Aug. 4, 1970 RYOSUKE MATSUYA 3,522,579

SOCKET FOR DECORATING LIGHT BULB AND DEVICE FOR CONNECTING THE BULB TO CORDS IN THE SOCKET

Filed Nov. 26, 1968

FIG. 1

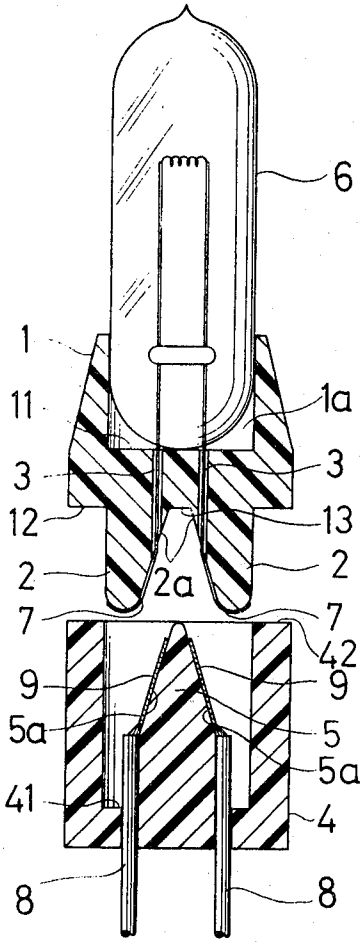


FIG. 2

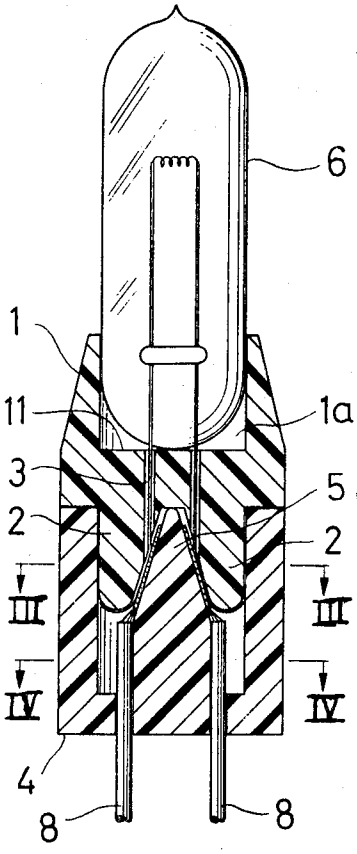


FIG. 5

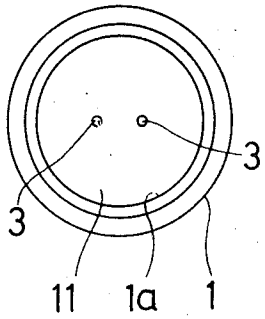


FIG. 6

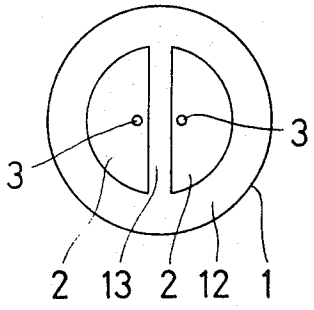


FIG. 7

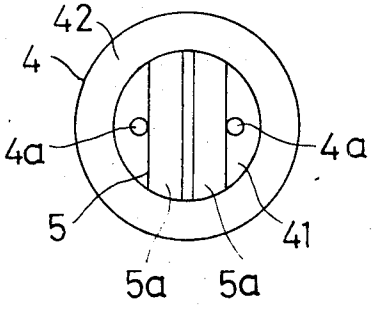


FIG. 3

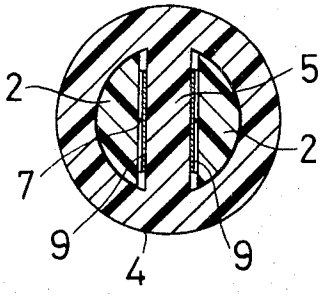
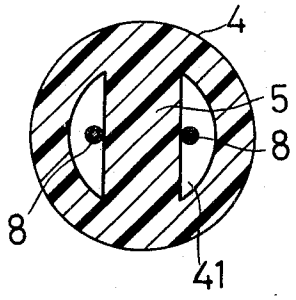


FIG. 4



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SOCKET FOR DECORATING LIGHT BULB AND DEVICE FOR CONNECTING THE BULB TO CORDS IN THE SOCKET

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U.S. Cl. 339—145 6 Claims

ABSTRACT OF THE DISCLOSURE

A base for a miniature lamp is capable of having the lamp inserted therein and the base inserted in a socket with the lead wires of the lamp in electrical contact with leads of the socket.

DESCRIPTION

The present invention relates to a socket with a base for miniature decorative lamps to be placed on Christmas trees or the like. A lamp has leads which extend through the base and lie along diverging surfaces of leg parts which depend from the base. The base is inserted into the socket, and the leads engage similarly arranged wires which extend into the socket against a central tongue part therein.

It is an object of the present invention to provide a means for setting the lamp receiving base to the socket in a very simple manner connecting the lamp lead wires to electric cord leads in the socket automatically and surely by setting both the base and socket to each other.

It is another object of the present invention to provide a socket consisting only of a lamp receiving element and a cord lead receiving element for assuring easy handling and assembling as this kind of lamp is generally small both in size and electric capacity as is suggested by the name miniature lamp.

Yet another object of the present invention is to provide a socket molded integrately of a plastic insulating material such as polypropylene resin having excellent elasticity so that the socket may have still higher efficiency.

In the accompanying drawing illustrating the present invention,

FIG. 1 is a longitudinal sectional view of the socket with the lamp base separated therefrom;

FIG. 2 is a longitudinal sectional view of the socket with lamp base connected thereto;

FIG. 3 is a cross sectional view taken on the line III—III of FIG. 2;

FIG. 4 is a cross sectional view taken on the line IV—IV of FIG. 2;

FIG. 5 is a top view of the lamp base;

FIG. 6 is a bottom view of the lamp base; and

FIG. 7 is a top view of the socket.

Referring now more particularly to the accompanying drawing, there is shown a lamp base **1** molded of a plastic material having suitable elasticity and electric insulating property and having a lamp receiving recess **1***a*. The lower part of said base is provided with two longitudinal legs **2**, **2** within the circumferential shoulder **12** and a central bottom **13** between said two legs. The insides of said legs **2**, **2** are inclined planes **2***a*, **2***a* which slant downward and diverge from one another. The bottom of recess **11** is provided with the two small holes **3**, **3** which are spaced apart and penetrate the said bottom to the aforementioned inclined planes **2***a*, **2***a* of the legs. The lead wires **7**, **7** extending from the lower part of the lamp **6** is inserted into the recess **1***a* and holes **3**, **3** and pulled

out of the lower part of the base **1** after passing through the small holes **3**, **3** in recess bottom **11** and the ends of these lead wires **7**, **7** extend to the lower ends of the legs **2**, **2** and are bent and pressed thereon after coming along the inclined planes **2***a*, **2***a* of the legs.

The socket **4** is made of the same material as that of the aforementioned base **1** and has a recess with a bottom **41** provided with two holes **4***a*, **4***a* which are spaced apart and penetrate the bottom of the socket. At the inside of the socket **4** there is a longitudinally extending tongue **5** projecting from said bottom **41**. Said tongue **5** has at its upper half, inclined planes **5***a*, **5***a* capable of mating with the inclined planes **2***a*, **2***a* at the inside of the legs **2**, **2** of the base **1**. The terminal strips **9**, **9** of electrical conducting material are fixed on the inclined planes **5***a*, **5***a* at both sides of tongue **5**, and they are connected to the bare wires **8**, **8** of an electric cord, inserted into the holes **4***a*, **4***a* from the outside.

When the legs **2**, **2** are inserted into the socket **4** to connect the socket **4** to the base **1** with the bulb **6** fitted into it, the legs **2**, **2** comes into contact with the inside wall of the recess in socket **4** and the upper circumferential top **42** of the socket **4** comes into contact with the lower circumferential shoulder **12** of the base **1**, with the result that the lead wires **7**, **7** of the bulb **6** are automatically pressed on and connected to the strips **9**, **9** at the position where the top of the tongue **5** is in close contact with the central bottom **13**. The composition and structure of the present invention are as stated above, so if both the base **1** and socket **4** are connected to each other with the lead wires **7**, **7** of the lamp inserted in the base **1** pulled out of the small holes **3**, **3** and bent along the inner sides of the legs **2**, **2** and with the strips **9**, **9** connected to the wires **8**, **8** fixed in the socket **4**, both base and socket are connected as one body easily and surely as they both are molded of an elastic material such as polypropylene resin.

Furthermore, since the tongue **5** of the socket **4** is long in the diametral direction and so designed as to be pressed in between the legs **2**, **2** of the base **1**, the base **1** can be set in the socket **4** in the connecting direction very easily and efficiently and the lead wires of the bulb can be positively connected to the terminal wires of the cord.

If the socket for a miniature lamp is composed as stated above, it will have unequaled features in respect of its assembling as well as production efficiency, thus, readily achieving the expected objectives.

I claim:

1. A socket for a decorative light comprising a lamp, a lamp base, and a socket; said base having a lamp receiving top recess and a pair of legs extending longitudinally of said base, the lower side of said legs having inclined planes on their inside diverging downward, said base being provided with a pair or longitudinal small holes said small holes extending from said recess to the inclined planes of said legs, lead wires from said lamp extending through said holes and along said leg planes, and said socket having a top recess, a pair of holes extending from said socket recess to the bottom of the socket and a tongue in said recess extending longitudinally of said socket, said tongue having at its upper half inclined planes conforming to the inclined planes at the inside of said legs of the base so that said base may be inserted in said socket and cord wires extending through said socket holes along said tongue.

2. A socket as claimed in claim **1**, wherein the lamp lead wires extend to the ends of said legs and bend around the lower ends of said legs; and said cord wires are fixed on the inclined planes at both sides of said tongue whereby said lamp lead wires may be pressed

on and connected to the cord wires by inserting said lamp base legs in said socket recess.

3. A socket for a decorative light as claimed in claim 1, wherein said base and socket are of a plastic insulating material such as polypropylene resin having excellent elasticity.

4. A socket for a decorative light comprising a lamp base, said base having a lamp receiving recess in its upper part and a pair of legs projecting downward opposite to each other from the lower part of said base between a bottom circumferential shoulder and a center bottom portion, said legs having at their insides inclined planes diverging downward, and said base being provided with small holes from said recess to said legs, a lamp having lead wires, said small holes extending through to the inclined planes at the inside of said legs, a socket capable of mating with said legs and an electrical cord having wire portions extending in said socket to contact said lead wires.

5. A socket for a decorative light as claimed in claim 4, wherein said socket has a recess for mating with said

legs, a pair of holes with said cord wires therein, and a tongue inside said recess extending in the diametral direction, said tongue projecting from the bottom of said socket recess and having at its upper half inclined planes with said cord wires thereon.

6. A socket for a decorative light as claimed in claim 5, wherein said tongue is of a configuration for fitting between said base legs whereby the lamp lead wires are automatically connected to said cord wires upon the insertion of said legs into said socket recess.

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RICHARD E. MOORE, Primary Examiner

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