

Oct. 21, 1958

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2,857,578

LAMPHOLDER

Filed June 5, 1956

2 Sheets-Sheet 1

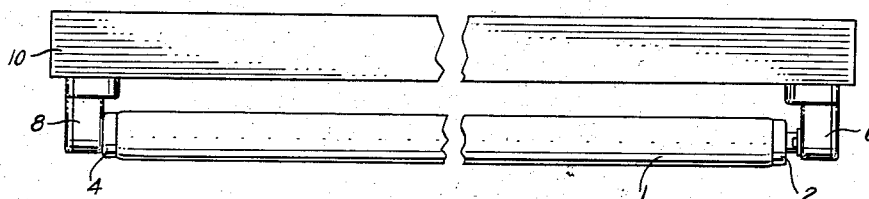


Fig. 1

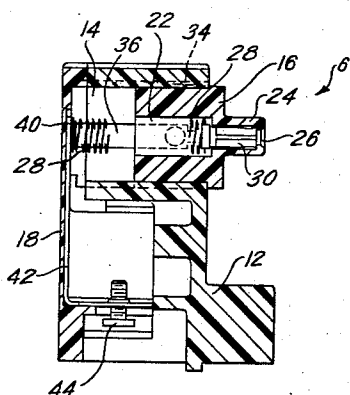


Fig. 2

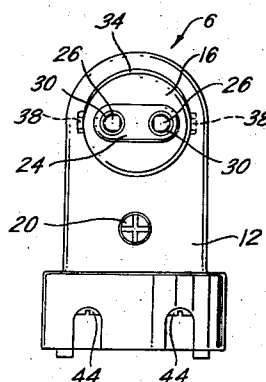


Fig. 3

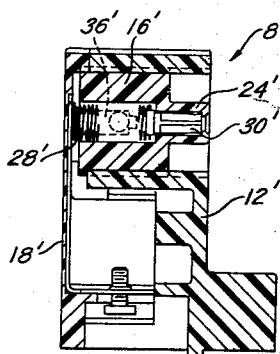


Fig. 4

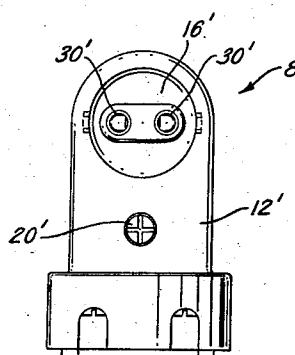


Fig. 5

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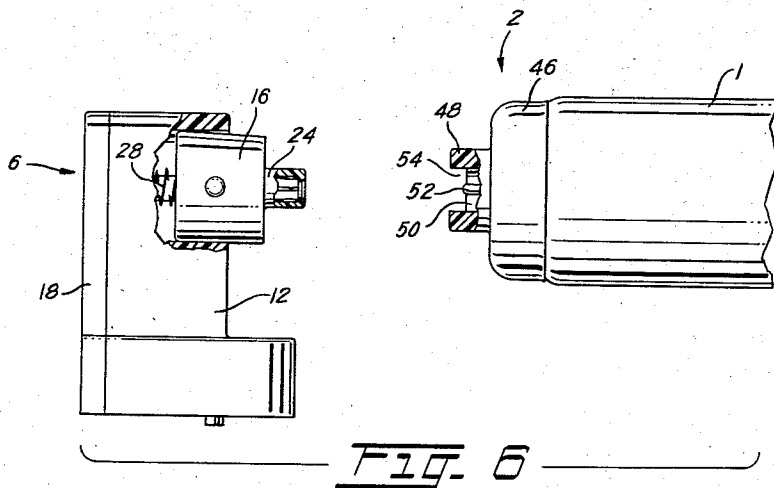
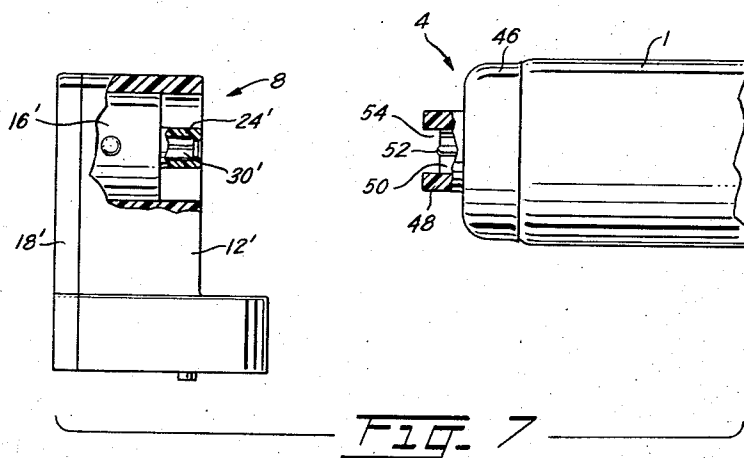
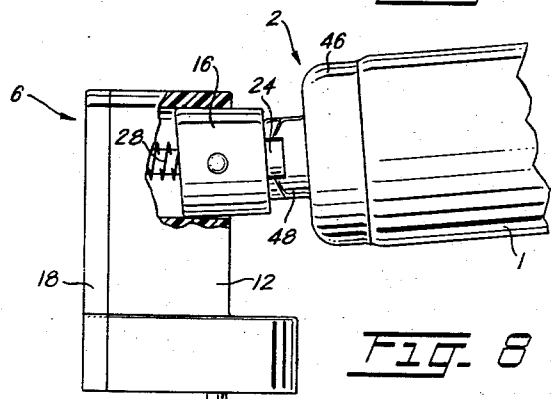
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LAMPHOLDER

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Application June 5, 1956, Serial No. 589,487

10 Claims. (Cl. 339—55)

This invention relates to holders for elongated electric gaseous discharge devices having an electrode at each end thereof. More particularly, this invention relates to lampholders for fluorescent lamps.

Certain types of electric gaseous discharge devices, such as fluorescent lamps for example, are provided with a base at each end thereof. Lead-wires extending from each end of the lamp are suitably secured in the base, and electrical contact therewith is established through a lampholder. The lampholder also serves as a means for supporting the lamp. In view thereof, the lampholder must provide positive electrical contact and insure adequate support for the lamp. In addition thereto, the electrical contact members in the lampholder should be located so that there is no danger of accidental electrical shock. Since certain types of lamp bases are provided with means for partially enclosing the electrical contact members thereof to prevent the danger of accidental electrical shock, one of the objects of this invention is to provide a lampholder which may be employed with this type of base as well as with bases in which the electrical contact members thereof are not so enclosed.

These and other objects, advantages and features are obtained, in accordance with the principles of this invention by providing a lampholder housing with a block disposed in an opening in the front face thereof. The block is provided with a pair of bores which are in register with a pair of bores of smaller diameter in a boss on the front face of the block. A pair of coiled springs extend into the bores of the block, the ends of the springs which are disposed within the bores being provided with a pair of resilient sleeves which are disposed within the bores of the boss and which receive the base pins on the end of a lamp.

In the specific embodiment of the invention shown in the accompanying drawings,

Figure 1 is a side elevational view of a lamp supported by the lampholders of this invention.

Figure 2 is a vertical sectional view of a lampholder having a movable block disposed in the lampholder housing.

Figure 3 is a front elevational view of the lampholder of Figure 2.

Figure 4 is a vertical sectional view of a lampholder having a stationary block disposed in the lampholder housing.

Figure 5 is a front elevational view of the lampholder of Figure 4.

Figure 6 is an exploded view of the lampholder of Figure 2 and the end of a lamp with which it is associated, portions of the lampholder and the lamp base being shown in section to illustrate more clearly the manner in which they cooperate with one another.

Figure 7 is an exploded view of the lampholder of Figure 4 and the end of a lamp with which it is associated, portions of the lampholder and the lamp base being shown in section to illustrate more clearly the manner in which they cooperate with one another.

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Figure 8 is a side elevational view, partly in section, of the lampholder of Figure 2 showing the disposition of the movable block during positioning of a lamp.

Referring now to the drawings, particularly Figure 1 thereof, a lamp 1 having a base 2 disposed on one end thereof and a base 4 disposed on the other end thereof, is supported by lampholders 6 and 8 attached to a base 10.

Referring now to Figures 2 and 3, the lampholder 6 shown therein comprises a housing 12 having an opening 14 therein within which a substantially cylindrical block 16 is disposed, and a cover plate 18 attached to housing 12 by screw 20. The block 16 is provided with a pair of bores 22. A boss 24 on the front face of the block 16 is provided with a pair of bores 26 which are in register with the bores 22. A pair of coiled springs 28, disposed within the opening 14 and extending into the bores 22, are provided with a pair of resilient sleeves 30 which are disposed in the pair of bores 26 in boss 24. The bores 26 are smaller in diameter than the bores 22. To facilitate the positioning of an end of a lamp on the lampholder 6, as will be described more fully below, the top surface of the block 16 is tapered to provide a clearance 34 (Fig. 3). The inner wall of the housing 12 which defines the opening 14 therein is provided with a pair of channels 36 within which studs 38 on block 16 are disposed, thereby preventing rotation of the block within the lampholder housing. Each of the coiled spring 28 is supported at one end thereof on a rim 40 formed in a face of metal plate 42 at one end thereof, the other end of metal plate 42 being provided with a screw 44 to which suitable lead-wires from a source of electrical energy may be connected. The inside face of the cover plate 18 of the lampholder is suitably molded to support the metal plates 42 therein.

The block 16 of the lampholder 6 is reciprocable within the opening 14 in housing 12, the length of the stroke being limited by the length of the channels 36 within which the studs 38 are disposed. On the other hand, block 16' of lampholder 8 (Figures 4 and 5) is made stationary by making the channels 36' substantially shorter than channels 36 in lampholder 6 and providing coiled springs 28 which will be fully compressed when cover plate 18' is secured to housing 12' by screw 20'.

As was mentioned above, one of the objects of this invention is to provide a lampholder which may be employed with lamps having partially enclosed contact members on their bases, as well as with lamps which do not have the base contact members so enclosed. The lamp illustrated in the accompanying drawings is of the former type. The lamp 1 is provided with a base at each end thereof of the type shown in my co-pending application Serial No. 589,488 entitled "Lamp Base" filed on June 5, 1956. Each of the bases 2 (Fig. 6) and 4 (Fig. 7) comprises a shell 46 within which a disk of insulating material is secured, the disk being provided with a boss 48 of insulating material. The boss 48 is provided with a central opening therein defining a pocket 50 within which base pins 52 are disposed and a slot 54 extending across the top of the boss.

Installation of a lamp 1 in its lampholders 6 and 8 (Fig. 1) is effected by first positioning the base 2 on the lampholder 6. As was mentioned above, the block 16 of lampholder 6 is tapered to provide a clearance 34 (Figs. 2 and 3). Thus, as is shown in Figure 8, the lamp 1 may be disposed at an angle to the horizontal as the boss 48 on the lamp base 2 is moved into encompassing relationship with respect to the boss 24 on block 16 of lampholder 6, the boss 24 being tiltable within the limits provided by the clearance 34. The slot 54 extending across the top of boss 48 of base 2 also facilitates positioning of the lamp 1 on the lampholder 6 because it

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permits initial engagement of the boss 48 with the boss 24 to be made from the side as well as end-on.

After the boss 48 of base 2 has been positioned on the boss 24 of block 16, the block 16 is pushed back within the lampholder housing 12 to effect insertion of base pins 52 into resilient sleeves 30 and to permit insertion of boss 48 on lamp base 4 into lampholder 8. After the lamp base 4 has been brought into alignment with the opening in lampholder 8, the boss 48 thereof is guided into encompassing relationship with respect to the boss 24 on block 16, with the base pins 52 of base 4 extending into resilient sleeves 30 in boss 24, thus completing installation of the lamp 1.

What I claim is:

1. A lampholder for a lamp having a pair of base pins extending from an end thereof, said lampholder comprising: a housing having an opening in a face thereof; a block disposed within said opening, said block having a pair of bores extending therethrough; means for retaining said block within said opening; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins extending from an end of a lamp; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

2. A lampholder for a lamp having a pair of base pins extending from an end thereof, said lampholder comprising: a housing having an opening in a face thereof and a pair of channels formed in the side wall of said housing defining said opening and extending from front to rear thereof; a block disposed within said opening, said block having a pair of studs projecting therefrom and extending into said channels; and a pair of bores extending therethrough; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins extending from an end of a lamp; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

3. A lampholder for a lamp having a pair of base pins extending from an end thereof, said lampholder comprising: a housing having an opening in a face thereof; a block disposed within said opening, said block having a pair of bores extending therethrough; means for retaining said block within said opening; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block, said bores in said boss being of smaller diameter than said bores in said block; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins extending from an end of a lamp; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

4. A lampholder for a lamp having a pair of base pins extending from an end thereof, said lampholder comprising: a housing having an opening in a face thereof and a pair of channels formed in the side wall of said housing defining said opening and extending from front to rear thereof; a block disposed within said opening, said block having a pair of studs projecting therefrom

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and extending into said channels, and a pair of bores extending therethrough; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block, said bores in said boss being of smaller diameter than said bores in said block; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins extending from an end of a lamp; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

5. A lampholder for a lamp having a pair of base pins extending from an end thereof, said lampholder comprising: a housing having an opening in a face thereof; a block disposed within said opening, said block being provided with a clearance with respect to the opening within which it is disposed, and said block being further provided with a pair of bores extending therethrough; means for retaining said block within said opening; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins extending from an end of a lamp; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

6. A lampholder for a lamp having a pair of base pins extending from an end thereof, said lampholder comprising: a housing having an opening in a face thereof and a pair of channels formed in the side wall of said housing defining said opening and extending from front to rear thereof; a block disposed within said opening, said block being provided with a clearance with respect to the opening within which it is disposed, and said block having a pair of studs projecting therefrom and extending into said channels, and a pair of bores extending therethrough; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins extending from an end of a lamp; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

7. A lampholder for a lamp having a pair of base pins extending from an end thereof, said lampholder comprising: a housing having an opening in a face thereof; a block disposed within said opening, said block being provided with a clearance with respect to the opening within which it is disposed, and said block being further provided with a pair of bores extending therethrough; means for retaining said block within said opening and preventing rotation therein; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins extending from an end of a lamp; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

8. A lampholder for a lamp having a base secured to an end thereof, in which the base includes a pair of base pins and a boss having a central opening defining

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a pocket within which the base pins are disposed, said lampholder comprising: a housing having an opening in a face thereof; a block disposed within said opening, said block having a pair of bores extending therethrough; means for retaining said block within said opening; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block, and said boss fitting into said central opening in said boss on said base; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins disposed within said pocket in said boss on said base; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

9. A lampholder for a lamp having a base secured to an end thereof, in which the base includes a pair of base pins and a boss having a central opening defining a pocket within which the base pins are disposed, said lampholder comprising: a housing having an opening in a face thereof and a pair of channels formed in the side wall of said housing defining said opening and extending from front to rear thereof; a block disposed within said opening, said block having a pair of studs projecting therefrom and extending into said channels, and a pair of bores extending therethrough; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block, and said boss fitting into said central opening in said boss on said base; a pair of coiled springs disposed within said housing and extending into said bores in said block; a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said

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coiled springs disposed within said bores in said block, for receiving the base pins disposed within said pocket in said boss on said base; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

10. A lampholder for a lamp having a base secured to an end thereof, in which the base includes a pair of base pins and a boss having a central opening defining a pocket within which the base pins are disposed, said lampholder comprising: a housing having an opening in a face thereof; a block disposed within said opening, said block being provided with a clearance with respect to the opening within which it is disposed, and said block being further provided with a pair of bores extending therethrough; means for retaining said block within said opening; a boss on the front face of said block, said boss having a pair of bores extending therethrough and in register with said bores in said block, and said boss fitting into said central opening in said boss on said base; a pair of coiled springs disposed within said housing and extending into said bores in said block, a pair of resilient sleeves, disposed within said bores in said boss and attached to the ends of said coiled springs disposed within said bores in said block, for receiving the base pins disposed within said pocket in said boss on said base; and means through which the other ends of said coiled springs may be connected to a source of electrical energy.

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