

H. HUBBELL.  
KEY SOCKET.

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1,048,167.

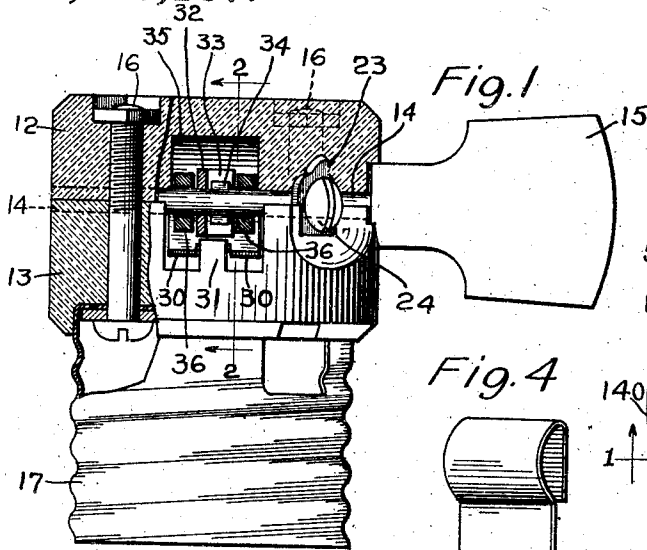


Fig. 3

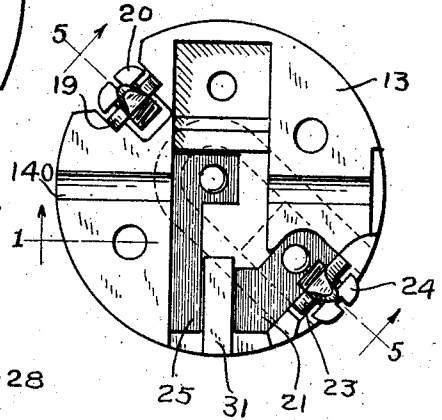


Fig. 4

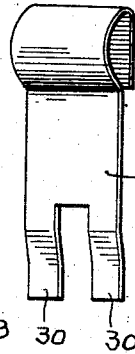


Fig. 2

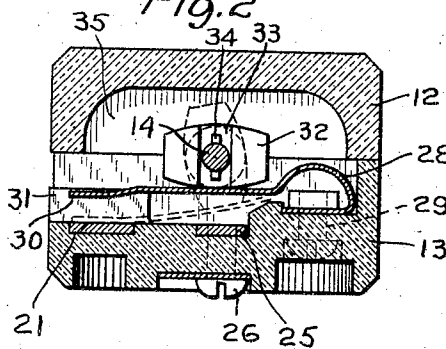


Fig. 5

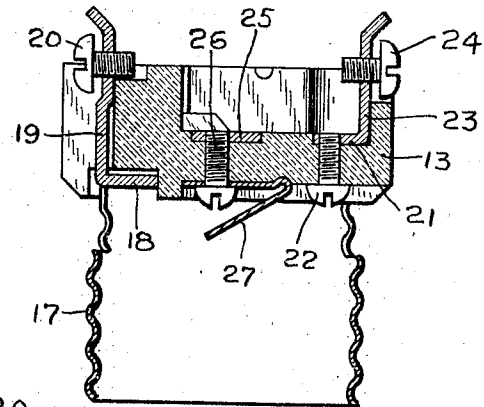


Fig. 6

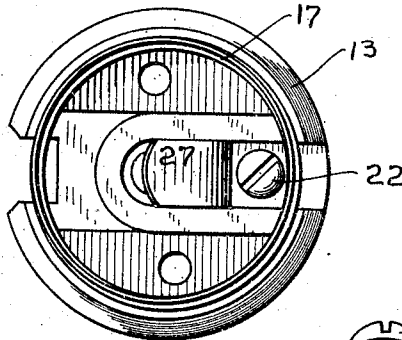
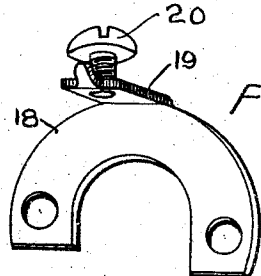


Fig. 7



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HARVEY HUBBELL, OF BRIDGEPORT, CONNECTICUT.

## KEY-SOCKET.

1,048,167.

Specification of Letters Patent.

Patented Dec. 24, 1912.

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*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 an Improvement in Key-Sockets, of which the following is a specification.

This invention has for its object to improve the construction and operation of electric switches, particularly snap switches employed in connection with lamp sockets and the like, and especially to provide a socket switch of simple construction capable of controlling a current of much higher potential than can be controlled by similar devices as heretofore constructed without materially increasing the spacing of the parts or the size of the socket. These and other objects of the invention, together with means whereby the same may be carried into effect, will best be understood from the following description of one form or embodiment thereof illustrated in the accompanying drawings. It will be understood however that the construction described and shown has been chosen for illustrative purposes merely and that the invention may be embodied in other forms without departing from the spirit and scope thereof.

In said drawings: Figure 1 is a part side view and part longitudinal section of a lamp socket constructed in accordance with the invention. Fig. 2 is a section on the line 2-2 of Fig. 1. Fig. 3 is a plan view of the upper face of the bottom insulating block and the parts carried thereby. Fig. 4 is a perspective view of the spring plate constituting the circuit closer or switch member. Fig. 5 is a section on the line 5-5 of Fig. 3. Fig. 6 is a plan view looking from the bottom in Fig. 1, the yoke piece and binding post connected therewith being omitted. Fig. 7 is a perspective view of the combined binding post and yoke piece.

12 and 13 denote, respectively, top and bottom insulating blocks having in their adjacent faces complementary grooves 140 in which is journaled a shaft 14 provided with a key 15. Said insulating blocks are secured together by means of bolts 16.

17 denotes a screw shell and 18 a yoke piece which, in the construction shown, has formed integral therewith a binding post 19 provided with a binding screw 20. The screw shell 17 and yoke piece 18 are connected with each other and attached to the

bottom insulating block 13 by means of the bolts 16 connecting the insulating blocks 12 and 13.

21 denotes a contact plate attached to the upper face of the insulating block 13 by means of a screw 22 and which, in the construction shown has formed integral therewith a binding post 23 provided with a binding screw 24. 25 denotes a second contact plate also attached to the upper face of the insulating block 13 by means of a screw 26. Contact plates 21 and 25 are preferably received in suitably shaped recesses formed in said block 13.

27 denotes the center spring contact which is secured to the lower face of insulating block 13 and connected with contact plate 25 by means of the screw 26 which also secures said plate 25 to said block 13.

In order to close the circuit through contact plates 21 and 25 there is provided a switch member comprising a spring plate 28 secured, as by bolt 29, to bottom insulating block 13 and adapted at its free end to engage contact plates 21 and 25. Said free end of the plate 28 is bifurcated to form two contact arms or fingers 30 lying on opposite sides of an insulating barrier 31 located between contact plates 21 and 25 and preferably comprising an integral lug or flange projecting from insulating block 13. When the fingers 30 of spring plate 28 are in engagement with contact plates 21 and 25 the circuit between center contact 27 and binding post 23 is completed. When, however, spring plate 28 is permitted to rise to carry its fingers 30 simultaneously out of engagement with the contact plates 21 and 25 there results a double break in the circuit, that is to say, between one of the fingers 30 and the plate 21 and between the other finger 30 and the plate 25. This double break, taken in connection with the insulating barrier 31 which effectually separates the plates 21 and 25, makes it possible to open a circuit carrying a current of much higher potential with the same degree of separation of the plates than is possible where such separation results in a single break in the circuit only. In other words, with the improved construction of switch it is possible to employ, for a current of given potential, a switch having a much more compact arrangement of parts than has heretofore been possible.

The spring plate 28 is normally raised, or in the position shown in full lines in Fig. 2,

to open the circuit. In order to depress said plate into the position shown in dotted lines in Fig. 2 to carry the fingers 30 simultaneously into engagement with the contact plates 21 and 25 respectively, and close the circuit, there is provided a snap cam 32 loosely mounted on the shaft 14 and having a recess 33 in which are loosely received lugs 34 projecting from said shaft 14. In order to accommodate the cam 32 the insulating blocks are provided with a recess 35 from the walls of which said cam is spaced by means of washers 36.

Having thus described my invention I claim:

1. A snap switch of the character described comprising an insulating block provided with a recess, a center contact, a screw for securing said center contact in position, spaced apart contacts located in said recess, one of said contacts being secured in position by said screw, an insulating barrier being interposed between said spaced apart contacts, a spring plate secured to said block and provided with a bifurcated end straddling said barrier, and means for moving said spring into engagement with said spaced apart contacts.

2. A snap switch of the character described comprising an insulating block provided with a radially arranged recess having a lateral branch, a center contact, a screw for securing said center contact in position, a contact in said recess and secured in position by said screw, a contact in the branch of said recess and spaced apart from the last mentioned recess, an insulating barrier being interposed between said spaced apart contacts, a spring plate secured to said block and provided with a bifurcated end straddling said barrier, and means for moving

said spring into engagement with said spaced apart contacts.

3. A snap switch of the character described comprising an insulating block provided with a recess, a center contact, a screw for securing said center contact in position, spaced apart contacts located in said recess, one of said contacts being secured in position by said screw, an insulating barrier being interposed between said spaced apart contacts, a spring plate secured to said block and provided with a bifurcated end straddling said barrier, the other end of said spring being bent under to form a lip, a securing screw engaging said lip, and means for moving said spring into engagement with said spaced apart contacts.

4. A snap switch of the character described comprising an insulating block formed in two parts, one of said parts being provided with a recess, a center contact, a screw for securing said center contact in position, spaced apart contacts located in said recess, one of said contacts being secured in position by said screw, an insulating barrier being interposed between said spaced apart contacts, a spring plate secured to said block and provided with a bifurcated end straddling said barrier, means for moving said spring into engagement with said spaced apart contacts, a yoke piece, screws uniting the parts of said insulating block and also securing said yoke piece in position, and a screw shell clamped between said yoke piece and said block.

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

HARVEY HUBBELL.

Witnesses:

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S. W. ATHERTON.