May 6, 1952 L. LUDWIG 2,595,799

SWITCH-SOCKET STRUCTURE

Filed Sept. 29, 1949

Fig. 1

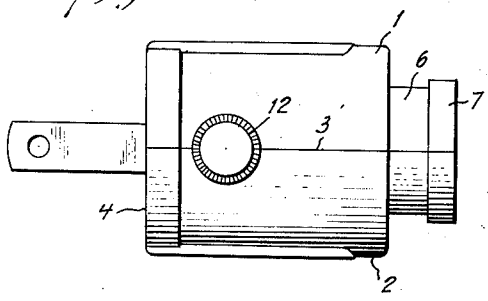
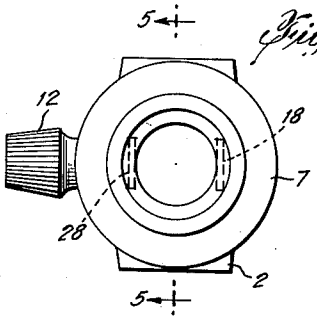


Fig. 2



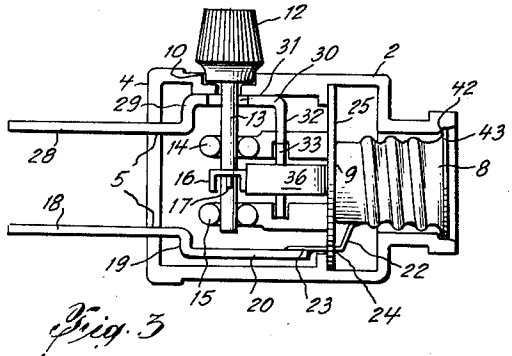


Fig. 3

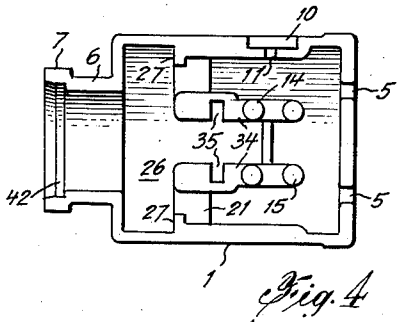


Fig. 4

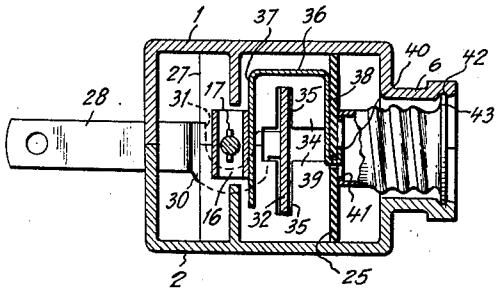


Fig. 5

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SWITCH-SOCKET STRUCTURE

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5 Claims. (Cl. 200—51.17)

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The invention is directed to electrical receptacles, more particularly to a combined socket and switch for electric lamps.

Devices of this kind have been known and used for a considerable number of years. Some of them have been satisfactory in operation but many of them suffer from various disadvantages. In some cases, the construction was rather complicated and costly, and in other cases, the assembly was rather complicated.

It is among the objects of the present invention to overcome the disadvantages and difficulties inherent in prior structures of the type described, it being among the objects of the present invention to provide a receptacle which is a combination of a switch and a scoket for electric lamps, which is simple in construction, and which is sturdy, to minimize accidental breakage.

It is also among the objects of the present invention to provide a device of the character described in which the several elements are capable of being quickly and easily assembled to complete the unit.

It is further among the objects of the present invention to provide a receptacle in which the switch has a positive action both in closing and in opening the lamp or other circuit.

The invention is more fully described in the accompanying drawing, in which like reference characters indicate like parts, and in which

Fig. 1 is a side elevational view of a receptacle made in accordance with the present invention;

Fig. 2 is an end elevational view taken from the right of Fig. 1;

Fig. 3 is a top plan view of the receptacle shown in Fig. 1, with the upper half of the housing removed to reveal the mechanism therein;

Fig. 4 is a plan view of one of the two members of the split housing, said members being duplicates, and

Fig. 5 is a vertical cross-section view taken along the line 5—5 of Fig. 2.

In practicing the invention, there is provided a hollow housing consisting of duplicate members 1 and 2 which are hollow and which are assembled along the line 3, which is the centerline of the completed receptacle. One end 4 of the housing has a pair of slots 5 for the passage of contact prongs therethrough. At the opposite end is a neck portion 6 terminating in a flange 7. A metal socket 8 fitted in neck 6 has an open end 9 at the left, as shown in Fig. 3.

The two halves of the casing have a recess 10 and a constricted opening 11 leading into the interior of the housing. A knob 12 having its inner end within recess 10 is provided with an operating rod 13 extending across the interior of the housing.

Each of the halves 1 and 2 has two pair of projections 14 and 15 extending therefrom and adapted to meet to form a transverse passageway to confine rod 13 and hold it against accidental

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displacement. A U-shaped or channel-shaped operating cam 16 is held on rod 13 and stops 17 are punched out of the body of rod 13 to prevent accidental removal of cam 16. The position of said cam is defined by stops 17 and projections 14 so that it is maintained in operative position under all conditions.

A prong 18 extends through one of the openings 5 and has a shoulder 19 with an extended portion 20 parallel to prong 18. Said portion 20 rests upon ledge 21 in housing 2. Integral with shell 8 is an extension 22 which is secured by soldering or the like at 23 to the end of portion 20. It passes through an opening or a notch 24 in thin insulating disk 25. Said disk fits into space 26 in the housing and is normally held against rim 27 therein.

The other prong 28 passes through the other slot 5 and has a shoulder or offset portion 29 with an extending portion 30 parallel to prong 28. An arcuate recess 31 is provided in portion 30 to allow the free movement of rod 13. The inner end of portion 30 is bent as shown at 32 and terminates in an angular flat portion 33 which constitutes the contact member, as well as the closing wedge to hold the two bakelite housing members 1 and 2 together.

Housings 1 and 2 are provided with upstanding pillars 34, each of which has a transverse recess 35. Said recess is of such width that when angular portion 33 is seated therein, the fit is tight and friction therewith holds the housings together.

A U-shaped flat, thin strip of springy metal 36 has one of the legs 37 thereof extending parallel to angular portion 33 and substantially in contact with cam 16, as shown in Fig. 5. The other leg 38 of the strip 36 is bent, as shown at 39, passing through a slot in disk 25, and being bent upwardly as shown at 40 to fit closely on said disk.

The inner end 41 of socket or shell 8 is open so that end 40 constitutes the central electrode or contact member. Flange 7 has recess 42 on the inner face thereof and shell 8 is flared at 43 so as to seat in recess 42. Thereby the socket is held firmly in position with respect to the other elements.

In making the assembly, shell 8 has extension 22 fastened or rivetted to prong 18. Operating rod 13 with its knob 12 is assembled with cam 16 thereon. Strip 36 is assembled on disk 25. In the assembly prong 28 is placed in housing 2, shell 8 with attached prong 18 is slipped into the notch in disk 25 and the parts are then fitted into housing 2. Operating rod 13 is placed in the position shown in Fig. 3 and then housing 1 is forced on top of the assembly, the friction of angular portion 33 in recesses 35 holding the same in position. In order to insure that there will not be any displacement of the housings 1 and 2, a

suitable cement may be provided at the meeting areas thereof to form a permanent joint.

I claim:

1. A switch-socket structure comprising a split housing having a narrow open neck at one end thereof and a pair of slots at the other end, a threaded metal shell open at both ends held in said neck and adapted to receive a lamp at its outer end, a prong extending into said housing through one of said slots and secured to said shell, an insulating disk having a central slit adjacent the inner end of said shell, a spring metal strip having one end passed through said slit and lying against said disk and adapted to contact the center of the base of said lamp, a second prong extending through the other slot and having an angular inner portion, the other end of said strip being U-shaped and embracing said angular portion, a switch rod extending into the side of said housing, a knob on the outer end of said rod, an operating can on said rod adjacent to one leg of said U, a plurality of projections in said housing on both sides of said rod for maintaining said rod in operative position, said cam adapted to cause contact between said strip and angular prong portion, recesses in both parts of said housing and said angular portion fitting tightly into said recesses for holding said parts together.

2. A switch-socket structure comprising a split housing having a narrow open neck at one end thereof and a pair of slots at the other end, a threaded metal shell open at both ends held in said neck and adapted to receive a lamp at its outer end, a shoulder at the outer face of said neck and a corresponding flange on said shell, a prong extending into said housing through one of said slots and secured to said shell, an insulating disk having a central slit adjacent the inner end of said shell, a spring metal strip having one end passed through said slit and lying against said disk and adapted to contact the center of the base of said lamp, a second prong extending through the other slot and having an angular inner portion, the other end of said strip being U-shaped and embracing said angular portion, a switch rod extending into the side of said housing, a knob on the outer end of said rod, an operating cam on said rod adjacent to one leg of said U, a plurality of projections in said housing on both sides of said rod for maintaining said rod in operative position, said cam adapted to cause contact between said strip and angular prong portion, recesses in both parts of said housing and said angular portion fitting tightly into said recesses for holding said parts together.

3. A switch-socket structure comprising a split housing having a narrow open neck at one end thereof and a pair of slots at the other end, a threaded metal shell open at both ends held in said neck and adapted to receive a lamp at its outer end, a prong extending into said housing through one of said slots and secured to said shell, an insulating disk having a central slit adjacent the inner end of said shell, a spring metal strip having one end passed through said slit and lying against said disk and adapted to contact the center of the base of said lamp, said disk having a notch in the edge thereof and said prong passing through said notch, a second prong extending through the other slot and having an angular inner portion, the other end of said strip being U-shaped and embracing said angular portion, a switch rod extending into the side of said housing a knob on the outer end of said rod, an

operating cam on said rod adjacent to one leg of said U, a plurality of projections on said housing on both sides of said rod for maintaining said rod in operative position, said cam adapted to cause contact between said strip and angular prong portion, recesses in both parts of said housing and said angular portion fitting tightly into said recesses for holding said parts together.

4. A switch-socket structure comprising a split housing having a narrow open neck at one end thereof and a pair of slots at the other end, a threaded metal shell open at both ends held in said neck and adapted to receive a lamp at its outer end, a prong extending into said housing through one of said slots, an integral extension on said shell attached to said prong, an insulating disk having a central slit adjacent the inner end of said shell, a spring metal strip having one end passed through said slit and lying against said disk and adapted to contact the center of the base of said lamp, a second prong extending through the other slot and having an angular inner portion, the other end of said strip being U-shaped and embracing said angular portion, a switch rod extending into the side of said housing, a knob on the outer end of said rod, an operating cam on said rod adjacent to one leg of said U, a plurality of projections in said housing on both sides of said rod for maintaining said rod in operative position, said cam adapted to cause contact between said strip and angular prong portion, recesses in both parts of said housing and said angular portion fitting tightly into said recesses for holding said parts together.

5. A switch-socket structure comprising a split housing having a narrow open neck at one end thereof and a pair of slots at the other end, a threaded metal shell open at both ends held in said neck and adapted to receive a lamp at its outer end, a prong extending into said housing through one of said slots and secured to said shell, an insulating disk having a central slit adjacent the inner end of said shell, a spring metal strip having one end passed through said slit and lying against said disk and adapted to contact the center of the base of said lamp, a second prong extending through the other slot and having an angular inner portion, the other end of said strip being U-shaped and embracing said angular portion, a switch rod extending into the side of said housing, a knob on the outer end of said rod, said second prong having a cut-out through which said rod passes, an operating cam on said rod adjacent to one leg of said U, a plurality of projections in said housing on both sides of said rod for maintaining said rod in operative position, said cam adapted to cause contact between said strip and angular prong portion, recesses in both parts of said housing and said angular portion fitting tightly into said recesses for holding said parts together.

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