the next position.

In testimony whereof I hereunto set my hand in the presence of two witnesses.

JOHN H. HANSON.

In presence of—

GEO. T. MAY, Jr.,
MARY F. ALLEN.