

M. F. FINKELSTEIN.
ELECTRICAL FITTING.
APPLICATION FILED APR. 4, 1913.

1,103,749.

Patented July 14, 1914.

Fig. 1.

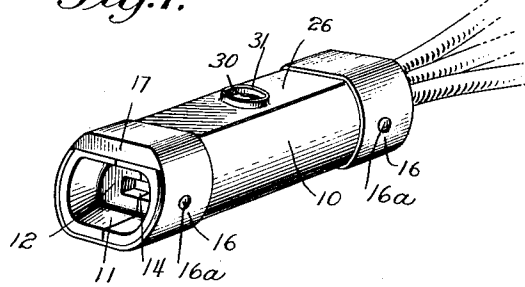


Fig. 2.

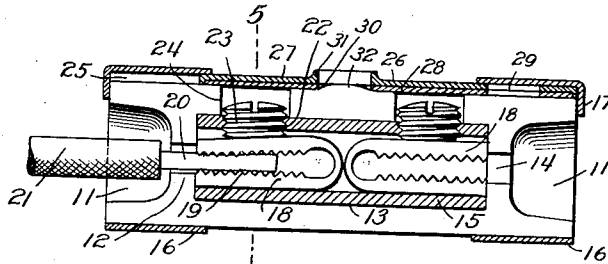


Fig. 3.

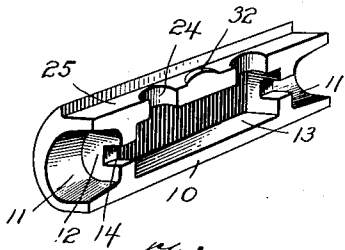
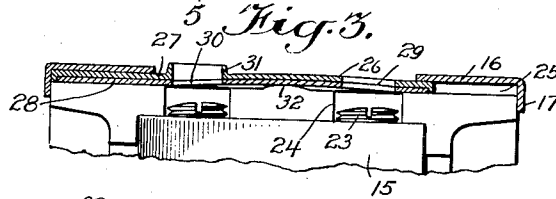


Fig. 4.

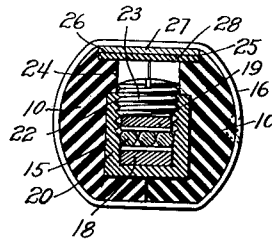


Fig. 5.

WITNESSES

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ELECTRICAL FITTING.

1,103,749.

Specification of Letters Patent.

Patented July 14, 1914.

Application filed April 4, 1913. Serial No. 758,790.

To all whom it may concern:

Be it known that I, MORRIS F. FINKELSTEIN, a citizen of the United States, and a resident of the city of New York, borough of the Bronx, in the county and State of New York, have invented a new and Improved Electrical Fitting, of which the following is a full, clear, and exact description.

This invention relates to electrical fittings, and has reference more particularly to a device of this class used for connecting the ends of wire or like conductors, and comprising an insulating body, conductor-receiving and holding means within the body, means for electrically connecting the conductors, and a guard for the last-mentioned means, movable longitudinally of the device, into an operative and into an inoperative position.

The invention also relates to the provision in a device of the class described, of conductor-securing members and a guard normally covering these members and slidable longitudinally of the body of the device to uncover the members.

The object of the invention is to provide a simple and efficient electrical fitting, particularly useful as a connector for wire or other conductors, by means of which the ends of the conductors can be securely joined both mechanically and electrically, which permits the conductors to be attached and released easily and expeditiously, which thoroughly insulates the bared ends of the conductors, in which the ends of the conductors and the members for gripping and clamping them are normally guarded and covered, in which the guard can be very readily disposed in operative and inoperative positions, which is compact in form and presents no projections or protuberances, and which can be inexpensively manufactured.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a perspective view of an embodiment of my invention; Fig. 2 is an enlarged, longitudinal section of the device;

Fig. 3 is a similar though fragmentary view, showing the guard in a different position; Fig. 4 is a perspective view of one section of the body of the device; and Fig. 5 is a transverse section on the line 5—5 of Fig. 2.

Before proceeding to a more detailed explanation of my invention it should be understood that the present form of the device constitutes an improvement upon one of the fittings disclosed in my co-pending application for Letters Patent of the United States, filed November 17, 1911, Serial No. 660,868. Certain of the features of the present device are common to that of the application referred to, particularly the means for receiving, gripping and electrically connecting the conductors. The present invention resides mainly in the guard which normally covers the conductor-connecting means; this guard is slidable longitudinally of the device to cover or uncover the set screws which clamp the conductor-gripping jaws.

Referring more particularly to the drawings I provide a fitting the body of which is formed in two sections 10, each of semi-cylindrical form. These elements 10 are fashioned from porcelain or any other suitable insulating material. The fitting has at each end a socket 11 terminating at the inner end in a partition 12 which separates it from a central chamber 13. The partitions have openings 14 therethrough. The chamber 13 is of substantially rectangular form and receives a correspondingly-shaped sleeve 15, fashioned from suitable material such as metal. The two semi-cylindrical sections and the body of the device are held together by end rings 16 of metal, indurated fiber or other material adapted for the purpose. Each end ring has a downwardly directed flange 17 engaging at an end face of the body, so that the rings cannot be moved longitudinally of the body, toward the middle thereof.

Positioned within the sleeve 15 I provide a pair of oppositely disposed spring clips 18 each having serrated jaws 19 adapted to receive the bared end 20 of a conductor 21, the end 20 being inserted through one of the openings 14 into place between the jaws. The conductor itself enters the socket 11 as is shown in Fig. 2. The sleeve 15, above each of the conductor-receiving clips has a threaded opening 22 in which is received a correspondingly threaded set-screw 23. By

screwing the latter inwardly, the gripping jaws will be clamped together against their normal resiliency. The body has a pair of openings 24 each of which registers with one of the openings 22 and receives the upper part of a screw 23. These openings also give access to the screws, so that the same can be manipulated.

Each of the body sections 10 has the upper part longitudinally cut away so that when they are assembled they form a guideway 25, extending the entire length of the body of the device and having the ends covered and closed by the rings 16. Slidably mounted within the guideway is a guard 26 consisting of a flat, elongated member of less length than the length of the guideway. In the present form of the device the guard is fashioned from two superposed plates 27 and 28, the former being the upper and having the extremities downwardly bent over the ends of the lower plate 25. The plates have near one end registering openings 29 therethrough, and near the other end openings 30, likewise registering. The upper plate about the last-mentioned opening is provided with an annular flange 31 which affords a grip for the fingers in the manipulation of the guard. When the guard is in an operative position it is so disposed that the openings 24 of the body are covered. As is shown in Fig. 3, by sliding the guard as far as it will go to the other end of the body, the openings 29 and 30 register with the openings 24, and thus give access to the screws 23.

Between the two openings 24 the body is provided with a flat projection or stud 32 adapted to engage the opening 30. It will be understood that when the stud engages the opening 30 it tends to hold the guard in position against accidental displacement. This arrangement thus permits the guard to be held in closed position. The plates will naturally spring aside as the guard is forced from one position to the other, and it will not interfere with the desired manipulation. When the guard is in an open position the plates are bowed over the stud 32 as is shown in Fig. 3.

It will be noted that the openings 29 and 30 are so proportioned that they are smaller in diameter than the diameter of each of the screws 23. Consequently, when the openings are disposed over the screws, access can be had to these to permit their manipulation by means of a screw-driver, but should they become accidentally unscrewed they cannot escape through the openings, owing to the smaller size of the latter. The movements of the guard in each direction are limited by the end flanges 17 of the ring 16.

It will be noted that the threads are carried down the side walls, the screws 23 themselves exceeding in diameter the inter-

nal width of the sleeve. The purpose of this is to give a better hold to the screw, as the thickness of the top of the sleeve is not adequate for the purpose.

To secure the end rings 16 upon the body sections of the device they are provided with indentations 16^a at which the material is forced into corresponding recesses provided for the purpose in one of the sections 10.

Having thus described my invention I claim as new and desire to secure by Letters Patent:—

1. A device of the class described comprising an insulating body, a conducting sleeve therein, conductor-receiving and holding clips within said sleeve, screws for controlling said clips, said body having a guideway extending longitudinally thereof, and a guard movably mounted in said guideway and having openings therethrough, said guard in normal position covering said screws, said body having end rings partly covering said guideway, said rings having means for limiting the movements of said guard.

2. A device of the class described comprising an insulating body, a conducting sleeve therein, conductor-receiving and holding means within said sleeve, members for controlling said last-mentioned means, and a guard slidable longitudinally of said body and normally covering said members, said guard having openings affording access to said members in a predetermined position of said guard, said guard having about one of said openings an annular projection affording means for manipulating said guard.

3. A device of the class described comprising, an insulating body having a groove thereon; conductor-receiving and -holding means in said body; means for electrically connecting the conductors; a guard for said last mentioned means, movable in said groove, whereby said last mentioned means may be exposed or covered by said guard.

4. A device of the class described comprising, an insulating body having a groove on the periphery thereof; conductor-receiving and -holding means in said body; means for electrically connecting the conductor; a guard for said last mentioned means mounted to move in said groove, whereby said last mentioned means may be uncovered or covered by said guard; and means for holding said guard in either of the positions when uncovering or covering said means for electrically connecting the conductors.

5. A device of the class described comprising an insulating body having a longitudinal groove on the periphery thereof; conductor-receiving and -holding means on said body; means for electrically connecting the conductors; a guard mounted to slide in said groove; and means on the body at the

groove for limiting the movement of said guard said guard having openings there-through whereby said means for connecting the conductors may be operated.

5 6. A device of the class described comprising, an insulating body having a longitudinal groove on the periphery thereof; a contacting sleeve in said body; conductor-receiving and -holding means within said
10 sleeve; a member for controlling said last-mentioned means; and a guard mounted to slide in said groove and normally covering said members, said guard having means
15 wherethrough said members can be operated.

7. A device of the class described comprising, an insulating body having a peripheral, longitudinal groove; a contacting sleeve in said body; conductor-receiving and
20 -holding means within said sleeve; members for controlling said last-mentioned means; and a guard mounted to slide in said groove and having openings therethrough for the operation of said members.

25 8. In a device of the class described, an insulating body having a peripheral, longitudinal

tudinal groove; a contacting sleeve in said body; conductor-receiving and -holding clips within said sleeve; screws for controlling said sleeves; and a guard mounted to
30 slide in said groove and having openings for exposing said screws, said guard in the normal position covering said screws.

9. A device of the class described comprising, an insulating body; a contacting
35 sleeve therein; conductor-receiving and -holding means within said sleeve; members for controlling said last-mentioned means; and a guard slidable longitudinally of said body and normally covering said members,
40 said guard having openings wherethrough said members are operated, said body having a projection adapted to engage one of said openings to hold said guard in a pre-determined position.

45 In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

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Witnesses:

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PHILIP D. ROLLHAUS.