

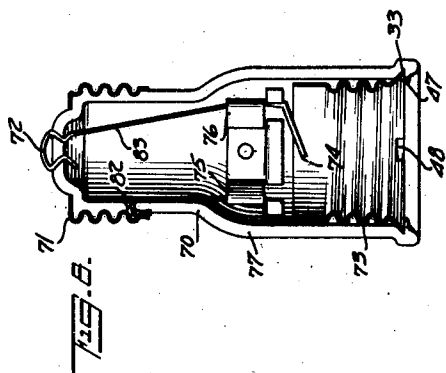
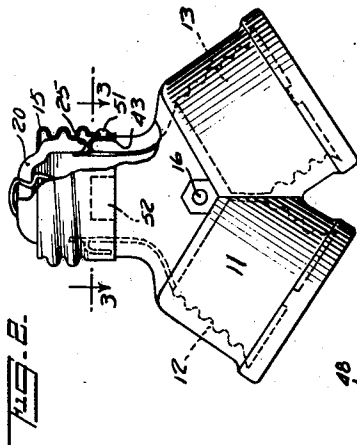
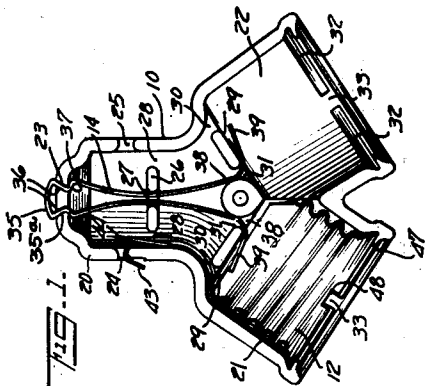
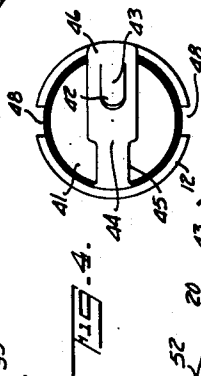
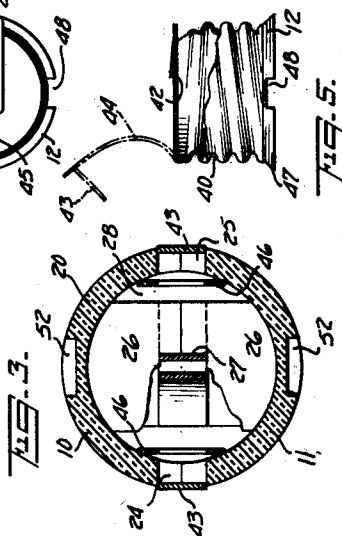
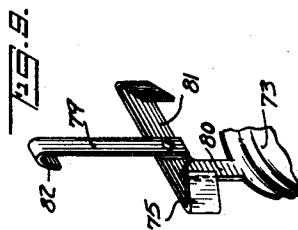
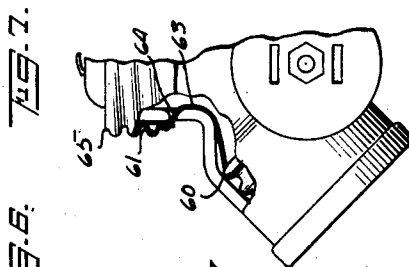
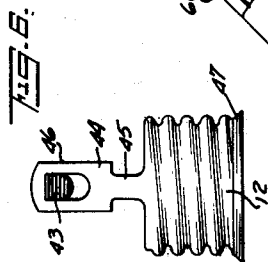
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ELECTRICAL FITTING AND METHOD OF MAKING THE SAME

Filed May 23, 1929



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ELECTRICAL FITTING AND METHOD OF MAKING THE SAME

Application filed May 23, 1929. Serial No. 365,254.

The present invention relates to electrical fittings and is more particularly directed toward electrical fittings such as plural lamp sockets and current taps adapted to be threaded into an electrical outlet and having one or more outlets for lamp sockets.

The present invention more particularly relates to electrical fittings such as plural lamp sockets and current taps having insulating casings consisting of two casing halves of moldable material molded together and adapted to support the conducting parts.

The present invention contemplates an arrangement of parts whereby a conductor strip connected to one of the output terminals such as a lamp socket terminal, carried inside a chamber within the casing halves is passed outwardly through registering notches in the casing halves to be bent against the side faces of the casing and be in a position to be engageable with a male screw shell forming one of the current supply terminals.

A further object of the present invention is to provide a screw shell terminal and conductor strip suitable for the above purpose all made out of a single piece of sheet metal. In some cases this strip may be provided by suitably slitting the base of the blank for the shell contact to form a strip connected thereto at one end, bending it back and forming it to shape to be received in the notches. In other cases, however, the strip so formed is of insufficient length and the present invention contemplates the obtaining of a strip of longer effective length by slitting out a tongue from the body of a strip, this tongue being adapted to be passed through the notches in the casing halves.

A further object of the invention is to provide an improved device to anchor the shell contacts in the casing halves and prevent rotation of the shell contacts.

A further object of the invention is to provide a plural lamp socket wherein a single bent strip of sheet metal provides a center contact for the input end of the plural lamp socket as well as the center contacts for the two outlets, this single conductor strip being secured in place in suitably formed notches

and abutments in the insulating casing halves.

The accompanying drawings show, for purposes of illustrating the present invention, several of the many embodiments in which it may take form, it being understood that the drawings are illustrative of the invention rather than limiting the same.

In these drawings:

Figure 1 is an elevational view of one of the casing halves of a plural lamp socket, showing one of the screw shell contacts and the strip forming the center contacts in position;

Figure 2 is an elevational view of a plural lamp socket of Figure 1, parts being broken away to show interior construction;

Figure 3 is a sectional view taken on the line 3—3 of Figure 2;

Figures 4 and 5 are top plan and sectional views, respectively, of a blank for a screw shell contact partly formed;

Figure 6 is a side elevational view of a screw shell contact taken at right angles to the direction shown in Figures 1 and 5;

Figure 7 is an elevational view with parts in section of a modified form of plural lamp socket of the type provided with the side outlets for attachment plugs;

Figure 8 is a view similar to Figure 1 showing a current tap; and

Figure 9 is a perspective view showing one of the terminal assemblies for the current tap of Figure 8.

The form of plural lamp socket shown in Figures 1 to 6, inclusive, is made up of a pair of identical casing halves 10 and 11, of molded insulating material, a pair of screw shell socket contact units 12 and 13, a center contact forming strip 14, male screw shell 15, and securing means indicated at 16.

The casing halves are provided with upwardly extending tip forming portions 20 and with two downwardly diverging socket shell receiving openings or chambers 21 and 22. The tip portion of each of the casing halves is provided with a centrally disposed notch 23 while the side walls of the tips are provided with laterally extending notches 24 and 25. As shown in the drawings, the

casing halves are provided, a short distance below the notches 24 and 25, with partitions or webs 26, 26. These partitions or webs are notched centrally as indicated at 27 and are spaced from the side walls of the casing halves as indicated at 28. The socket shell receiving chambers are closed at their upper ends by end walls indicated at 29, these end walls being notched as indicated at 30 and 31. Near the outer end of the chambers 22, the casing halves are provided with peripheral grooves 32. These grooves are not continuous, there being an interruption indicated at 33. The two casing halves according to the preferred form of construction are identical and the faces of the various parts above referred to is in a single central plane.

The center contact forming strip 14 is made out of a single piece of sheet metal doubled on itself to the shape indicated in Figure 1. This contact forming strip has an arcuate central portion 35 adapted to be carried beyond the tip of the fitting and with downwardly and inwardly convergent portions 35a adapted to fit the convergent walls 36 of the notches 23 in the casing halves. The sides of the terminal member 14 are shouldered as indicated at 37 and then converge together to pass through the notch 27 in the partitions or webs 26. The member then diverges and passes through the notches 31 as indicated at 38. The lower ends or feet 39 of this conductor strip are carried inside the chambers 21 and 22 and are spaced slightly from the end wall 29 so as to form resilient center contacts for the lower sockets. The member 14 is made out of resilient sheet metal and is readily insertible into place in the notches.

The screw shell contact units 12 and 13 are identical and are shown in detail in Figures 1, 4, 5 and 6. These contact units have, as above intimated, an integral conductor strip adapted to lead current to the shells. The combined screw shell contact and conductor strip are made as follows: A screw shell blank is formed in the usual manner with threaded side walls 40 and with a bottom portion 41. The material in this bottom portion is utilized to form the strip and according to the preferred form of construction, the bottom portion of the blank is cut to form a transverse strip as indicated at 44, this strip being slitted, as shown at 42, to form a tongue 43. The tongue is bent back into the plane of the bottom. Prior to inserting the contact unit in the casing, the tongue 43 is bent as indicated in Figure 5 and the strip 44 is bent to have the configuration indicated in the drawings so that it will conform to the shape of the casing into which it is to be inserted. The strip is preferably narrowed or constricted as indicated at 45 and has a wider outer end portion 46 adapted to surround the tongue 43. The narrow portion 45 of the

strip passes through the registering notches 30. The wider portion 46 enters the chamber formed between the casing halves so as to assist in anchoring the conducting parts inside the casing. The broad portion of the strip 46 lies in the registering notches 28.

In making the blank for the socket shell, it is outwardly flared as indicated at 47 and this outwardly flared portion is notched as indicated at 48. This notch may be cut by the dies at the same time as the other operations are performed. When the shell is inserted in place the flange 47 is received in the grooves 32 and a notch 48 accommodates the ungrooved portion 33 of the insulating casing.

From Figure 1 it will be apparent that the screw shell conductor strip unit may be easily inserted into the casing half and the tongues 43 passed out through the notches 24 and 25 so as to provide external terminals for the output contacts. After the screw shell contacts and center contact strip have been inserted in one of the casing halves, the other casing half is applied to it, the parts fitting together, and the casing halves secured together by the bolt indicated at 16.

The male screw shell 15 for the device is then slipped on as indicated. This screw shell is of ordinary construction and passes down about the tip of the fitting sliding over the tongues 43. To facilitate soldering the screw shell of the tongues, the screw shell is provided with small holes indicated at 51 and a drop of solder is applied, as shown in Figure 2. In order that the screw shell may be attached more securely, the casing halves are provided with recesses indicated at 52 and the material of the screw shell is pressed into these recesses.

The four way plural lamp socket indicated in Figure 7 has a wider angle between the lamp sockets, and hence it is possible for the socket contact indicated at 60 to be closer to the male screw shell 61 than in the type of construction shown in Figures 1 and 2. The blank from which the screw shell 60 is formed may provide sufficient material to allow for making an integral conductor strip 63 of sufficient length to pass through notches indicated at 64. It then lies alongside the side wall of the casing where it may be secured to the outer screw shell 65 in the manner above described.

In each of these forms of construction, it will be noted that the conductor strip (44 or 63) passes upwardly between the casing halves until it reaches the registering notches which are inside the male screw shell, thereby making it certain that when in use no conducting parts are exposed beyond the screw shell.

Figure 8 shows a current tap 70 having the usual plug contacts 71 and 72 whereby it may be threaded into a lamp socket. This current tap also has a socket outlet, the screw shell

of which is indicated at 73, and a center contact 74. It is provided with pairs of blade receiving contacts indicated at 75 and 76. These conducting parts, except for the external screw shell 71 are carried inside of casing halves indicated at 77, these being provided with notches, recesses and openings to accommodate the various parts.

The screw shell 73 is anchored in place in the socket chamber in the same manner as the screw shells 12 and 13. Corresponding parts are indicated by the same reference characters. In this current tap, the connection between the screw shell 71 and the socket shell 73 is in the form of a conductor strip 79 riveted to an extension 80 formed integral with the socket shell. These parts are also riveted to a cross conductor strip 81 which provides the blade receiving contacts 75. The upper end of the conducting strip is bent as indicated at 82 to pass through suitable notches in the casing halves and is preferably secured to the outer screw shell 71 in the manner above described. The conductor assembly for the other side of the circuit includes a strip indicated at 83 whose upper end is formed to fit notches in the tip of the fitting. The lower end of the strip 83 forms the center contact 74, and the strip is riveted to a cross strip forming the blade receiving contact 76, similar to that shown in Fig. 9.

It is obvious that the invention may be embodied in many forms and constructions, and I wish it to be understood that the particular forms shown are but a few of the many forms. Various modifications and changes being possible, I do not limit myself in any way with respect thereto.

I claim:

1. A combined screw shell contact and terminal strip for lamp sockets comprising a single piece of sheet metal having a threaded screw shell portion, a rearwardly extending strip, and a tongue cut from the strip.

2. A combined screw shell contact and terminal strip for lamp sockets comprising a single piece of sheet metal having a threaded screw shell portion outwardly flared at one end and having a rearwardly extending strip at the other end provided with a tongue cut from the strip.

3. The method of making a lamp socket shell with an integral conductor strip having longer effective length than the diameter of the shell, which consists in severing a strip from the base of the shell blank, and cutting a tongue from said strip near the free end thereof.

4. The method of making a combined screw shell contact and terminal strip for lamp sockets, which consists in forming a cup-shaped threaded stamping of sheet metal, cutting away material from the base of the stamping to have a strip connected at one

end to the threaded shell and slitting said strip near the free end of the strip to form a tongue.

5. The method of making a combined screw shell contact and terminal strip for lamp sockets, which consists in forming a single piece of sheet metal into a screw shell with a terminal strip connected to the shell and extending away from the shell body, and slitting said strip near the free end of the strip to form a tongue.

6. The method of making a combined screw shell contact and terminal strip for lamp sockets, which consists in forming a cup-shaped threaded stamping of sheet metal, cutting a strip from the bottom of said cup-shaped stamping of sheet metal, and slitting the free end of the strip to form a tongue.

Signed at New York, in the county of New York and State of New York, this 10th day of May, 1929.

GEORGE B. BENANDER.