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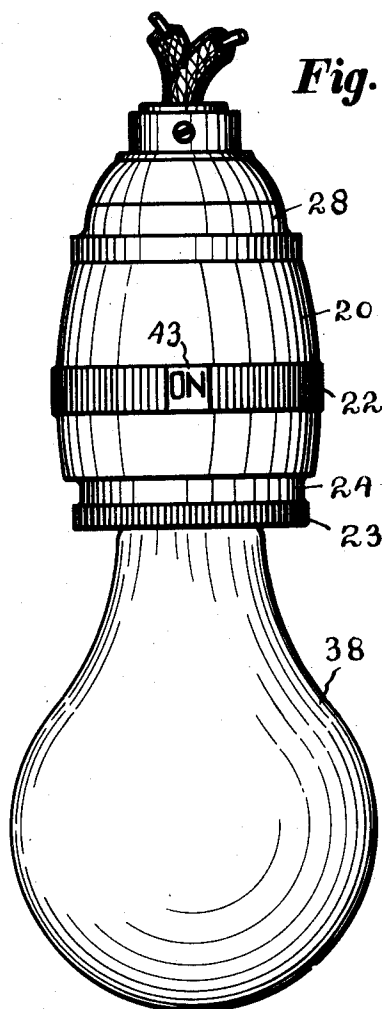
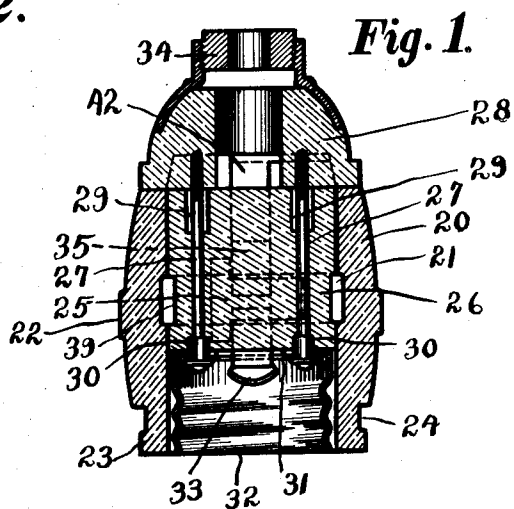
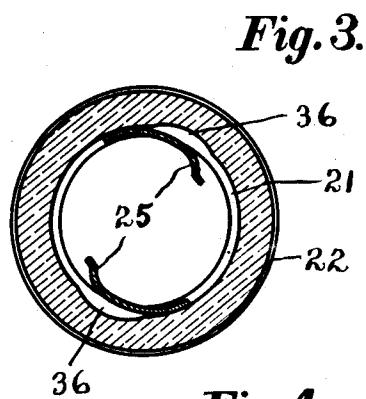
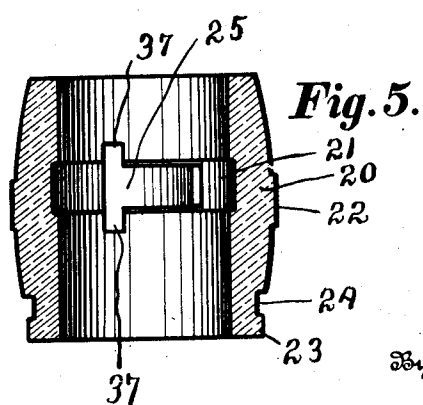
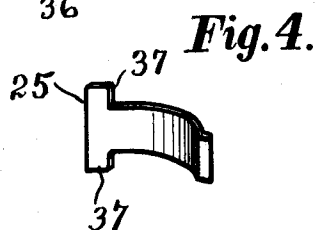
1,701,476

J. G. MILLER

SAFETY SOCKET

Filed May 16, 1927

2 Sheets-Sheet 1



Inventor

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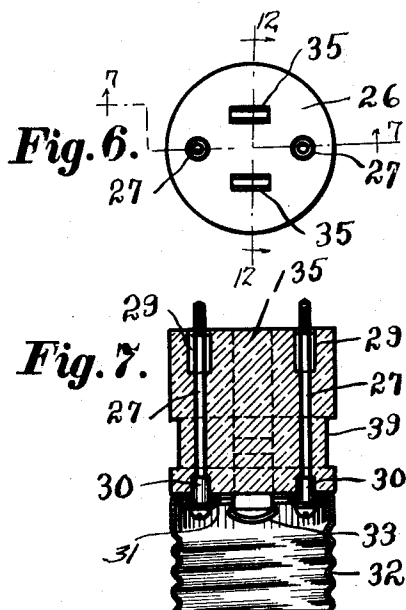
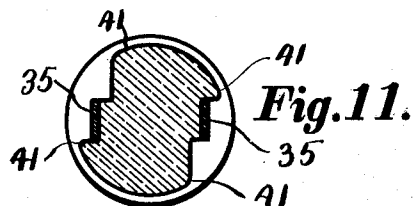
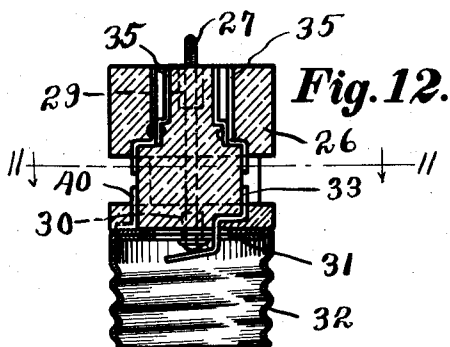
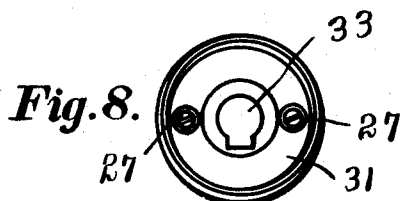
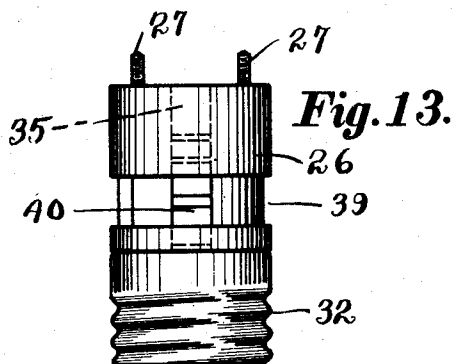
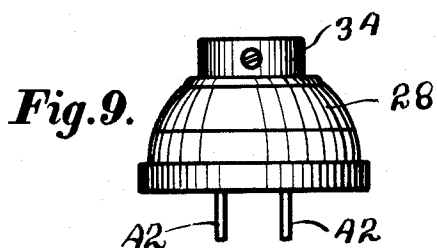
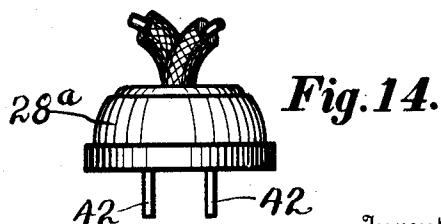
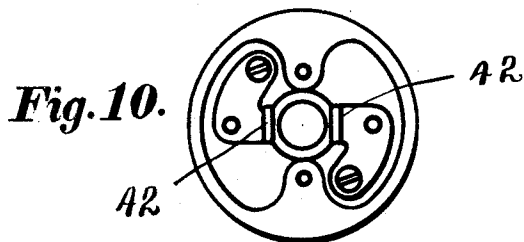
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J. G. MILLER

SAFETY SOCKET

Filed May 16, 1927

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

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MRS. J. G. MILLER, OF OMAHA, NEBRASKA.

SAFETY SOCKET.

Application filed May 16, 1927. Serial No. 191,893.

The present invention relates to improvements in safety sockets, and has for an object to provide an electrical switch construction which will be faithful and secure in its operation and, by virtue of the enclosure of the parts and the improved insulation, the device is both shock-proof and weather-proof.

Another object of the invention is to provide an improved socket structure which will insure against the excessive heat produced by present types of lamps and other electrical appliances.

A further object of the invention is to provide a double pole and double break contacts, all parts of which are dead when no current is passing.

A still further object of the invention is to provide a socket having a capacity of over 660 watts and combining the advantages of the key and keyless sockets.

A still further object of the invention is to provide a socket of fewer parts, longer life, of less expensive construction and trouble-proof.

With the foregoing and other objects in view, the invention will be more fully described hereinafter, and will be more particularly pointed out in the claims appended hereto.

In the drawings, wherein like symbols refer to like or corresponding parts throughout the several views,

Figure 1 is a vertical section taken through a socket constructed according to the present invention.

Figure 2 is a side elevation of the socket showing a lamp inserted.

Figure 3 is a cross section taken substantially centrally through the barrel.

Figure 4 is a perspective view of a spring contact.

Figure 5 is a longitudinal section taken through the barrel showing the spring contact inserted.

Figure 6 is a top plan view of the cylindrical body or core.

Figure 7 is a longitudinal section taken through the core, along the dotted line 7—7 of Figure 6.

Figure 8 is a bottom plan view of the core showing center contact and reinforcement ring.

Figure 9 is a side view of a cap employed.

Figure 10 is a bottom plan view of the cap shown in Figure 9.

Figure 11 is a cross section taken through the core substantially centrally thereof.

Figure 12 is a longitudinal section taken through the core along the dotted line 12—12 of Figure 6 and at substantially right angles to Figure 7.

Figure 13 is a side view of the core, and

Figure 14 is a side view of a conventional plug cap employed.

Referring more particularly to the drawings, 20 designates a hollow barrel of Bakelite, porcelain or other non-conductive and insulating material. Internally of the barrel is an annular groove 21 formed about midway of its length. Externally about midway of the length of the barrel is a milled band 22 for facility in rotating the barrel. At the lower edge of the barrel is also a milled or knurled band 23 and above this latter band is an annular recess 24 for receiving a shade holder.

In Figure 4 is shown a resilient metallic contact member 25 having the right angularly turned tongues 37 at its base end for fitting into similarly formed recesses on the interior of the barrel, as shown in Figure 5, which recesses communicate with the annular groove 21 in which the body portion of the contact member 25 is adapted to engage.

As shown in Figure 3, deep seats 36 are shown as indented in the base portion of the groove 21 in position to receive downward portions of the spring contact fingers 25, the terminal edges of which are bent outwardly at an angle to the curvature given the intermediate portion of the contact fingers.

The contact fingers are adapted to engage within an external annular groove 39 provided on an intermediate portion of an insulating body or core 26 which is supported within the barrel as by the two diametrically opposite bolts 27, the upper ends of which pass through recesses 29 in the upper end of the core 26 and are threaded into the cap 28 which is adapted to receive through the coupling 34 the wires as shown in Figure 2.

The lower portion of the socket body or core 26 is provided with the hollow rivets 30 extending about the lower headed ends of

the bolts 27. These hollow rivets constitute the means by which the reinforcing ring 31 and the threaded socket shell 32 are held in place on the lower ends of the bolts and suspended thereby. At 33 is shown the central contact member which is insulated from the screw shell 32 in which the lamp 38, shown in Figure 1, is screwed. This contact 33 and also a contact 40, as shown in Figure 12 is brought up along the side of the core 26 within the annular groove which at this point is stepped in the manner shown in Figure 11. The contacts 33 and 40 terminate in spaced relation from the contacts 35 which are disposed within sockets at the upper portion of the core. These sockets are intended to receive the pins 42, shown in Figure 3, as projecting down from the cap piece 28 or from the cap piece 28* of the ordinary form, as shown in Figure 14.

In the operation of the device assuming that a lamp 38 is in the socket and that the socket is connected in the house or other circuit, simply by rotating the barrel 20, the manipulation of which is convenient owing to the external milled band 22, the lamp 38 may be illuminated and turned off quickly without sparking of the switch contacts and without the dangers incident to the ordinary socket operation.

In rotating the barrel 20, the spring contact fingers 25, of which there will preferably be two, are made to rotate within the external annular groove 39 of the insulating core 26. When the free inwardly bent angular terminal ends of these spring contact fingers 25 come opposite and engage the spaced ends of the contacts 33, 35 and 40, 35 the circuit through the lamp 38 will be established, and when consequent upon and further rotation of the barrel 20, the contact fingers are moved off the stationary contacts 33, 35 and 40, 35, the lamp will be extinguished.

Furthermore, owing to the stepped arrangement 41, shown in Figure 11, and the formation given the free end portion of the contact fingers 25 the movable contacts will snap rapidly "On" and "Off" the fixed contacts and sparks and arcs are prevented. On the barrel, as indicated at 43 in Figure 2, may be placed an "On" and "Off" indicator.

I do not wish to be restricted to the size, form and proportions of the various parts, and obviously changes could be made in the construction herein described without departing from the spirit of the invention, it being only necessary that such changes fall within the scope of the appended claims.

What is claimed is:—

1. A socket comprising a rotatable barrel, a fixed core within the barrel, a cap secured to said core and forming an abutment for the barrel, a screw socket shell carried by the core, spaced contacts including said shell, and contacts rotatable with said barrel for bridging said spaced contacts.

2. A socket comprising a cap piece, a core suspended therefrom, spaced contacts carried by the core, a threaded shell carried by the core, and a rotatable barrel extending about the core and shell and having contact arms to engage with the spaced contacts of the core.

3. A socket comprising an insulating core, an insulating barrel rotatably mounted about the core, an insulating cap piece affixed to the core, a threaded shell extending within the barrel and below the core, a reinforcing ring about the upper portion of the shell, rivets for holding the reinforcing ring and shell in place, spaced contacts carried by the core, and moveable, resilient contact arms carried by the rotatable barrel.

4. A socket comprising a cap piece having pins and threaded recesses, a core having apertures to receive said pins and provided with two depressed portions intermediate its ends in stepped form, the steps running circumferentially, threaded bolts in the core for threading into said recesses in the cap piece, contacts in said core extending into the depressed and stepped part, a threaded shell carried by said bolts at the lower part of said core, a central terminal within said shell, contacts from said terminal and shell extending into the depressed and stepped part of the core in spaced relation to the before mentioned contacts, and a rotatable barrel having yieldable contact arms for engaging the spaced contacts of the core.

In testimony whereof, I have affixed my signature.

JOSEPH G. MILLER.