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SOCKET FOR PLUG-IN METERS

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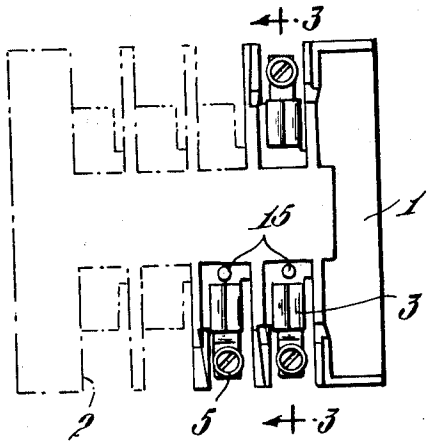


Fig. 1

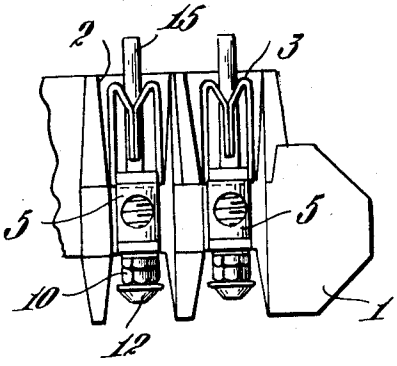


Fig. 2

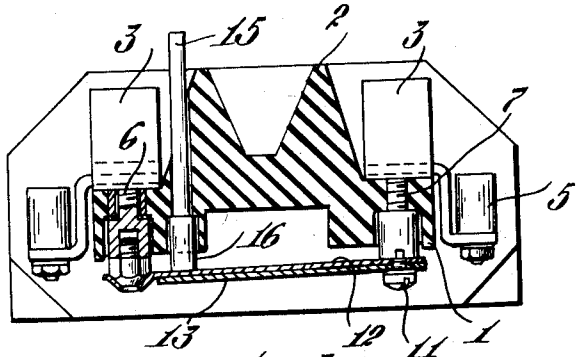


Fig. 3

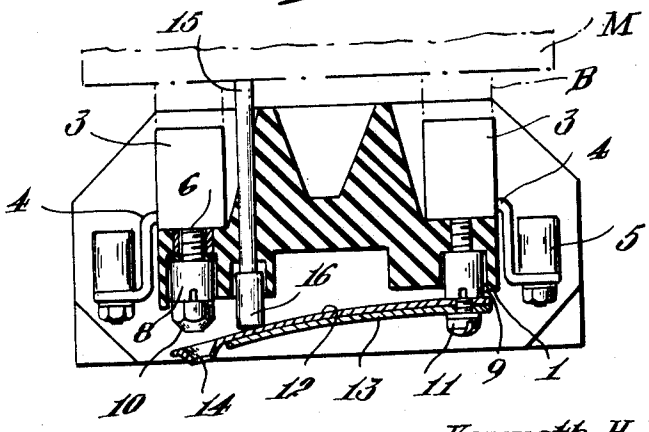


Fig. 4

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SOCKET FOR PLUG-IN METERS

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6 Claims. (Cl. 200—51.1)

This invention relates to sockets having jaws to receive the blades of meters of the plug-in type and more particularly to sockets having switches which automatically close the gaps between the jaws when the meters are removed so that current will continue to flow without interruption.

Objects of the invention are to provide a socket which is simple and economical in construction, which is durable and reliable in use, and in which the switches make good contact when closed.

According to the present invention the socket comprises a base of insulating material with one or more pairs of forwardly projecting jaws mounted on the base to receive the meter blades, each of the jaws having an electrical contact at the back of the base, in combination with a switch for interconnecting the aforesaid contacts when the meter is removed, the switch being disposed behind the base and opening rearwardly, and means for actuating the switch, the actuating means projecting forwardly beyond the tips of the jaws for engagement with the meter base as the meter is being inserted. Preferably each of the aforesaid contacts comprises a screw which extends through the base with its head behind the base for holding the jaw on the base. The switch yieldingly presses forwardly against the aforesaid contact and the circuit is opened by moving the switch away from the contact. To obtain good contact between the interengaging surfaces of the switch and contact, one of the surfaces may be concave and the other convex so as to interfit when the switch is closed. In most cases the socket has two rows of jaws with the jaws of each pair disposed opposite each other in the two rows respectively, each of the aforesaid switches extending crosswise of the rows. In the preferred embodiment the switch actuating means comprises a plunger extending through the base adjacent the contact which is disengaged when the switch is open.

For the purpose of illustration a typical embodiment of the invention is shown in the accompanying drawings in which

Fig. 1 is a plan view;

Fig. 2 is a side view;

Fig. 3 is a section on line 3—3 of Fig. 1 with the switches closed; and

Fig. 4 is a similar section with the switches opened by a meter which is shown in broken lines.

The particular embodiment of the invention chosen for the purpose of illustration comprises a molded base 1 of plastic insulating material with a row of recesses 2 along each side for the meter jaws 3 which seat on the bottoms of the recesses. Disposed over the base of each of the U-shaped jaws is the upper end of a Z-shaped conductor 4 carried on its lower end a terminal post 5 for connection to a wire or cable. Extending through the base and threaded into the upper ends the Z-shaped conductors 4 are screws 6 and 7 having heads 8 and 9 seating in recesses on the back of the base. Threaded axially into the heads 8 and 9 are screws 10 and 11. Bridging the screws 10 and 11 is a switch 12 backed with a spring

13, these two parts being fastened to the head 9 by the screw 11 and the switch 12 normally seating on the head of the screw 10. To provide good contact between the screw 10 and switch 12 the screw head is convex and the switch is provided with a cup 14 which fits the screw head as shown in Fig. 3.

Extending through the base 1 over the free end of each switch close to the adjacent jaw 3 is a plunger 15 which projects forwardly beyond the base 1 and which has a head 16 seating in a socket on the back of the base so that it cannot be displaced from the base accidentally.

As shown in Fig. 4 by broken lines the meter M has blades B which enter the spring jaws 3 and as the meter is inserted the plungers 15 open the switches 12.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. For use with a meter of the type having a base and contact blades projecting rearwardly therefrom, a socket comprising a base of insulating material, a pair of forwardly projecting jaws mounted on the base to receive said blades; each of the jaws having an electrical contact at the back of the base, a switch for interconnecting the aforesaid contacts of the jaws when the meter is removed, the switch being disposed behind the base and opening rearwardly, and means for actuating the switch, said means extending through the base into engagement with the switch and projecting forwardly beyond the tips of the jaws for engagement with the meter base as the meter is being inserted.

2. For use with a meter of the type having a base and contact blades projecting rearwardly therefrom, a socket comprising a base of insulating material, a pair of forwardly projecting jaws mounted on the base to receive said blades, means for holding each jaw on the base including a head behind the base, a switch for interconnecting said heads when the meter is removed, the switch being disposed behind the base and opening rearwardly, and means for actuating the switch, said means projecting forwardly beyond the tips of the jaws for engagement with the meter base as the meter is being inserted.

3. For use with a meter of the type having a base and contact blades projecting rearwardly therefrom, a socket comprising a base of insulating material, two rows of forwardly projecting jaws mounted on the base to receive said blades, the jaws of each pair being disposed opposite each other in the two rows respectively, means holding each jaw on the base including a screw head behind the base, a switch for interconnecting said heads of each pair of jaws when the meter is removed, each switch extending crosswise of said rows behind the base and opening rearwardly, and means for actuating the switches, said means projecting forwardly beyond the tips of the jaws for engagement with the meter base as the meter is being inserted.

4. For use with a meter of the type having a base and contact blades projecting rearwardly therefrom, a socket comprising a base of insulating material, two rows of forwardly projecting jaws mounted on the base to receive said blades, the jaws of each pair being disposed opposite each other in the two rows respectively, each of the jaws having an electrical contact at the back of the base, a switch for interconnecting the aforesaid contacts of each pair of jaws when the meter is removed, each switch extending crosswise of said rows behind the base and opening rearwardly, and means for actuating the switches, said means comprising a plunger extending through the base at each switch and projecting forwardly beyond the tips of the jaws for engagement with the meter base as the meter is being inserted.

5. For use with a meter of the type having a base and contact blades projecting rearwardly therefrom, a socket comprising a base of insulating material, two rows of forwardly projecting jaws mounted on the base to receive said blades, the jaws of each pair being disposed opposite each other in the two rows respectively, means for holding each jaw on the base including a head behind the base, a switch for interconnecting said heads of each pair of jaws when the meter is removed, each switch extending crosswise of said rows behind the base and opening rearwardly, and means for actuating the switches, said means comprising a plunger extending through the base at each switch and projecting forwardly beyond the tips of the jaws for engagement with the meter base as the meter is being inserted.

6. For use with a meter of the type having a base and contact blades projecting rearwardly therefrom, a socket comprising a base of insulating material, two rows of forwardly projecting jaws mounted on the base to receive

said blades, the jaws of each pair being disposed opposite each other in the two rows respectively, each of the jaws having an electrical contact at the back of the base, a switch for interconnecting the aforesaid contacts of each pair of jaws when the meter is removed, each switch extending crosswise of said rows behind the base and yieldingly pressing forwardly against one of said contacts, and means for actuating the switches, said means comprising a plunger bearing on the switch adjacent said one contact and extending through the base and projecting forwardly beyond the tips of the jaws for engagement with the meter base as the meter is being inserted.

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