The present invention relates to fittings for tubular incandescent lamps and especially to fittings for tubular lamps of the type having a metal cap or ferrule at each end to which the lamp filament is connected and by which electrical current is conveyed through the filament. In mounting such lamps in circuit, two fittings are provided in spaced relation to each other, the lamp being inserted between the fittings and supported by them, the current flowing through the lamp from one fitting to the other.

The object of the invention is to provide an improved fitting which is shock-proof but which at the same time is relatively simple in structure and convenient in use, and for a consideration of what I believe to be novel and my invention, attention is directed to the following specification and the claims appended thereto.

In the drawing, Fig. 1 is a side elevation showing a tubular lamp mounted between two fittings embodying the invention, the two fittings being alike; Fig. 2 is a longitudinal sectional view on an enlarged scale through one of the fittings, an end of a tubular lamp being shown in position in the fitting; Fig. 3 is a sectional view on line 3-3, Fig. 2, the lamp itself being omitted but the cap or ferrule of the lamp being indicated in position, the locking cap of the fixture being omitted; Fig. 4 is a view similar to Fig. 3 taken on line 4-4 of Fig. 2, the locking cap being shown in position and the contact parts being shown in position different from that in Figs. 2 and 3, and Fig. 5 is a face view of the locking cap.

Referring to the drawing, A indicates a tubular incandescent lamp supported between the two fittings B, the fittings being spaced apart a distance to receive the lamp. The structure of the fittings B is shown in detail in Figs. 2 to 5 inclusive, the two fittings being alike.

The fitting comprises a base 1 and a locking cap 2 of suitable insulating material, the locking cap being adapted to be placed on the base and locked thereon after the lamp is in position. The base is provided with a chamber 3 in which is located a U-shaped spring 4 fastened in position by means of a screw 5. The two arms of the U-shaped spring 4 project upwardly and are reversely bent at their free ends to provide hooks 6. Silently mounted between the arms of the spring 4 is a contact slide 8 comprising a metal strip having its edges notches 8 in which the hooks 6 of the spring 4 lie when the circuit through the base is open, as shown in Fig. 3.

The upper end of the slide is provided with a right angularly extending finger 9 which fits in an eccentric groove 10 formed in the metal base or ferrule 11 which is sealed to the end of the lamp 12 and forms a part thereof. Groove 10 is formed by reversely bending the walls of metal base 12 on itself and at one side it is provided with an opening 7 through which finger 9 enters the groove. The lower end of slide 8 is bent in the shape of a U, as best shown in Fig. 2, and riveted between the two arms of the U is an insert 13 provided with projections 15 which extend in a direction toward the legs of the spring 4. Spring 4 is provided also with two lateral ears 16 which extend inwardly and which at their inner edges are provided with notches 17. The base 1 is provided also with an intermediate wall 18 having a semi-circular notch 19 in which the tubular lamp fits. Also, in the base is a contact spring 20 suitably fastened to the base and provided with a binding screw 18 by means of which an electrical conductor may be connected to the contact. Contact spring 20 stands in line with and is adapted to be engaged by a contact 21 carried by the lower end of contact slide 8. Attached to base 1 is a spring holder 22 which at its upper free end is provided with a conical shaped projection 23 adapted to fit in cap 12. Holder 22 is provided with legs 24 which rest on and are suitably attached to shoulders in the base and serve to support the holder. The conical projection 23 is located in the axis of the lamp and holders 22 of two adjacent sockets are adapted to receive between them a lamp and support it, as shown in Fig. 1. The holders have sufficient resiliency so that they may be moved to permit of the insertion of the lamp and then spring back to hold the lamp in place.

The locking cap 2 comprises a front wall 25 and a marginal flange or surrounding wall 27. It is adapted to fit on the base, as best shown in Figs. 2 and 4. At the inner surface of its lower edge, wall 25 is provided with two integral stops 26 and with a wedge shaped extension 28 which is directed downwardly and is located between the two stops.

In the use of the invention, two fittings are suitably mounted in fixed relation to each other a distance apart to adapt them to receive a lamp between them. When the lamp is not in position in a fitting, the contact slide 8 is in its lowermost position, as shown in Figs. 2 and 3. In this position, the hooked ends 4' of spring 4 lie in the notches 8 in the contact slide 8, thus locking the contact slide in its lower position with contact 14 out of engagement with contact 18. In connecting a lamp to the fittings, the cup 2 of the
2 fittings are first removed after which the lamp is inserted between the spring holders 22 of the fittings, as shown in Fig. 2. This serves to support the lamp in position between the bases.

5 When the lamp is in position, the finger 9 rests in the opening 7 of the eccentric groove 10 as shown in Fig. 2. At this time, the circuit is open close the circuit, it is necessary to turn the lamp A through an angle of 180 degrees from the position shown in Fig. 2 to the position shown in Fig. 3, such turning movement serving to lift the contact slide 6 by reason of the finger 9 riding in the eccentric groove 10. However, the lamp can not now be turned since hooks 4', which fit into edge notches 8, lock the contact slide. In order to unlock the contact slide of a holder to permit the lamp to be turned, it is necessary to place the locking cap 5 in position on its base. When the locking cap is placed in position, the wedge shaped extension 28 passes between the arms of the U-shaped spring 4 and forces them outwardly, thus moving hooks 4' out of notches 8. The lamp can now be turned and when turned 180 degrees, the eccentric groove 10 is turned from the position shown in Figs. 2 and 3 to the position shown in Fig. 4 in which the opening 7 is at the top. This serves to lift the contact slide 6, bringing contact 14 into engagement with the contact 18, thus closing the circuit through the lamp. During the latter part of the movement of the contact slide 6, the projections 15 on the inserts 13 engage lateral ears 16 spreading the arms of the U-shaped spring 4 apart, the projections 15 snapping into the notches 18' in lateral arms 16, as shown in Fig. 4. This serves to move the hook ends 4' over the stops 26, as shown in Fig. 4, thus locking the cap 2 on the base.

When it is desired to remove a lamp from the holders, the lamp is first turned through an arc of 180 degrees to move contact 14 away from contact 18 and effect the unlocking of the caps following which the caps may be removed and then the lamp removed.

With the above described arrangement, it will be seen that before a lamp is connected into circuit, it is necessary to put the caps 2 in position to cover the contacts and that when the lamp is turned to close the circuit through it, the caps are locked in position.

As a result, a person using the lamp in the normal way can not come into engagement with the live contacts or get a shock from the device as the live contacts 18 are enclosed in the bases and become connected to the ferrules of a lamp only after the caps are in position to cover the ferrules.

What we claim as new and desire to secure by Letters Patent of the United States, is:

1. A fitting for a tubular lamp comprising a base, a fixed contact on the base, a movable contact, on the base, means for locking the movable contact against movement, a cap for the base, means carried by the cap for releasing said locking means when the cap is positioned on the base, and means locking the cap on the base when the movable contact is moved into engagement with the fixed contact.

2. A fitting for a tubular lamp comprising a base, a movable contact on the base, a fixed contact on the base adapted to be moved into engagement with the fixed contact by turning movement of a lamp in the fitting, means locking the movable contact against movement, a cap for the base, means carried by the cap for releasing said locking means when the cap is on the base, and means locking the cap on the base when the movable contact is moved into engagement with the fixed contact.

3. The combination with a lamp having a ferrule at one end provided with an eccentric groove, of a fitting for the lamp comprising a base, a fixed contact on the base, a movable contact on the base having a part for engagement with said groove whereby by a turning movement of the lamp the movable contact may be moved into and out of engagement with the fixed contact, a removable cap for the base, means carried by the cap for releasing said locking means when the cap is on the base, and means for locking the cap on the base when the movable contact is moved into engagement with the fixed contact.

4. The combination with a lamp having a ferrule at one end provided with an eccentric groove, of a fitting for the lamp comprising a base, a fixed contact on the base, a movable contact on the base having a part for engagement with said groove whereby by a turning movement of the lamp the movable contact may be moved into and out of engagement with the fixed contact, a removable cap for the base, means carried by the cap for releasing said locking means when the cap is on the base, and means for locking the movable contact in its position away from the fixed contact when the cap is removed from the base.

5. A fitting for use with a lamp having a ferrule at its end provided with an eccentric groove comprising a base, a fixed contact thereon, a slide contact having a part for engagement with the fixed contact and a part for engagement with the eccentric groove in the lamp ferrule, a cap for the base, and means actuated by movement of the slide contact to lock the cap on the base.

6. The combination with a lamp having a ferrule at one end provided with an eccentric groove, of a fitting for the lamp comprising a base, a fixed contact on the base, a movable contact on the base having a part for engagement with said groove whereby by a turning movement of the lamp the movable contact may be moved into and out of engagement with the fixed contact, a removable cap for the base, and means for locking the movable contact out of engagement with the fixed contact when the cap is removed from the base.

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