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LAMP CLUSTER

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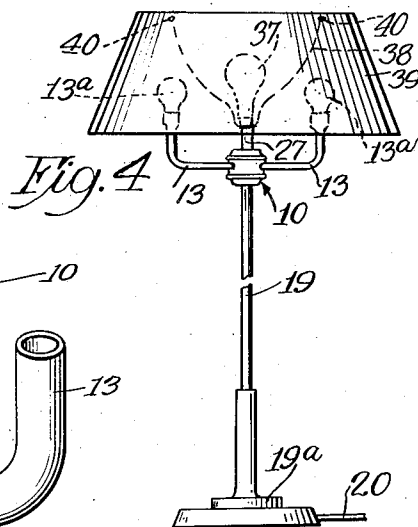
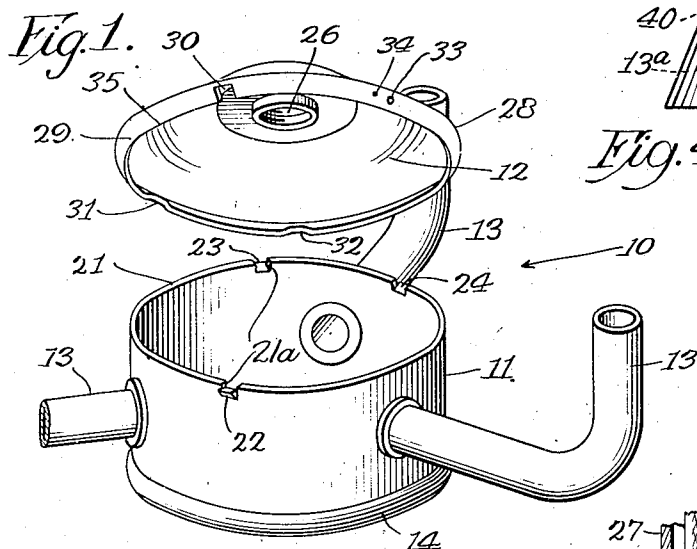
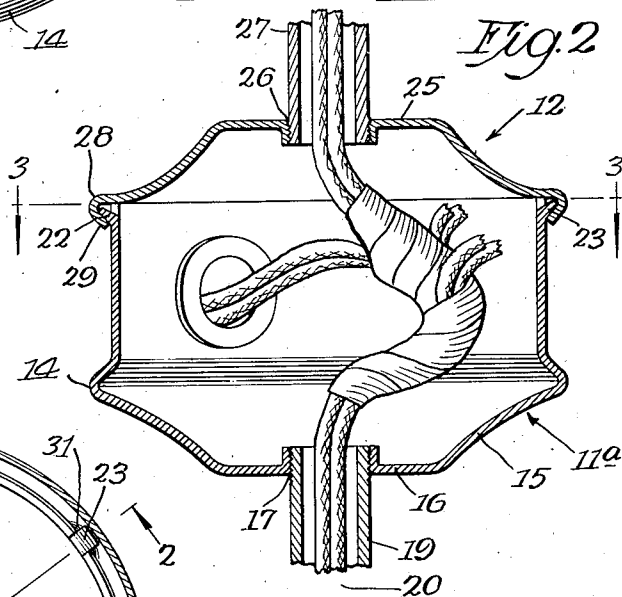
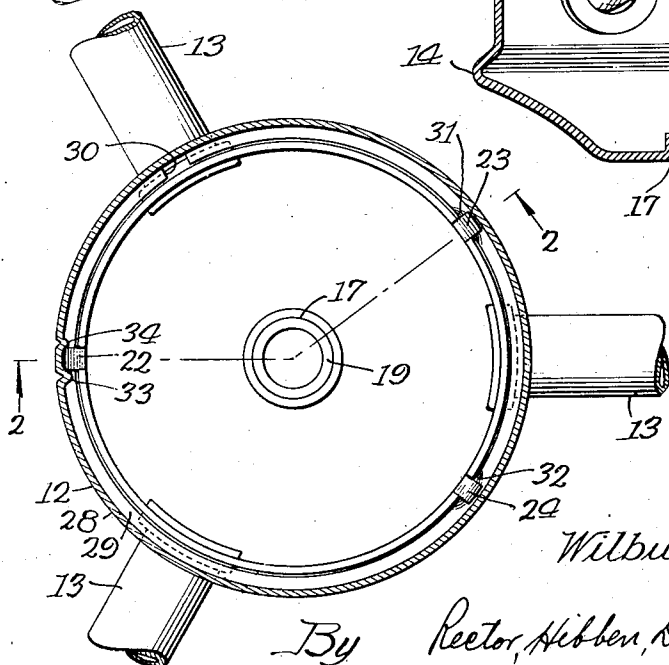


Fig. 3



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LAMP CLUSTER

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7 Claims. (Cl. 240—81)

This invention relates to an improvement in means for uniting a pair of members, and more particularly to an improvement in means for fastening a cap on a body portion of a lamp and fixture cluster, and has for its main purpose to effect a tight locking engagement between a cap and a body portion with a minimum of rotary movement.

It has long been a problem to effect a satisfactory union between the members of a light cluster, but up to this time no solution has been offered.

The principal object of this invention is to provide for a tight interlocking engagement between a pair of members by a slight relative movement.

Another object is to provide a secure and locked engagement between a cap and a body portion by cooperating fastening means contained on said cap and said body portion.

A further object is to provide a cap of neat appearance which may be easily and securely affixed to a body portion of a lamp cluster with a minimum of turning thereby preventing injury to the wires extending through the cap.

A further object is to provide a cap which may be securely locked on the top of a body portion of a lamp cluster in such a manner that all rocking of the cap and twisting of wires will be prevented.

A further object is to provide a lamp cluster which is cheaply manufactured and is of compact design.

Other objects and advantages of the invention will be made apparent hereinafter.

The nature of the invention will be apparent from the following specification taken with the accompanying drawing in which one embodiment is illustrated.

In the drawing:

Figure 1 is a perspective view of the cap and the main body portion of a lamp cluster prior to securingment;

Fig. 2 is a view of a cross section of the cap and the main body portion along the line 2—2 of Fig. 3 looking in the direction of the arrows;

Fig. 3 is a view of a cross section of the cap and the body portion in locked relationship along the line 3—3 of Fig. 2 looking in the direction of the arrows.

Fig. 4 is an elevation of a complete floor lamp illustrating the lamp cluster.

In the drawing there is shown a three-light lamp cluster 10 which comprises a cylindrical body portion 11 and a circular cap 12, said body portion 11 having arms or candle supports 13

affixed thereto and extending outwardly therefrom. Inserted in the end portions of said candle arms 13 are electric light bulbs 13^a. The body portion 11 is provided with an annular bead 14 and an end wall 11^a which is formed of a convex portion 15 and a flat portion 16, said flat portion having a threaded aperture 17 to threadedly engage the lamp stem 19 which terminates in a base 19^a and houses the wires 20. Stamped out from the upper rim 21 of the body portion 11 are 10 outwardly extending protuberances or tongues 22, 23 and 24, tongues 23 and 24 being circumferentially spaced in closer relationship to each other than to tongue 22. As a consequence of the stamping operation, wall portions 21^a are up-15 standing in relation to the tongues 22, 23 and 24, and provide a secure seat for the cap 12 as shown in Fig. 2.

For application to the upper rim 21 of the body portion 11, there is a circular cap 12 which is of a 20 configuration similar to end wall 11^a. This cap 12 has a flat top 25, and a threaded aperture 26 therein to threadedly admit the stem or the adapter 27 which supports the usual shade and reflector, and contains the wires 20. At the lower 25 portion of the cap 12 there is a flange or lip 29 directed inwardly from an annular bead 28, the cap 12 having its greatest diameter slightly greater than that of the diameter of the cylindrical body portion 11. Flange 29 is cut away 30 or slotted as at 30 and has takeups or depressed portions 31 and 32 which are approximately the same distance apart as are the tongues 23 and 24 of the body portion 11. In proximity to the slot 30 are closely spaced bosses or tits 33 and 34, tit 33 35 being larger and extending inwardly a greater distance than tit 34. The takeups 31 and 32 are in approximately the same circumferentially spaced relationship to the tits 33 and 34 as the tongues 23 and 24 are to the tongue 22. Thus the takeups 40 31 and 32 and the tits 33 and 34 are circumferentially spaced about the flange 29 of the cap 11 so as to simultaneously engage the tongues 22, 23 and 24 respectively, of the body portion 11 when the cap 12 is finally in locked position. The 45 circumference defined by the outermost extremities of the tongues 22, 23 and 24 is greater than the circumference of the rim of the flange 29, the result being that the tongues 22, 23 and 24 effectively resist removal and all movement of the cap 50 11 vertically.

Affixed to the upper portion of the stem 27 is a lamp unit comprising a light bulb 37 and a reflector 38 for directing the light rays upwardly. A shade 39 is supported by the reflector 38 and is 55

affixed thereto on the upper edge as at 40. The wires 20 extend upwardly through the stem 27 to the light bulb 37. Thus the cap 12 supports the stem 27, the light bulb 37, the reflector 38 and the shade 39.

It is, therefore, necessary in applying the cap 12 to first place the portion of the flange 29, opposite the slot 30, under the tongues 23 and 24, and then to lower the cap completely with the tongue 22 entering the slot 30. After the cap 12 is so placed, it is then turned slightly in a clockwise direction until the tit 34 passes over and beyond the tongue 22, and simultaneously the takeups 31 and 32 will frictionally engage the tongues 23 and 24, the takeup 31 engaging the tongue 23, and the takeup 32 engaging the tongue 24.

It is obvious that the protuberances or tongues 22, 23 and 24 will exert a resilient resistance to the passage of the tit 34 and the takeups 31 and 32 thereover. The tit 33 is large enough to prevent further clockwise movement of the cap 12 beyond the tongue 22 while the tit 34 which must be forced over and beyond the tongue 22 provides a locking effect in conjunction with the frictional engagement of the takeups 31 and 32 with the tongues 23 and 24, thereby preventing displacement in any direction and eliminating all rocking of the parts.

Another factor in the prevention of relative rocking of the cap 12 on the body 11 is the secure seating contact provided for the cap by the upstanding wall portions 21^a of the body. Thus it will be seen that to loosen the cap 12 a counterclockwise force must be exerted in order to withdraw the tit 34 over the tongue 22, and that the cap 12 may be removed only when the slot 30 and the tongue 22 coincide.

It is apparent that since the cap 12 supports the upper stem 27, the light bulb 37, the reflector 38 and the shade 39, a great amount of weight is resting thereon, and any jarring or moving of these parts positioned above tends to loosen and break the connection between the cap 12 and the body 11. The aforescribed fastening means on the body 11 and the cap 12 effectively resist the tendency of these parts to rock and chatter.

Although the foregoing description has set forth one form of fastening means, it will be understood that changes and modifications may be resorted to without departing from the spirit and scope of the appended claims.

I claim:

1. A lamp cluster comprising in combination, a body and a lamp or shade supporting cap adapted to be secured together by relative rotary movement with the body supporting the cap and the weight of the lamp or shade tending to rock the cap relative to the body when the cluster is moved or jarred, the body having a plurality of outwardly directed, resilient protuberances and the cap having a plurality of depressed portions adapted to frictionally engage the protuberances except one to tightly hold the body and cap together, and a pair of inwardly extending tits straddlingly engaging the excepted protuberance to prevent inadvertent relative rotation of the body and the cap, the depth of one of the tits being less than the other to permit the forcible passage over the excepted protuberance.

2. A lamp cluster comprising in combination, a body and a lamp or shade supporting cap adapted to be secured together by relative rotary movement with the body supporting the cap and

the weight of the lamp or shade tending to rock the cap relative to the body when the cluster is moved or jarred, the body having a plurality of outwardly directed, resilient protuberances and the cap having a flange provided with a plurality of depressed portions adapted to frictionally engage the protuberances to tightly hold the body and cap together, and interengaging stop means on the body and cap for preventing inadvertent relative rotation thereof.

3. A lamp cluster comprising in combination, a body and a lamp or shade supporting cap adapted to be secured together by relative rotary movement with the body supporting the cap and the weight of the lamp or shade tending to rock the cap relative to the body when the cluster is moved or jarred, the body having a plurality of outwardly directed, resilient protuberances and the cap having an inwardly directed flange provided with a plurality of depressed portions adapted to frictionally engage the protuberances except one to tightly hold the body and cap together, and including a slot registrable with the excepted protuberance to facilitate the initial positioning of the cap on the body, the inner radius of the flange being smaller than the outer radius of the protuberances, whereby the cap and body are held together against relative endwise movement and a part straddling the excepted protuberance when the cap is positioned on the body to prevent subsequent inadvertent relative rotation thereof.

4. A lamp cluster comprising in combination, a body and a lamp or shade supporting cap adapted to be secured together by relative rotary movement with the body supporting the cap and the weight of the lamp or shade tending to rock the cap relative to the body when the cluster is moved or jarred, the body having a plurality of outwardly directed, resilient protuberances and the cap having an inwardly directed flange provided with a plurality of depressed portions adapted to frictionally engage the protuberances except one to tightly hold the body and cap together, and including a slot registrable with the excepted protuberance to facilitate the initial positioning of the cap on the body, the inner radius of the flange being smaller than the outer radius of the protuberances whereby the cap and the body are held together against relative endwise movement, and a part on the cap engaging a part of the body to prevent relative rotation of the cap and body in either direction.

5. A lamp cluster comprising in combination, a body and a lamp or shade supporting cap adapted to be secured together by relative rotary movement with the body supporting the cap and the weight of the lamp or shade tending to rock the cap relative to the body when the cluster is moved or jarred, the body having a plurality of outwardly directed, resilient protuberances and the cap having an inwardly directed flange provided with a plurality of depressed portions adapted to frictionally engage the protuberances except one to tightly hold the body and cap together, and including a slot registrable with the excepted protuberance to facilitate the initial positioning of the cap on the body, the inner radius of the flange being smaller than the outer radius of the protuberances, whereby the cap and body are held together against relative endwise movement, and a pair of tits straddling the excepted protuberance when the body and cap are relatively rotated to prevent subsequent inadvert-

tent rotation of the body and cap in either direction.

6. A lamp cluster comprising in combination, a body and a lamp or shade supporting cap adapted to be secured together by relative rotary movement with the body supporting the cap and the weight of the lamp or shade tending to rock the cap relative to the body when the cluster is moved or jarred, the body having a plurality of outwardly directed, resilient protuberances and the cap having an inwardly directed flange provided with a plurality of depressed portions adapted to frictionally engage the protuberance except one to tightly hold the body and cap together and including a slot registrable with the excepted protuberance to facilitate the initial positioning of the cap on the body, the inner radius of the flange being smaller than the outer radius of the protuberances whereby the cap and the body are held together against relative endwise movement, and a pair of tits straddling the excepted protuberance when the body and cap are rela-

tively rotated to prevent subsequent inadvertent rotation of the body and the cap, one of said tits being of lesser depth to permit forcible rotation over and beyond said protuberance.

7. A lamp cluster comprising in combination, a shell and a lamp or shade supporting cap adapted to be secured together by relative rotary movement, the shell having a plurality of outwardly directed, resilient protuberances formed in the wall thereof adjacent the cap and the cap being adapted to rest on the peripheral edge of the shell wall, the weight of the lamp or shade tending to rock the cap relative to the shell when the cluster is moved or jarred, and the cap having an inwardly directed flange provided with a plurality of depressed portions adapted to frictionally engage the protuberances except one to tightly hold the shell and cap together, and a stop part on the cap engaging a part on the shell to prevent inadvertent rotation of the shell and cap in either direction.

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