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L. O'BRIEN

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BATTERY CONNECTER

Filed March 22, 1937

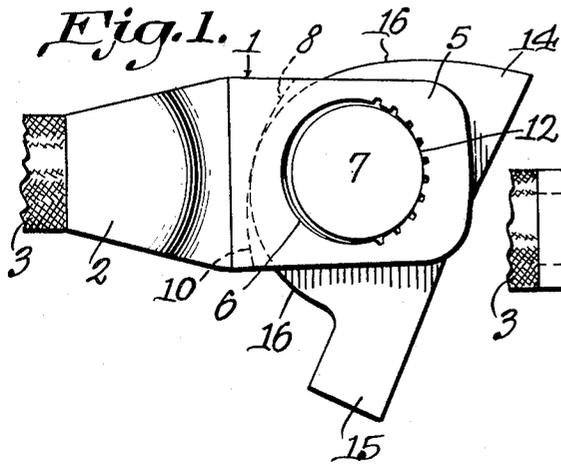


Fig. 2.

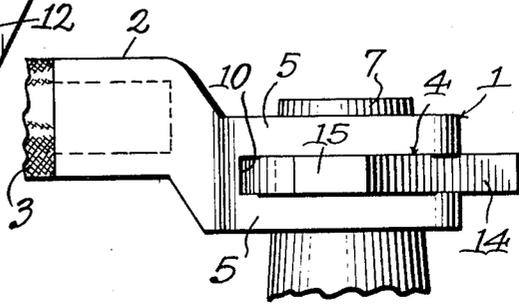


Fig. 3.

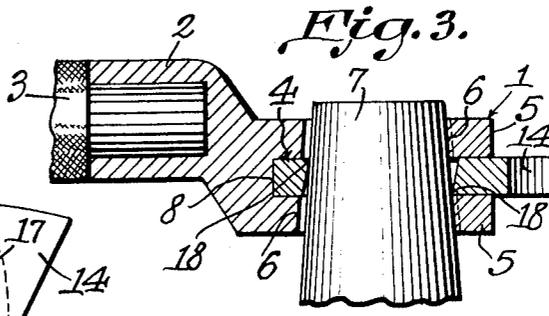


Fig. 4.

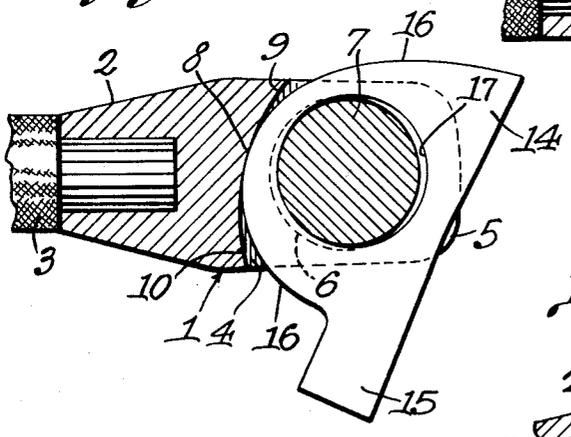


Fig. 6.

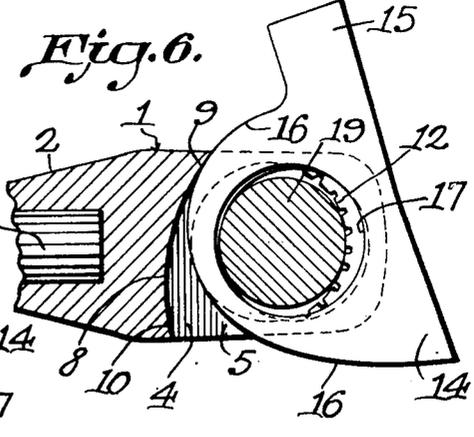
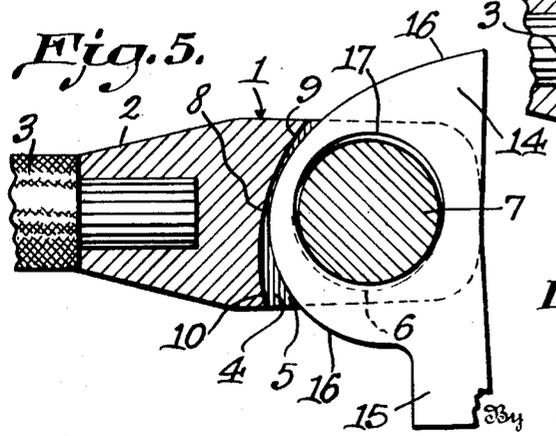


Fig. 5.



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UNITED STATES PATENT OFFICE

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BATTERY CONNECTER

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Application March 22, 1937, Serial No. 132,418

2 Claims. (Cl. 173—259)

This invention aims to provide a simple means for attaching a conductor firmly to the post of a battery, without the use of clamps, springs and the like. A very simple operation, only being necessary to effect a connection between the conductor and the battery terminal, and that connection being unusually secure. A further object of the invention is to supply a device of the class described which can be installed without the use of special tools of any kind.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawing:

Fig. 1 shows in top plan, a device constructed in accordance with the invention;

Fig. 2 is a side elevation;

Fig. 3 is a longitudinal section;

Fig. 4 is a longitudinal section showing the parts as they will appear when the battery terminal is gripped;

Fig. 5 is a longitudinal section showing the parts as they will appear before the gripping operation is begun;

Fig. 6 is a longitudinal section showing how the device may be used to grip a battery terminal of reduced diameter.

The device forming the subject matter of this application preferably is made of metal throughout, and includes a first member 1, having offset means 2 for receiving the end of a conductor 3. The means 2 need not be offset in a direction parallel to the axis of a battery terminal 7, as shown in Fig. 2, but may be arranged as desired, depending upon the direction in which the conductor 3 is to be run.

In the outer end of the first member 1, a slot 4 is formed, the slot defining parallel arms 5, provided with an opening 6 for the reception of the battery terminal 7, the opening 6 generally but not necessarily being tapered, because the battery terminal 7 ordinarily is tapered. The first member 1 is supplied with a concaved bearing surface 8, located at the inner end of the slot

4. One end portion 9 of the bearing surface 8 is nearer to the axis of the opening 6 than is the opposite end portion 10. The first member 1 is provided with teeth 12, the teeth being located on the edge of the opening 6, near to the outer end of the first member 1.

The device comprises a plate-like second member 14, shaped so as to fit closely, but for swinging movement, in the slot 4 of the first member 1, between the arms 5. The second member 14 has a projecting handle or shank 15, and the second member has a cam edge 16. There is an opening 17 in the second member 14, for the reception of the battery terminal 7. This opening 17 is formed obliquely, or otherwise than at a right angle to the outer surfaces of the second member 14, thereby defining angular biting edges 18.

The device may be operated in various ways, depending upon the taste of the user, but, generally, the second member 14 is placed in the slot 4 of the first member 1, between the arms 5, the shank 15 of the second member being so disposed, as shown in Fig. 5, that the cam 16 of the second member is out of engagement with the bearing surface 8 of the first member, the opening 17 of the second member being in registration with the opening 6 of the first member. The openings 6 and 17 receive the battery terminal 7. The second member 14 is swung slightly, by a hammer blow on the shank 15 or otherwise, until the parts are in the position of Fig. 4, the cam 16 of the second member 14 then engaging the bearing surface 8 of the first member 1, and producing relative movement between the members 1 and 14 transversely of the battery terminal 7. By this operation, the biting edges 18 of the second member 14 are caused to engage the battery terminal 7, and the teeth 12 of the first member will be caused to acquire a hold on the battery terminal.

If the device is to be used in connection with a battery terminal 19 (Fig. 6) of smaller diameter than usual, the second member 14 is turned end for end from the position of Fig. 5 thereby bringing the openings 6 and 17 less completely into registration, and, as the second member 14 is swung, the cam 16 and the part 9 of the bearing surface 8 will cooperate, and effect the gripping operation on the battery terminal 19, before the openings 6 and 17 are in full registration.

Having thus described the invention, what is claimed is:

1. In a device for fastening conductors to battery terminals, a first member having an open-

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ing for the reception of a battery terminal, and provided with a bearing surface located inwardly of the opening, and a second member having an opening disposed in approximate registration with the opening of the first member to receive a battery terminal, the axis of the opening of the second member being disposed otherwise than at a right angle to the outer surface of the second member, thereby defining, in the second member, sharpened biting edges for engagement with a battery terminal, the second member being provided with a cam engageable with the bearing surface when the second member is swung on a battery terminal, thereby to produce relative movement between the first and second members, transversely of a battery terminal, and to cause the battery terminal to be gripped in the openings and by the said sharpened biting edges of the second member, the first and second members being interengaged against relative movement longitudinally of a battery terminal.

2. In a device for fastening conductors to battery terminals, a first member having an opening for the reception of a battery terminal, and provided with a bearing surface located inwardly of the opening, and a second member having an

opening disposed in approximate registration with the opening of the first member to receive a battery terminal, the second member being provided with a cam engageable with the bearing surface when the second member is swung on a battery terminal, thereby to produce relative movement between the first and second members, transversely of a battery terminal, and to cause the battery terminal to be gripped in the openings, the bearing surface being concaved, and the cam being convexed, the relative concavity of the bearing surface and the convexity of the cam being such that when the second member projects in one direction, with the cam engaging the intermediate portion of the bearing, the openings of the first and second members will be in full registration, to receive a large sized battery terminal, the cam engaging one end of the bearing surface, when the cam is reversed end for end, and the openings of the first and second members then being partly out of registration, to receive a smaller battery terminal, the first and second members being interengaged against relative movement longitudinally of a battery terminal.

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