Oct. 26, 1948. C. L. BASHAM 2,452,422

ELECTRICAL CONNECTOR

Filed April 4, 1946

Fig. 1.

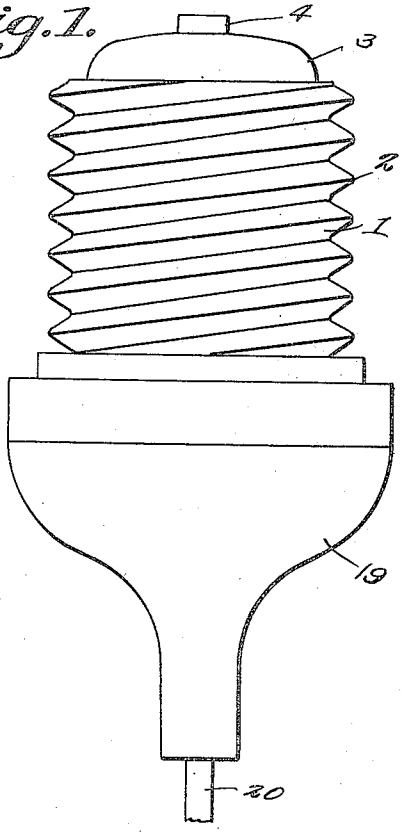


Fig. 4.

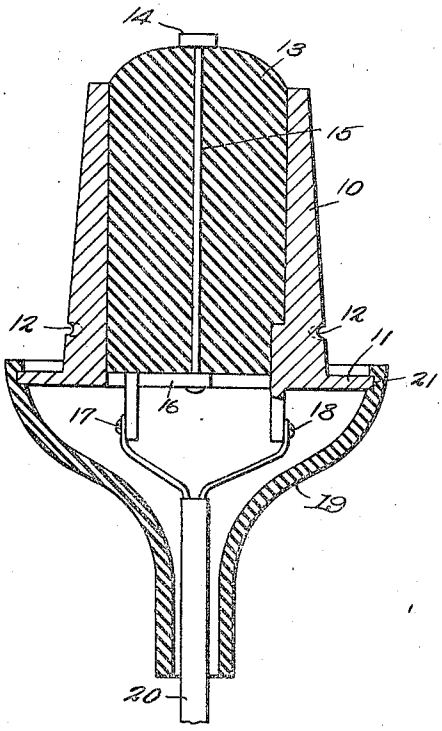


Fig. 2.

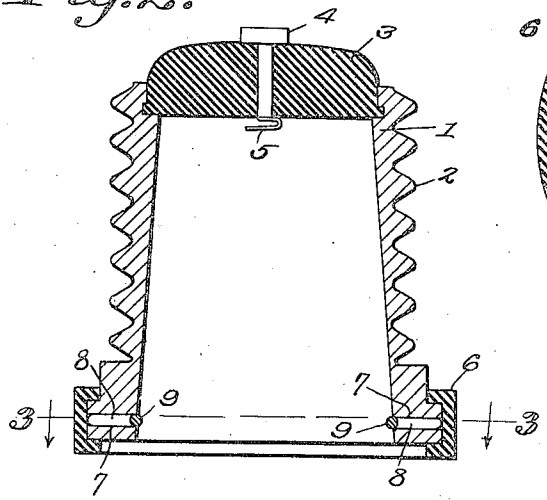
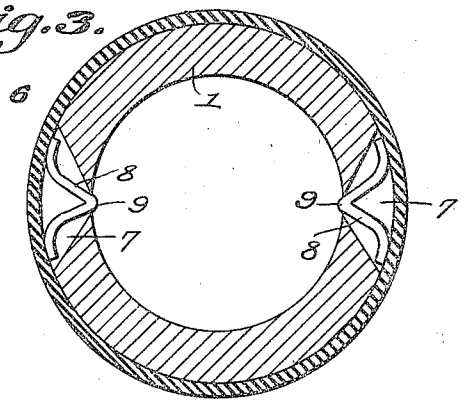


Fig. 3.



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ELECTRICAL CONNECTOR

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Application April 4, 1946, Serial No. 659,462

1 Claim. (Cl. 173—343)

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My present invention relates to an improved electrical connector and more particularly to the quick detachable connector having two elements, one of which is suited for insertion into the standard light socket, while the other unit is fashioned for co-action with the first unit and may be quickly and easily detached and attached without the usual continued rotary movement.

In the accompanying drawings I have illustrated one complete example of the physical embodiment of my invention according to the best mode I have thus far devised but it will be understood that various changes and alterations may be made in the exemplified structure without departing from the spirit of the invention and the scope of the appended claim.

In the drawings:

Figure 1 is a side elevational view of a device constructed in accordance with the invention, and showing connected male and female units.

Figure 2 is a vertical section through the female unit.

Figure 3 is a horizontal sectional view taken at line 3—3 of Figure 2.

Figure 4 is a vertical sectional view of the male unit.

Referring now to the drawings, and particularly to Figures 1, 2, and 3 relating to the female unit, I have shown a hollow casing 1 of metal tapered interiorly and having exterior threads 2. This casing and its threads are designed for insertion into a light socket or outlet and for more or less permanent placement. The casing need not be removed unless replacement is necessary. The casing is provided with a head 3 and a contact 4 adapted to engage the co-acting contact with the usual outlet socket, and the contact is fashioned with an interior spring 5.

An insulating ring 6 is provided on the lower portion of the casing and also formed in the lower portion of the casing are diametrically opposed notches 7 into which are placed springs 8 having points 9 extending into the hollow interior of the casing.

Referring now to Figure 4 of the drawings I have shown the male unit comprising a casing 10 tapered to fit in close relation with the casing 1 and formed of conducting material as metal. The casing is provided with a lower annular ring 11 and exterior short grooves 12. The hollow casing 10 is filled with insulating material 13 and the contact 14 adapted for engagement with the spring contact 5 is provided with wire 15 extending downwardly through the insulating material 13 to the lower contact 16.

Connector 17 on the contact 16, and connector 18 on the casing provide contact for the wire 20.

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A cover of rubber or other flexible insulating material as 19 is fashioned with an interior groove 21 for engagement with the annular ring 11.

In operation the female unit is threaded into the light socket or outlet, and the male unit is then inserted into the female unit, the tapered units forming a close fit therebetween. A quarter turn in either direction at the most, will permit the points 9 of the springs 8 to snap into the grooves 12 and the two units will thus be held in proper relation.

To release the male unit, the unit is turned either clockwise or counterclockwise until the points ride out of the grooves 12 whereupon the male unit may be slid out of the female unit.

Having thus fully described my invention what I claim as new and desire to secure by Letters Patent is:

An electrical connector including interlocking male and female units, the female unit comprising a hollow casing of electrically conductive material exteriorly formed, substantially throughout its length, for detachable engagement in an outlet receptacle, the inner surface of the casing being tapered, a head of insulating material permanently connected to one end of the casing, a spring contact within the head and extending from opposite ends thereof, and opposed V-shaped springs in the casing having their parts normally projecting into the hollow interior thereof, the male unit comprising a hollow casing of conductive material tapered exteriorly for insertion in the female unit, insulating material filling the interior of the casing of the male unit, and a conductor within the insulating material and extending from end to end thereof, said conductor being engageable with the spring contact of the female unit, there being short opposed grooves formed in and extending circumferentially of the casing of the male unit in which the V-shaped springs are engageable, whereby to lock the male to the female unit by relative rotation of said units.

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