Nov. 4, 1941. C. F. MacCARTHY 2,261,170

ELECTRICAL CONTACT SOCKET

Filed April 26, 1940

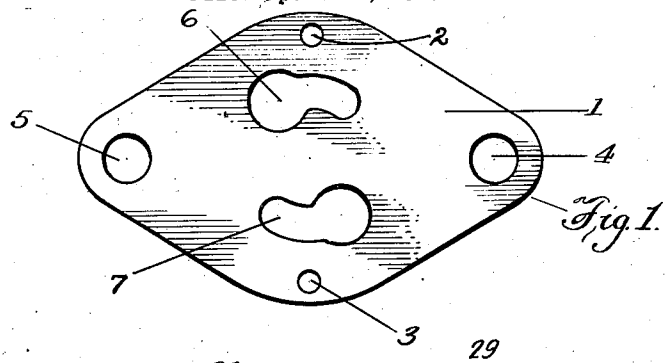


Fig. 1.

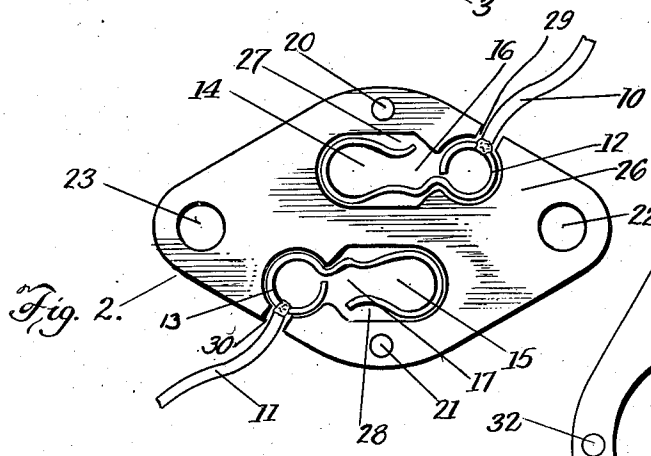


Fig. 2.

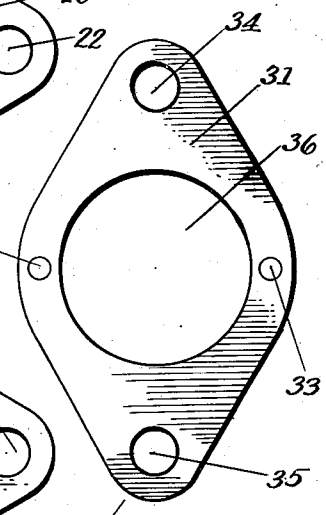


Fig. 3.

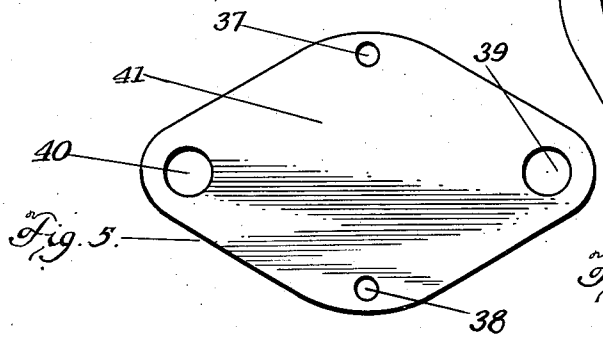
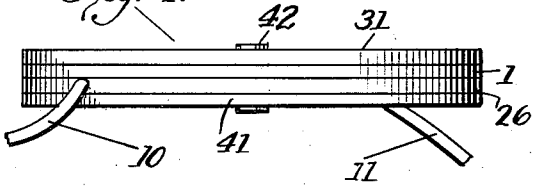


Fig. 5.

Fig. 4.



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ELECTRICAL CONTACT SOCKET

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Application April 26, 1940, Serial No. 331,793

3 Claims. (Cl. 173—328)

This invention relates to a socket for an electrical device having a base with two contact pins extending therefrom used in the starting apparatus of electric gaseous discharge lamps, and the like.

An object of the invention is to provide a socket which gives a distinctly positive action. Another object is the securing of a broad contact surface. A further object is the centering in the socket of the base of an electrical device so that the rotating axis of the base of an electrical device is concentric with the insulating material. The structure of the socket is such that it is much easier to manufacture, than prior sockets.

The socket comprises four pieces of insulating material, for example fiber, joined together by eyelets, rivets, or some similar means, two pieces of resilient wires, two pigtails and such other materials as are enumerated in the specifications, taken in conjunction with the drawing in which:

Figure 1 is a top view of the second layer.

Figure 2 is a top view of the third layer.

Figure 3 is a top view of the top layer.

Figure 4 is a side view of the socket after it has been assembled.

Figure 5 is a top view of the bottom layer.

In Figure 1, the insulating material, for example fiber 1, is stamped or punched in such a manner as to provide the holes 2, 3, 4, and 5 and the cut-outs 6 and 7. These cut-outs and holes are so shaped that when the insulating material of fiber herein described is superimposed on the insulating material described in Figure 2, the holes 2, 3, 4 and 5 in Figure 1 will coincide with similar holes 20, 21, 22, 23 described in Figure 2 and the cut-outs 6 and 7 herein described will be over the cut-outs 27 and 28 described in Figure 2.

In Figure 2, the insulating material, for example fiber, 26, is stamped or punched in such a manner as to provide the holes 20, 21, 22, and 23 and the cut-outs 27 and 28, and 29 and 30. These cut-outs and holes are so shaped that when the insulating material or fiber described in Figure 1 is superimposed thereon, the holes 20, 21, 22 and 23 described herein will coincide with similar holes described in Figure 1 and the cut-outs 27 and 28 in Figure 2 will be directly beneath similar cut-outs described in Figure 1. Cut-outs 29 and 30 are so inserted as to provide outlets for connection purposes for the pigtails 10 and 11 which are joined to the resilient wires 12 and 13 by soldering, welding, or some similar bonding method.

The contour of the resilient wires 12 and 13 is such that the wires provide a positive locking device when they are recessed in the cut-outs 27 and 28. The cut-outs 27 and 28 herein described are so formed as to provide for enough expansion on the part of the wires 12 and 13 to allow for the insertion therebetween of the contact pins of the base of an electrical device and for the movement of these pins into their locking positions. On the other hand, the cut-outs are not so large that they will obviate the securing of a positive locking action after the base of an electrical device has been rotated to the desired position.

In Figure 2, when the contact pins of the socket are inserted in the cut-outs 27 and 28, they are inserted so as to assume the positions 14 and 15 and when rotated in a clock-wise manner, they will exert a pressure on the resilient wires 12 and 13 and pass into the locking positions 16 and 17. A large contact surface, a desirable feature in a device of this nature, is secured by reason of the fact that a firm contact is made on two sides of each switch contact-point.

Figure 3 is a view of the top layer of insulating material or fiber, 31, in which the holes 32, 33, 34, and 35 are so located as to coincide with similar holes described in Figures 1 and 2 when the layer in Figure 3 is superimposed on the layers described in Figures 1 and 2. The cut-out, 36, is located in a position where it will be directly over the cut-outs 6 and 7 and 27 and 28 in Figures 1 and 2 respectively and is of a size adequate to receive therein the base of the electrical device. Thus this cut-out provides for the centering of the base of an electrical device so that its rotating axis is concentric with the fibers, thus causing both contacts on the base of the electrical device to enter both socket contacts at the same time.

Figure 5 is a view of the bottom layer of insulating material or fiber, in which the holes 37, 38, 39 and 40 are so inserted as to coincide with similar holes described in Figures 1, 2, and 3 when the layers described in said figures are superimposed on the layer 41 in Figure 5.

Figure 4 is a side view of the socket in its finished form, i. e., after the four layers of insulating material shown in the accompanying drawing have been superimposed on each other in the manner above described. The pigtails 10 and

11 are shown in their extension from the middle of the layers of insulating material.

Screws are inserted in the holes 4 and 5 and corresponding holes described in the above figures, as a means of securing the socket in a fixed position. Eyelets or rivets 42 may be inserted through the holes 2 and 3 and corresponding holes as described in the above figures as a means of fastening together the four layers of insulating material.

What I claim is:

1. A socket for an electrical device having a base with two contact pins extending therefrom, said socket comprising four joined laminations of insulating material, the top lamination having a cut-out therein for the insertion therethrough of the base of the electrical device, the second lamination having two elongated arcuate cut-outs therein for the insertion and rotation therethrough of the contact pins of the electrical device, the third lamination having two elongated arcuate cut-outs therein in register with the cut-outs in the second lamination, a pair of resilient contact wires set in the cut-outs of the third lamination, a pair of pigtails extending from said contact wires and a bottom lamination acting as a base plate.

2. The combination of claim 1 in which the contour of the contact wires is such that it provides two distinct contact surfaces for each contact pin.

3. A socket for an electrical device having a base with two contact pins extending therefrom, said socket comprising: at least three joined laminations of insulating material, one lamination having two elongated arcuate cut-outs therein for the insertion and rotation therethrough of the contact pins of the electrical device; another lamination having two elongated arcuate cut-outs therein in register with the cut-outs in the first mentioned lamination; a pair of resilient contacts set in the cut-outs of the last-mentioned lamination; a pair of pigtails extending from said contacts, and a bottom lamination acting as a base plate.

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