O. E. HUNT.

WIRE CONNECTOR.

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1,209,842.

Patented Dec. 26, 1916.

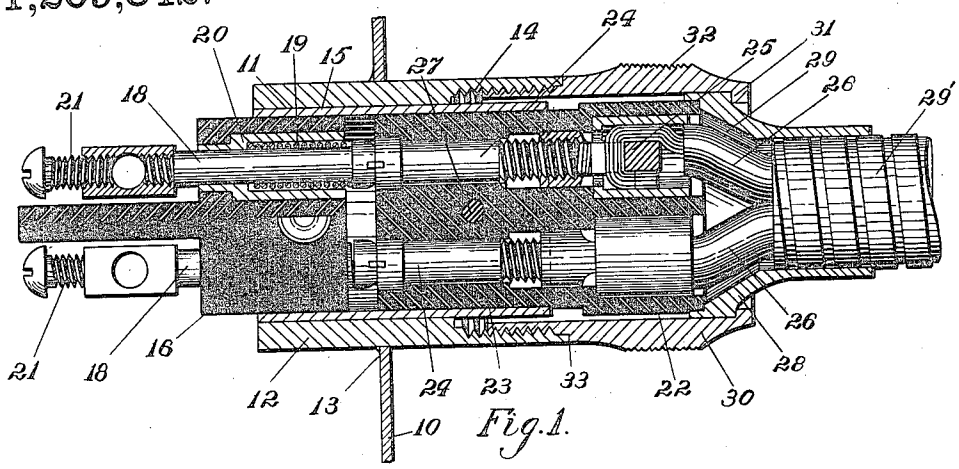


Fig. 1.

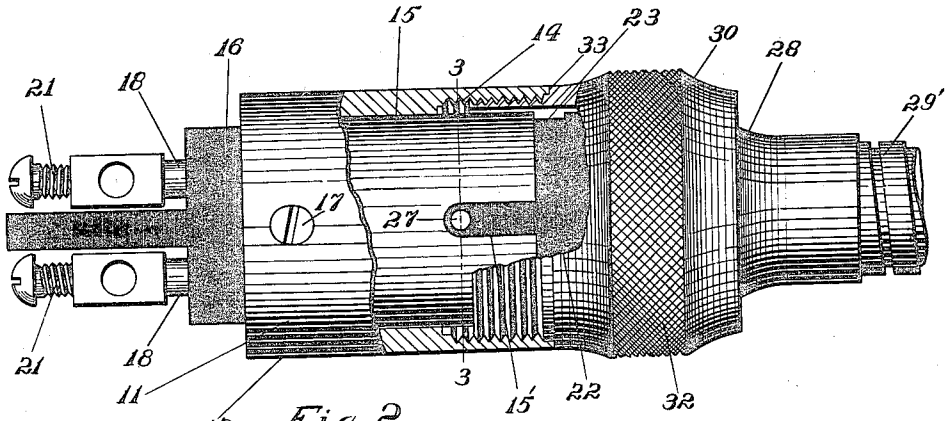


Fig. 2.

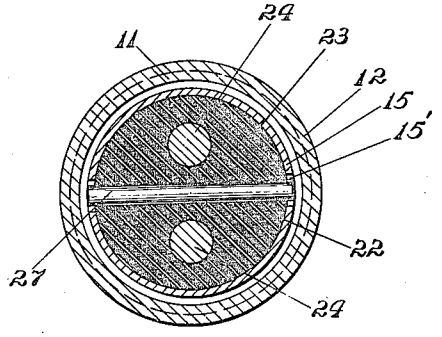


Fig. 3.

Witnesses:

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UNITED STATES PATENT OFFICE.

ORMOND E. HUNT, OF DETROIT, MICHIGAN, ASSIGNOR TO PACKARD MOTOR CAR COMPANY, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

WIRE-CONNECTOR.

1,209,842. Specification of Letters Patent. Patented Dec. 26, 1916.

Application filed February 24, 1914. Serial No. 820,603.

To all whom it may concern:

Be it known that I, ORMOND E. HUNT, a citizen of the United States, and resident of Detroit, Wayne county, State of Michigan, have invented certain new and useful Improvements in Wire-Connectors, of which the following is a specification.

This invention relates to wire connectors.

The object of the invention is to produce a wire connector of improved form, and one that is substantially water proof, is simple in construction, and neat and durable in use.

In the drawings, which form a part of this specification, Figure 1 is a longitudinal sectional view of a wire connector showing an embodiment of the invention; Fig. 2 is a view, partly in elevation and partly in section; and Fig. 3 is a transverse section on the line 3—3 of Fig. 2.

A connector made according to this invention comprises two principal members, a socket member and a plug member, one of which is preferably adapted to be secured to a support, and the other of which is adapted to be detachably connected to the first member. A guiding means is employed to insure the correct alinement of the terminals of the two members as they are placed together, and a screw threaded device is used to removably secure the members to each other.

Referring to the drawings, a support 10, which may be a lamp or other suitable casing, has an opening in which is arranged one of the members of the connector preferably the socket member 11. This member comprises an outer casing 12 of substantially cylindrical form, which is secured to the support 10 as by soldering at 13, and is threaded at its outer end as at 14. An inner casing 15 fits within the outer casing being somewhat separated therefrom at the outer threaded end and provided at that end with one or two longitudinal slots 15′, as shown. Within these casings is an insulation block 16, the casings and block being secured together in suitable manner as by the screw 17. Two spring-pressed terminals 18 are mounted in the block 16, the springs 19 surrounding the terminals and contained in tubes 20 secured in the block. The projecting ends of the terminals may be provided with wire clamping devices 21 or other desired means for conveying current from the terminals.

The plug member 22 of the connector comprises an insulation block 23 adapted to fit within the casing 15 and having coöperating terminals 24 secured in the block and provided with suitable clamping devices 25 for the wires 26. The specific construction of these clamps forms no part of the present invention. The block 23 is formed with lugs 27 on its sides, which lugs are shown in the form of a pin extending through the block, and these lugs are so arranged relative to the terminals 24 that they will properly position them relative to the terminals 18 as the lugs slide in the slots 15′.

On the outer end of the block 23 is a cap 28 formed with an opening 29 through which the wires 26 may pass and in which a flexible conduit 29′ may be secured as shown. The cap is usually separable from the block 23 being held against the end thereof by a flanged sleeve 30 which surrounds and is loose on the block 23 with its flange 31 engaging the cap as shown. The sleeve may be knurled as at 32, and is threaded at its inner end for engagement with the threads 14 on the casing 11. It is shown threaded externally so that its inner end enters the space between the inner and outer casings of the socket member, and by screwing it down tightly against the shoulder 33 a tight and substantially water-proof joint is secured. It will be seen also that the parts are so proportioned that the springs 19 of the terminals 18 are placed under compression as the sleeve 30 is screwed on thus tending to push the block 23 outwardly and hold the cap 28 against the end of the block and against the flange of the sleeve 30. This makes a tight joint at the sleeve and cap, insures proper contact of the terminals, and there is no twisting strain on the conduit 29′, which is usually of metal and is injured by twisting, as the sleeve is screwed in place to hold the plug and socket members together.

A specific embodiment of the invention has been described in detail and will be specifically claimed, but it will be understood that the invention is not limited to the exact details of construction shown, as it will be apparent that changes may be made

without departing from the spirit or scope of the invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:—

1. A wire connector comprising a socket member interiorly threaded and having terminals, a plug member adapted to fit in the socket member and having coöperating terminals, and a sleeve threaded into said socket member and removably securing the members together.

2. A wire connector comprising a socket member interiorly threaded and having spring pressed terminals, a plug member having coöperating terminals and having a cap, and a sleeve threaded into said socket member, said spring-pressed terminals tending to hold said cap against the end of said sleeve.

3. A wire connector comprising a socket member having a casing, an insulation block therein, and terminals in the block, and a plug member having an insulation block with fixed coöperating terminals, a cap over the outer end thereof, and a flange sleeve threaded into said casing and securing the members together.

4. A wire connector comprising a socket member having a casing, an insulation block therein, and spring-pressed terminals in the block, and a plug member having an insulation block with fixed coöperating terminals, a cap over the outer end thereof, and a flanged sleeve threaded into said casing and securing the plug member to the socket member, said spring-pressed terminals tending to hold the cap against the flange of the sleeve.

5. A wire connector comprising a socket member having an outer casing for attachment to a support, an inner casing fitted in the outer casing and separated therefrom adjacent one end, an insulation block secured within the casings, and terminals in the block, and a plug member having an insulation block adapted to slide in the inner casing of the socket member, terminals adapted to coöperate with the terminals of the socket member, a cap over the outer end of said insulation block and having an opening for the passage of wires, and a sleeve engaging said cap and screw threaded to said socket member in the space between the inner and outer casing thereof to secure the members together.

6. A wire connector comprising a socket member having an outer casing for attachment to a support, an inner casing fitted in the outer casing and separated therefrom adjacent one end, said inner casing having a longitudinal guiding slot, an insulation block secured within the casings, and terminals in the block, and a plug member having an insulation block adapted to slide in the inner casing of the socket member, said latter block provided with a lug or pin to slide in said guiding slot, terminals adapted to coöperate with the terminals of the socket member, a cap over the outer end of said insulation block and having an opening for the passage of wires, and a sleeve engaging said cap and screw threaded to said outer casing to secure the members together.

In testimony whereof I affix my signature in the presence of two witnesses.

ORMOND E. HUNT.

Witnesses:
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Le Roi J. Williams.