This invention relates to connectors, being particularly related to connectors for electric discharge lamps commonly known as fluorescent lamps, and the arrangement of connectors in such lamps. The connectors of this invention are readily usable to interengage a pair of lamp bases of the type disclosed and claimed in the copending application of Messrs. Albert F. Pate, Robert A. Kuebler, and Harold R. Kestner, Serial No. 106,827, filed concurrently herewith and assigned to the same assignee as the present invention.

Hereinafore, the most commonly used fluorescent lamp has had a straight-line tubular configuration, including a tubular glass envelope, with a lamp base positioned at each end thereof. The lamp bases of such a lamp, which are usually two in number, face outwardly, presenting contacts which face away from each other for engagement with an associated pair of separate lamp holders. In addition, such a lamp most commonly has also been supported by these lamp holders, which are attached to a suitable supporting fixture. To provide a more compact fluorescent lamp than the straight-line tubular varieties hereinafore utilized, an improved fluorescent lamp has now been developed, wherein a pair of panel-shaped glass members are attached together to form an over-all glass envelope. The envelope includes channels that are doubled back upon themselves in alternately opposite directions. This more compact lamp assumes a generally flat rectangular and panel-shaped appearance. Such an arrangement of the glass envelope, with electrodes suitably positioned therein, provides a concentration of illumination in a relatively small area.

In the aforementioned lamp of panel-shaped configuration, it has been found desirable to provide an efficient and low cost connector for congregating external lead wires and connecting them to the contact carrying the lamp. It has been considered additionally desirable to physically locate the aforementioned connector together with a pair of cooperating lamp bases so that a very compact illumination device is thereby achieved.

An important object of the present invention is to provide an improved connector which is especially usable with a panel-shaped lamp.

Another important objective of the present invention is to provide an illumination device wherein the lamp and connector assume a novel complementary relationship and disposition, to achieve an illumination device of compact structure.

Another object of my invention is to provide a connector for a fluorescent lamp, which connector compressibly interengages and is supported by the lamp.

A further object of the present invention is to provide an improved connector which combines efficiently with opposed bases of a panel-shaped fluorescent lamp to provide an efficient illumination device.

A still further object of my invention is to provide an improved connector for a fluorescent lamp, which connector is simplified in structure and readily manufacturable.

In carrying out one aspect of my invention, there is provided an electrical illumination device including a generally flat panel-shaped fluorescent lamp having a substantially rectangular peripheral outline with an elongated peripheral slot formed in one of its sides between two oppositely disposed lamp bases. The lamp bases of the lamp are arranged so that contacts of one base face inwardly toward contacts of the other base. Between these lamp bases, there is positioned a connector that carries contacts at opposite ends thereof which face away from each other. The connector fits compactly between the lamp bases, and the contacts at each end of the connector interengage associated contacts of one of the lamp bases to furnish electric power to the panel lamp from an external source. With such an arrangement of the connector and lamp bases, a compact and efficient illumination device having a rectangular peripheral outline is thereby achieved.

By a further aspect of my invention, I provide an elongated connector which is efficiently cooperable with a pair of spaced apart inwardly facing bases of a fluorescent lamp. This connector may, of course, be combined with the aforesaid structure to provide a particularly desirable illumination device. The structure of the connector includes a housing with a pair of insulative contact support sections disposed at its opposite ends. One of the contact support sections is telescopically arranged at one end of the housing for reciprocating movement along the longitudinal axis of the housing to facilitate the attachment and removal of the connector to and from the lamp bases. Each of the contact support sections includes a pair of adjacent insulated chambers with a contact supporting means in each chamber. A contact is positioned in each chamber and fastened to the contact supporting means to provide a pair of adjacent insulated contacts facing outwardly from each end of the connector. With such a connector, the contact support section at each end of the connector interengages a base of the bi-pin lamp and the connector contacts mate with the lamp base contacts to energize the lamp from an external source. By means of such a connector arrangement, the connector is disposed between the lamp bases and it is also supported by means of interengagement with the lamp bases to expeditiously transmit power to the lamp from a single compact wire congeruting unit.

By a still further aspect of my invention, I provide a fluorescent lamp connector having improved contact members which mate with pin contacts of a fluorescent lamp in a novel manner. More particularly, these contacts have a generally S-shaped configuration and are supported in cantilever fashion within insulative contact sections of the connector for resilient movement in the same direction upon engagement with associated contacts of a bi-pin fluorescent lamp, to effect a wiping electrical contact between the mating contacts. This contact structure and arrangement may, of course, be combined with the aforesaid connector structure to provide a particularly desirable illumination device.

Further aspects of my invention will become apparent hereinafter, and the specification concludes with claims particularly pointing out and distinctly claiming the subject matter which I regard as my invention. The invention, however, as to organization and method of operation, together with further objects and advantages thereof, may best be understood by reference to the following description when taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a plan view of a panel type illumination device embodying my invention;
FIG. 2 is a front elevational view of the illumination device of FIG. 1, showing a connector embodying my invention disposed between two lamp bases of the device;
FIG. 3 is an end view of the illumination device of FIG. 1;
FIG. 4 is a side elevational view, partially in section and partially broken way, of the connector interengaged with contact carrying fragments of the lamp bases, to
show the interior structure of the connector and lamp bases at the contact ends thereof;

FIG. 5 is a plan view, partially broken away, of the connector interengaged with the contact carrying fragments of the lamp bases;

FIG. 6 is a side elevational view of the connector by itself,

FIG. 7 is a bottom view of the connector by itself; and

FIG. 8 is an end view of the connector, showing the face of one of the contact support sections.

Referring first to FIG. 1 of the drawings, in which like numbers denote like parts in all figures, there is shown a split lamp 3 of rectangularly configured peripheral outline of the lamp 3 at side 35 thereof. Between each of the bases 33 and 34, there is an elongated peripheral slot 43 provided in side 35 of the device 1. Connector 7 fits into slot 43, as shown in FIG. 1, in overlying relationship to ledge 25. The connector is constructed to interengage bases 33 and 34, as shall be described in detail hereinafter, and thereby provide a panel-shaped device of compact rectangular peripheral outline.

Lamp bases 33 and 34 are similar in construction, differing essentially in that lamp base 33 is designed for positioning at one end of the lamp side 35, such as, for example, the left end when viewing FIGS. 1 and 5, and lamp base 34 is designed for positioning at the other end of the lamp side 35, such as the right end when viewing FIGS. 1 and 2. Certain features of the lamp bases 33 and 34 comprise the invention of Messrs. Albert F. Pate, Robert A. Kuebler, and Harold R. KeStner and these features are described and claimed in their aforesaid copending applications Serial No. 106,827. Each of the lamp bases 33 and 34 comprises a one-piece molded casing of insulating material that includes a pair of oppositely disposed vertical walls (FIG. 1) connected to a top wall 44. To enable the bases 33 and 34 to substantially conform to the curved configuration of a plurality of the adjacent lamp bases, top wall 44 is smoothly curved downwardly toward the bottom of the base, as shown in FIG. 2. Tongues 45a and 45b are formed respectively at the back and front of each lamp base. Each of the tongues 45a and 45b has a recess formed therein for engagement with one side of a C-shaped clip 46. The other side of these C-shaped clips engages a recess formed in ledge 26 to thus fasten each of the lamp bases to the lamp envelope. The front face of each of the lamp bases 33 and 34 is recessed at 33a and 34a (FIG. 5) to form a pair of opposed projecting walls 47a and 47b disposed in planes parallel to the axes of the lamp pin contacts 31. Pin contacts 31 are fastened to a separate insulating member 48 which is slipped into a slot 48c in the lamp base from underneath. The pin contacts project outwardly toward the outer edges of the connector 7 and parallel to the longitudinal axis of connector 7, being frontally disposed within recesses 33a and 34b. Each of the lamp bases 33 and 34 also includes an outstretched arm 49 which engages between a pair of adjacent channels, as shown in FIG. 1, to provide additional support for the lamp base in lamp 3.

To support lamp 3 on fixture 5, four C-shaped fastening strips 50a, 50b, 50c, and 50d (FIG. 3), are attached to the fixture 5. Stripes 50a include arms 5b which engage and support the ledge 27 in a suitable manner, such as from above the lamp, viewing FIG. 2.

Connector 7 is of elongated and slender configuration and has an oblong cross section. To enable the connector 7 to support, insulate, and contain a pair of resilient contacts 51 at each of its ends 53 and 54, support sections 57 have been provided. One of the contact support sections 57 faces outwardly from each end of the connector housing. The contact support sections 57 are molded from a suitable insulating material and they are also generally box-shaped in structure. More particularly, each support section 57 has a box-shaped body 59 of oblong cross section (FIG. 8) with a pair of opposed L-shaped sections 61 and 63 depending from bottom wall surface 65, and an outwardly extensive box-shaped mouth 67 which is also of oblong cross section. Mouth 67 communicates with body 59, is coaxial thereto, and is stepped inwardly therefrom at its sides by shoulders 69 and 71.

When bar connector 7 is installed between the two inwardly facing cooperating lamp bases 33 and 34, as shown in FIGS. 1 and 5, each mouth 67 of the connector interengages and cooperates with the recessed face of one of the lamp bases. More specifically, when connec-
tor 7 is seated between the pair of mating lamp bases 33 and 34, the outer surfaces of oppositely disposed vertical walls 73 and 75 (FIGS. 6 and 7) of connector member 67 (at each end of the connector 7) are each disposed in contiguity to associated surfaces of vertical walls 47a and 47b of lamp bases 33 and 34. The outer surface of horizontal bottom wall 77 of connector member 67 rests upon and is supported by bottom wall 47c of the associated lamp base 45b of each lamp base extends underneath the bottom wall 65 of the contact support section 57 and faces upwardly as shown on the left side of FIG. 4 to furnish an additional supporting means for each end of connector 7.

Turning now to an explanation of the internal structure of contact support sections 57, attention is directed to FIGS. 4 and 8. When mouth 67 of section 57 is viewed from the outer end or frontal face 81 thereof, it will be noted that section 57 includes upper and lower chambers 83 and 85 respectively (FIG. 4). Chambers 83 and 85 are formed by top, intermediate and bottom transverse walls 89 and 65, respectively, which are integrally joined to vertical walls 73 and 75 of mouth 67 and vertical walls 91 and 93 of body 59 (FIGS. 7 and 8). To guide the resilient movement of contact 51 in each of the chambers 83 and 85, transversely centered slot 95 is formed on the upper and inner surface of transverse walls 89 and 65 (viewing FIG. 4). Slots 95 extend rearwardly from frontal face 81 into enlarged cavity 97 (FIG. 4) which opens toward the longitudinal center of the connector from the rear face 99 (FIG. 4) of contact support section 57. Between front and rear faces 81 and 99 of each contact support section 57, a pair of spaced transversely extensive projections 101 are formed on the inner surfaces of vertical walls 91 and 93 of body 59. As shown in FIGS. 4 and 8, the projections 101 have their inner vertical surfaces parallel to each other and they are spaced apart by slot 102. Slot 102 communicates with bottom slot 95 in each chamber. The upper horizontal surfaces of each pair of projections 101 are spaced from one or the other of transverse walls 87 and 89 by a transversely and longitudinally extensive upper slot 103. Slots 102 and 103 in each chamber, as shown in FIG. 8, combine to provide a T-shaped over-all slot which is formed by spaced projections 101 and the associated upper wall surface of each chamber. This T-shaped slot connects the frontal end 11 of each chamber to enlarged cavity 97. The bottom of each slot 102 communicates with slot 95 at the innermost or rearward end thereof.

For electrically engaging pin contacts 31 of lamp bases 33 and 34 with an efficient contact wiping action, by means of my invention, the aforementioned resilient contacts 51 have been provided. Contacts 51 are constructed of a suitable thin conductive material, such as, for example, phosphor bronze metal having a thickness in the order of 0.018 inch. In particular, as shown in cross section by FIG. 4, each of the contacts 51 has a generally S-shaped configuration, comprising a U-shaped supporting portion 105 and a U-shaped contacting portion 107. Supporting portion 105 of each contact 51 is generally wider than contacting portion 107, and to attach the contact to insulating section 57, an upper section 109 of contact portion 105 (viewing FIG. 4) is extended through slot 103 of one of the chambers. The outer end 111 of contact portion 105 is then lapped around angularly extensive forward faces of projections 101, as shown in FIG. 4. Section 109 and the outer end 111 together form a hook-shaped end. The U-shaped portion 107 of each contact is thus wrapped around the projections 101 and securely held in engagement therewith by lapped outer end 111 thereof.

The U-shaped contacting portion 107 of contact 51, which is relatively slender in width when generally compared with support portion 105 thereof, extends forwardly toward frontal face 81 of insulating section 57 from underneath projections 101 (viewing FIG. 4). In particular, the upper segment or lamp pin contacting portion 113 of contact portion 107 extends outwardly through slot 102 of the chamber, and is sloped slightly downwardly from a horizontal disposition toward the bottom wall 65 of the connector 7 (viewing FIG. 4). To provide a resilient spring fit for each contact engagement therewith by an associated lamp pin contact 31, the free end 115 of contacting portion 105 is doubled back upon section 113 in the same general direction as upper segment 113. Free end 115 also extends into the longitudinally extensive bottom slot 95 in each chamber and is disposed contiguous to a stepped shoulder stop 117 formed in slot 95. With such an arrangement of the resilient contacts 51, when the box-shaped mouth 67 at each end of connector 7 interengages the recessed face of one of the lamp bases 33 or 34, as shown in FIG. 4, the pin contacts 31 of the lamp base are initially engaged by the outermost ends of upper segments 113 of the pair of contacts on the curved outer tips of the contacts 51. This initial engagement forces the segments 113 to move downwardly toward the bottom wall 65 of the support 57. After each lamp pin 31 is first engaged by upper segment 113 of contact 51, the upper segment 113 thereupon pivots downwardly about its cam-lowered supporting attachment against the biasing force of its associated underlying spring seat to effect an efficient and simplified contact wipe.

To mount the contact support sections 57 of my novel connector 7, I have provided a pair of complementary L-shaped members 119 and 121 which expeditiously cooperate with two contact support sections 57 to form a compact connector unit of bar-shaped configuration.

More specifically, the members 119 and 121 are elongated in structure and may be made of a relatively thin rigid material, such as, for example, a metal having a thickness of 0.025 inch. The L-shaped members 119 and 121 each have two longitudinally spaced tongues 123 formed on the longitudinal axis of the connector unit. More specifically stated, near end 53 of the connector 7, an oppositely disposed pair of rectangular slots 135 are formed in mid-vertical position on the side walls of L-shaped members 119 and 121. Near end 55 of the connector 7 (an oppositely disposed pair of elongated rectangular slots 135 are formed in mid-vertical position on the side walls of the members 119 and 121. The slots 135 have their axes of elongation disposed generall parallel to the longitudinal axis of connector 7.

Each of the contact supporting sections 57 has an oppositely disposed pair of ears 137 projecting outwardly from the vertical walls 91 and 93 of body 59. (See FIG. 5.) Ears 137 are rectangularly configured and suitably dimensioned to cooperate with slots 133 at outer end 53 of the connector casing 131. The rectangularly arranged top, bottom and side walls 87, 65, and 91, 93 of the box-shaped body 59 of each contact support section 57 fits telescopically into one of the open ends of casing 131. Ears 137 of the contact support section 57 position on end 53 of the connector casing 131. Ears 137 of the contact support section 57 position on end 53 of the connector 7 when viewing FIG. 4, fit into opposing slots 133 of the casing 131 to rigidly secure one of the insulating sections 57 thereto.
Turning now to a further aspect of my invention, which concerns itself with a novel and efficient arrangement for biasing the connector contacts into interengagement with the lamp pin contacts, conveniently attaching bar connector 7 to lamp bases 33 and 34, and also facilitating the expeditious removal of the connector 7 from interengagement with these lamp bases, attention is directed to the right side of FIGS. 4, 5, 6, and 7. The contact support section 57 which is positioned on the end 55 of the connector (i.e., the right side of the connector when viewing FIG. 4, 6, and 7) has its ears 137 fitted into elongated slots 135. Instead of being rigidly supported in casing 131, as is the insulating section 57 at connector end 53, the insulating section 57 at end 55 is telescopically positioned in the open end of casing 131 for reciprocating movement along the longitudinal axis of the connector 7. The rear edge of each of the vertical walls 91 and 93 of body 59 (for each insulating section 57) has a segment-shaped boss 139 projecting therefrom (FIG. 4). The segment-shaped bosses 139 fit into and seat one end of compression spring 141. The other end of compression spring 141 surrounds and is seated by an annular projection 143 which faces outwardly from the spring support 129. Spring support 129 extends transversely to the longitudinal axis of connector casing 131, as shown in FIG. 4, and passes through narrow slots 145, such as the one shown in FIG. 6, to help attach L-shaped members 119 and 121 together. Spring 141 runs in compression between support 129 and the rear edges of insulating walls 91 and 93, to normally bias the reciprocating contact support 57 forwardly or away from the longitudinal center of the connector. Ears 137 of the reciprocating support 57 are normally biased outwardly against the forward vertical edges of slots 135. When the reciprocating support 57 is compressed, the innermost vertical edges of the slots 135 limit the depressive movement of the reciprocating support 57 into casing 131.

It will thus be seen that the contact support sections 57 are structurally alike in every respect. The section 57 which is positioned at connector end 53 differs from the section 57 which is positioned at connector end 55 only in that the first mentioned connector has a C-shaped grounding contact 147 fastened within and between depending L-shaped sections 61 and 63. The contact 147 shall be further described hereinafter. By utilizing the same insulating sections 57 at each end of my illustrated bar connector 7, an over-all connector unit of economical construction is thereby achieved.

For connecting the various lead wires 149 from an external power source to the resilient contacts 51 at each end of the bar connector 7, the insulated wires 149 are brought into casing 131 from mouth 151 at the longitudinal center of the casing. Mouth 151 comprises two cooperating recesses formed in upper longitudinal edges 124 and 126 of members 119 and 121. These recesses have their edges lapped over to form a smooth over-all rim and thereby preclude any possible damage to the insulation of the inwardly extending conductors. It will thus be seen that the entry of conductors 149 to the connector 7 is segregated at mouth 151. The bared ends of the various conductors 149 are suitably fastened to the U-shaped supporting portions 105 of the resilient connector contacts, such as by soldering them thereto in the manner shown in FIG. 4.

After the conductors 149 have been fastened to the contacts at each end of my bar connector 7, one of the many advantages derived therefrom, is that the connector ends thereof may be interengaged with a pair of inwardly facing lamp bases by means of only one hand. In addition, due to the action of compression spring 141 upon the reciprocating contact support section, the connector sections at each end of casing 131 are biased longitudinally outwardly toward the mating contacts of the lamp bases. This facilitates the interengagement of the connector and lamp contacts. Due to the compressible telescopic mounting of the insulating contact section 57 at one end 55 of the connector, the installed connector is also enabled to efficiently withstand various abnormal abuses of the type generally associated with applications of lighting components, such as, for example, severe vibrations. To remove bar connector 7 from interengagement with lamp bases 33 and 34, as suggested in FIG. 4, the casing 131 may be grasped with the fingers and moved to the right. End 55 of casing 131 thereupon telescopes to the right relative to the spring loaded insulating section 57, and the rigidly supported insulating section 57 at the other end of connector 7 may be readily tilted downwardly (viewing FIG. 2) and removed from its associated lamp base.

The grounding contact 147 has a C-shaped configuration, and is wrapped around the transversely extensive bottoms 153 of sections 61 and 63 (as shown in FIGS 4 and 5). Transverse tabs 155 of contact 147 engage the inner faces of bottoms 153 to attach the contact to the insulating section 57 which is supported in stationary fashion on the connector. With contact 147 positioned on the bottom of the stationary insulating section 57 in such a manner, the slender contact segment 157 of contact 147 is free to pivot resiliently about a cantilevered support in peripheral slots 145 and move outwardly (viewing FIG. 5) upon engagement and disengagement, respectively, with a grounding strip (not shown).

It will now therefore be seen that my novel connector provides an efficient and simplified means for interconnecting two contact carrying sections to a pair of opposed lamp bases. It will be further understood that by means of the present invention, I have also provided a novel combination of fluorescent lamp and a connector, where the lamp and connector assume a complementary relationship to achieve an illumination device of compact structure.

While in accordance with the Patent Statutes, I have described what at present is considered to be the preferred embodiment of my invention, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from my invention, and I therefore aim in the following claims to cover all such equivalent variations as fall within the true spirit and scope of this invention.

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

1. An electric illumination device comprising a generally flat electric lamp, said lamp having a peripheral slot formed in one of said sides between two oppositely disposed lamp bases, each of said lamp bases including a contact means facing toward the other opposed lamp base, and an elongated lamp connector for energizing said lamp, said connector being disposed within said peripheral slot and interengaged with the contacts of said lamp bases thereby to form a lamp and connector combination, said elongated lamp connector having a hollow housing and a plurality of lead wires disposed within the housing.

2. An electric illumination device comprising an electric lamp, said lamp having a generally rectangular peripheral outline with a substantially continuous illumination area within said outline, an elongated peripheral slot formed in one of its sides between two oppositely disposed lamp bases, contacts positioned in said lamp bases, and a lamp connector disposed within said peripheral slot, said lamp having a generally rectangular peripheral outline, said connector telescoping to permit the attachment and removal of said connector to and from interengaged lamp contacts of the lamp bases.

3. An electric illumination device comprising a panel-shaped lamp having a generally rectangular peripheral
outline, a elongated slot formed in one side of the peripheral outline of the lamp between two oppositely disposed lamp bases adjacent the outermost ends of the side of the lamp outline and carrying contacts therein, the contacts of one lamp base facing toward the contacts of the other base, and an elongated bar-shaped connector disposed within said peripheral slot, said connector carrying contacts at each end thereof which interengage mating contacts of the lamp bases thereby to form a lamp and connector combination with an over-all rectangular peripheral outline.

4. A connector for a lamp, said connector comprising an elongated housing, a pair of insulative contact support sections mounted in opposite ends of the housing, a pair of oppositely disposed elongated slots formed in opposite sides of the housing near one end, one of said contact support sections having opposed ends slidably cooperating with said slots to allow a reciprocating movement of said one contact support section along the longitudinal axis of the elongated housing, the other contact support section being supported in stationary fashion at the other end of the housing, each of said support sections including at least one insulated chamber, and a longitudinally extensive contact support in each of said chambers whereby to provide a contact at each end of the connector for interengagement with associated contact sections of the lamp, said one contact support section being reciprocably movable to facilitate the attachment and removal of said connector to and from interengagement with said lamp.

5. A connector for a bi-pin fluorescent lamp, said connector comprising a bar-shaped housing an elongated casing of rectangular cross sectional configuration with a pair of insulative contact support sections disposed at opposite ends of the casing, said casing comprising two elongated L-shaped members fastened together in complementary relationship to form a casing of rectangular cross section, a pair of oppositely disposed rectangular slots formed in vertical walls of said casing near one end thereof, a pair of oppositely disposed elongated slots formed in vertical walls of said casing near the other end of the casing, one of said contact support sections being telescopically arranged for reciprocating movement within the casing along the longitudinal axis of the housing, said one contact support section having opposed ears which cooperate with and are guided for said reciprocating movement within the elongated slots of the casing, the other contact support section being supported in stationary fashion at the other end of the casing, said last mentioned contact support section having opposed ears formed on vertical walls thereof which cooperate with the said rectangular slots thereby to secure said support sections in the casing, each of said support sections including a pair of adjacent insulated chambers, transversely extensive contact supporting means formed in each of said chambers, and a contact fastened to an associated contact supporting means in each of said chambers and substantially disposed within an associated one of said chambers, thereby to provide a pair of adjacent insulated contacts at each end of the connector for interengagement with associated contacts of a bi-pin fluorescent lamp, the telescopically arranged contact support section being reciprocably movable in said casing, the attachment and removal of said connector to and from interengagement with said lamp.

6. An electric illumination device comprising an electric lamp having two opposed lamp bases spaced apart and facing toward each other, each of said bases having at least one lamp contact, a separate contact support member removably engaged with each of said two opposed lamp bases, a hollow housing extending between said separate contact supporting members, said contact members extending outwardly of said housing, said housing secured to one of said contact supporting members for unitary movement with said member and said housing extending over said other contact supporting member and telescoped over said other contact supporting member when said other contact supporting member has been aligned with said other lamp base, said resilient means securing said contact supporting members against their respective lamp bases by biasing said housing and said one contact supporting member away from said other contact supporting member.

7. An electric illumination device comprising an electric lamp having two opposed lamp bases spaced apart and facing toward each other, each of said bases having at least one lamp contact, a separate contact support member removably engaged with each of said two opposed lamp bases, a housing extending between said separate contact supporting members and connecting them together, at least one of said contact supporting members extending outwardly beyond said housing, said housing telescoped with said one contact supporting member when either of said contact supporting members is engaged against one of said lamp bases to shorten the combined length of said contact supporting member and said housing, and resilient means biasing said housing from one said contact supporting member to and from interengagement with said lamp.

8. A connector for a bi-pin fluorescent lamp, said connector comprising a hollow housing, a pair of insulative contact support sections mounted in opposite ends of said housing, at least one of said contact support sections being reciprocable mounted, each of the contact support sections including a pair of juxtaposed chambers opening outwardly from one end of the connector, transversely projecting wall means formed in each of said chambers, and a resilient contact disposed within each of said chambers, each of said contacts having a hook-shaped end secured over an associated transversely projecting wall means, a lamp pin contacting portion, an intermediate portion joined said hook-shaped end and said contacting portion, and a biasing portion at the end of said contact remote from said hook-shaped end, said biasing portion engaged against another wall of said chamber and said intermediate portion extending along a face of said transversely projecting wall facing toward said other wall and being wrapped around said transversely projecting wall to said hook-shaped end, said contact being held in said chamber by being wrapped around said transversely projecting wall, hooked over said transversely projecting wall and by resilient engagement between the face of said transversely projecting wall and said other wall, the resilient engagement between the face of said transversely projecting wall and said other wall providing a wiping electrical engagement between said contact of the connector and the associated contacts of the lamp, and the contacts of each contact support section being mounted for resilient movement in the same direction upon interengagement with associated contacts of bi-pin fluorescent lamp.

9. A connector for a fluorescent lamp, said connector comprising a housing, a pair of insulative contact support sections mounted at opposite ends of said housing, each of the contact support sections including a chamber opening outwardly from one end of the connector, transversely projecting wall means formed in each of said chambers,
and a resilient contact disposed within each of said chambers, said contact having a hook-shaped end secured over an associated transversely projecting wall means, a lamp pin contacting portion, an intermediate portion joining said hook-shaped end and said contacting portion, and a biasing portion at the end of said contact remote from said hook-shaped end, said biasing portion engaged against another wall of said chamber and said intermediate portion extending along a face of said transversely projecting wall facing toward said other wall and being wrapped around said transversely projecting wall to said hook-shaped end, said contact being held in said chamber by being wrapped around said transversely projecting wall, hooked over said transversely projecting wall and by resilient engagement between the face of said transversely projecting wall and said other wall, the resilient engagement between the face of said transversely projecting wall and said other wall providing a wiping electrical contact between said contact of the connector and the associated contacts of the lamp.

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