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ELECTRIC CONNECTOR FOR DASH LAMPS, &c.

APPLICATION FILED JULY 20, 1917.

1,264,482.

Patented Apr. 30, 1918.

Fig. 1.

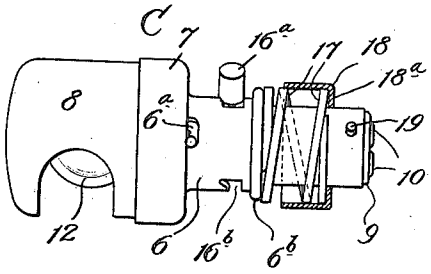


Fig. 2.

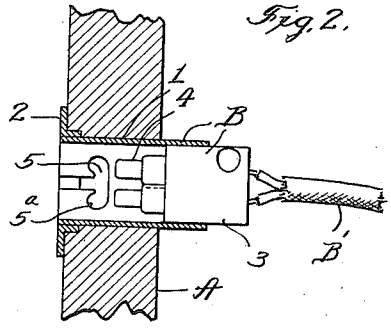


Fig. 3.

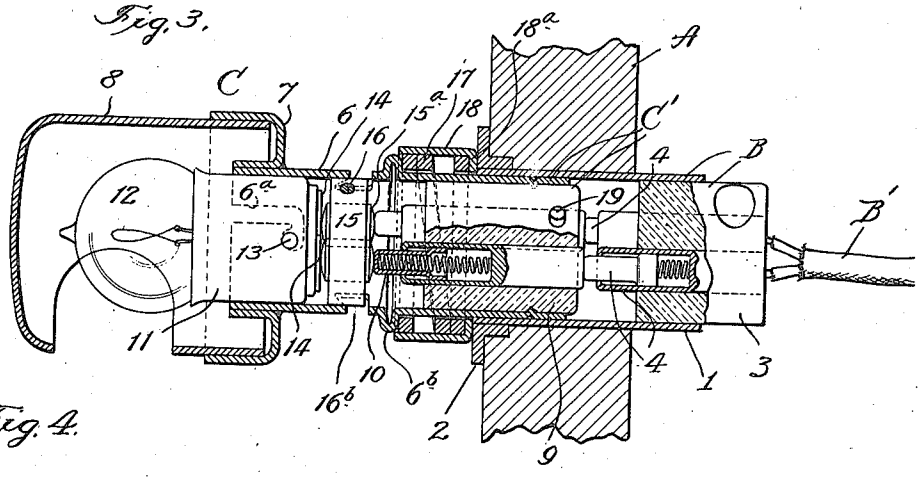
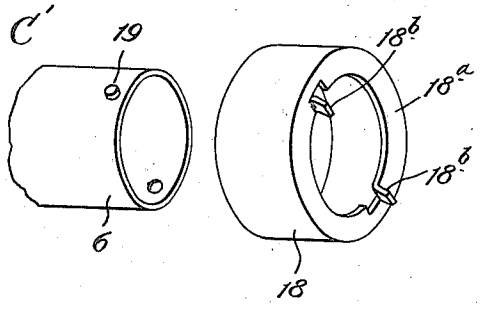


Fig. 4.



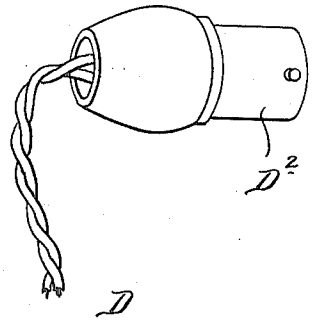
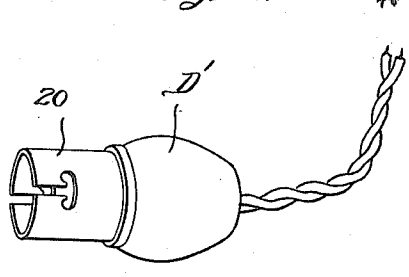


Fig. 5.



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UNITED STATES PATENT OFFICE.

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ELECTRIC CONNECTOR FOR DASH-LAMPS, &c.

1,264,482. Specification of Letters Patent. Patented Apr. 30, 1918.

Application filed July 20, 1917. Serial No. 181,894.

To all whom it may concern:

Be it known that I, JOHN BERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Electric Connectors for Dash-Lamps, &c., of which the following is a specification.

This invention relates particularly to means for securely mounting a dash-lamp on an automobile and preventing rattling thereof.

The primary object is to provide a simple and cheap construction in this class of devices, which will serve effectively to accomplish the purpose indicated, without interfering with the ready demountability of the dash-lamp from its support.

The invention is illustrated in its preferred embodiment in the accompanying drawing, in which—

Figure 1 represents a side elevational view of a dash-lamp and the connector which carries the same, equipped with my improvement, the spring-housing employed being shown in section; Fig. 2, a sectional view of a dash, or stationary support, equipped with a connector having a socket for receiving the connector shown in Fig. 1; Fig. 3, a broken vertical sectional view showing the dash-lamp mounted in a socket carried by the dash; Fig. 4, a broken perspective view showing the portion of the connector which carries the lamp and the spring follower which is adapted to be placed thereon; and Fig. 5, a broken perspective view of a cord equipped with connectors, enabling the dash-lamp to be used as an exploring lamp.

In the construction illustrated A represents the dash, or other stationary support forming part of an automobile body; B, a connector mounted in the support A and equipped with conductors B′ adapted for connection with an electric source; C, a dash-lamp which is carried by or equipped with a connector C′, by means of which the dash-lamp may be mounted in the connector B; and D, a cord comprising electric conductors equipped with connectors D′ and D^2, the former of which is adapted to receive the connector C′, and the latter of which is adapted to be entered in the socket of the connector B.

The connector B comprises a shell or sleeve 1, one end of which is equipped with an attaching flange 2 and the other end of which is fitted with an insulation plug 3. The plug 3 is equipped with spring-contacts 4, which may be of any well-known construction. In the illustration given, the spring-contacts 4 are of the plunger type, being connected through the plug 3 with the conductors of the cord B′. The shell 1 is provided with the usual bayonet-slots 5, which have recesses or bays 5^a adapted to interlock with the studs of a connector which may be inserted.

The connector C′ of the dash-lamp, in the illustration given, comprises a shell or sleeve 6, one end of which is fitted with a holder 7 in which is detachably mounted a reflector or guard 8. In the other end of the sleeve 6 is secured an insulation plug 9 which is equipped with spring-contacts 10. The contacts 10 may be of any approved type, and are adapted to register at their rear ends with the contacts 4. The front end of the sleeve 6 is provided with bayonet slots 6^a in the usual manner. The front end of the sleeve 6 receives the shank 11 of an electric bulb 12. The shank 11 is equipped with lateral studs 13 adapted to engage the bayonet-slots 6^a. Interposed between the contacts 14 of the shank 11 and the spring-contacts 10 of the plug 9 is a rotatable switch-disk 15. The switch-disk 15 is of insulating material and is provided with contact posts 15^a which extend therethrough. The switch-disk is operated by means of a stud 16 which is equipped with a handle 16^a, the stud 16 working in lateral slots 16^b with which the sleeve 6 is provided.

No claim is made in the present application for the switch-disk 15. It may be omitted, if desired. Its purpose is to enable the circuit to be interrupted with facility between the bulb and the contacts 10, which may be accomplished by oscillating the disk.

The sleeve or shell 6 of the connector C′ is equipped with an external collar 6^b, back of which the connector C′ is encircled by a comparatively heavy coil spring 17, which is accommodated by a tubular spring-housing 18, which has an inturned flange 18^a embracing the rear end of the spring 17,

Back of the spring 17 and housing 18, the connector is equipped with lateral studs 19 which are adapted to engage the bayonet-slots 5, with which the socket of the connector B is provided.

The coller 6^b of the shell 6 may be provided by spinning the metal of the shell outwardly to form a bead, and then flattening the bead somewhat, thus providing a shoulder or abutment for the front end of the spring 17. The spring can be slipped over the rear end of the connector C', and to facilitate the assembly, it is preferred to cut or notch the flange 18^a of the spring-housing 18 at diametrically opposite points and strike the tongues 18^b rearwardly, thus providing recesses through which the lateral studs 19 will pass when the spring-housing is slipped onto the connector C'. This will be understood readily from Fig. 4. After the spring-housing is in place, the tongues 18^b are bent back, thus filling the recesses again and completing or restoring the flange 18^a. Thus, the spring follower is disposed upon the connector between the collar 6^b and the lateral studs 19, and free to slide longitudinally upon the connector. When the connector C' is entered in the socket of the connector B, the spring 17 is placed under compression, so that when the lateral studs 19 are rotated to engage the offsets 5^a of the bayonet-slots, the connectors will be so firmly interlocked as to effectually prevent the dash-lamp from rattling, even though it may be of quite heavy construction. It may be stated here that the springs of the contacts 4 of the connector B are designed to insure a continuity of the circuit under all conditions of usage, but they are ordinarily too light to prevent rattling of the dash-lamp. On the other hand, the spring 17 is advantageously located, and may be easily made of ample strength to hold the connector C' forcibly projected, with the lateral studs 19 firmly interlocked in the offsets 5^a of the bayonet-slots 5.

Inasmuch as the head portions of the bayonet-slots are apt to be disposed at varying distances from the front surface of the flange 2 of the connector B, it is preferred to make the tubular spring-housing 18 of large enough diameter to enable the spring-housing to slide over the flange or collar 6^b in the event that it is necessary to compress the spring 17 more than is shown in Fig. 3. When the parts are designed to best advantage, however, the flange 6^b serves virtually as a closure for the front end of the spring-housing 18, in the manner shown in Fig. 3, so that the device presents a neat appearance.

When desired, the dash-lamp shown in Fig. 1 may be inserted in the connector D', and the connector D^2 may be inserted in the connector B. This enables the dash-lamp to be used as an exploring lamp. It may be noted that in this case the socket portion or shell 20 of the connector D' presents a comparatively thin front edge, which will, however, abut against the inturned flange 18^a of the housing 18 on the connector C'. Thus, the connector C' is adapted to a connector of the type indicated by the reference character D' in Fig. 5.

The construction described is simple, inexpensive, and thoroughly adapted to the purpose of preventing rattling of the dash-lamp, and thus the danger of the dash-lamp being shaken from its socket is obviated.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitation should be understood therefrom, but the appended claims should be construed as broadly as permissible in view of the prior art.

What I regard as new, and desire to secure by Letters Patent is:—

1. In means of the character set forth, the combination with a support and a connector carried thereby comprising a shell provided with bayonet-slots and a plug secured in said shell equipped with contacts, of a dash-lamp equipped with a connector entered in said shell and having lateral studs engaging said bayonet-slots and having contacts engaging said first-named contacts, and a coil spring encircling said second-named connector in front of the lateral studs thereof and serving to hold said second-named connector with its studs in interlocking engagement with said bayonet-slots.

2. In means of the character set forth, the combination with a support and a connector mounted thereon having a shell provided with bayonet-slots and a plug secured therein provided with spring-contacts, and a dash-lamp equipped with a connector having a collar and lateral studs spaced some distance back of said collar and engaging said bayonet-slots and having also contacts engaging said spring-contacts, a coil spring encircling said second-named connector and disposed between said collar and said studs, and a tubular spring-housing having an inturned rear flange disposed in front of said first-named connector and engaging the rear end of said coil spring.

3. A device of the character set forth, comprising a connector provided with an external shoulder and with external lateral studs disposed some distance back of said shoulder and adapted to engage the bayonet-slots of a companion connector, and a coil spring encircling said connector and disposed between said shoulder and said studs.

4. A device of the character set forth, comprising a connector provided with an external collar and some distance back of said collar with lateral studs, a coil spring encircling said connector and disposed be-

tween said shoulder and said studs, and a tubular spring-housing slidable on said connector and having a flange disposed in front of said studs and engaging the rear end of said spring.

5. A device of the character set forth, comprising a connector provided with an external collar and some distance back of said collar with lateral studs, a coil spring encircling said connector and disposed between said shoulder and said studs, and a tubular spring-housing slidable on said connector and having a flange disposed in front of said studs and engaging the rear end of said spring, the front end of said spring-housing being of larger diameter than said collar.

6. A device of the character set forth comprising a connector provided with an external collar and equipped some distance in the rear of said collar with lateral studs, a coil spring encircling said connector and disposed between said collar and said studs, and a tubular spring-housing slidable on said connector and having a flange disposed in front of said studs and engaging the rear end of said spring, said flange being notched and provided with tongues closing said notches.

JOHN BERG.