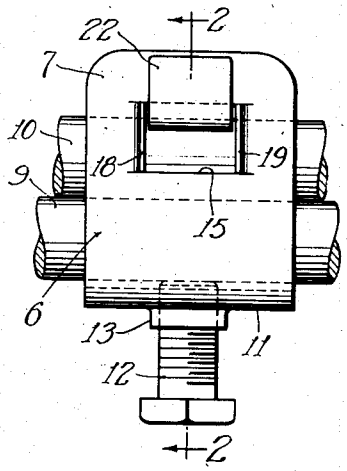
Feb. 8, 1938. W. G. FOTSCH 2,107,859

ELECTRICAL CONNECTER

Filed Jan. 27, 1936

Fig. 1



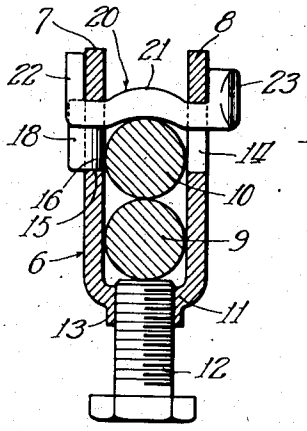


Fig. 2

Fig. 3

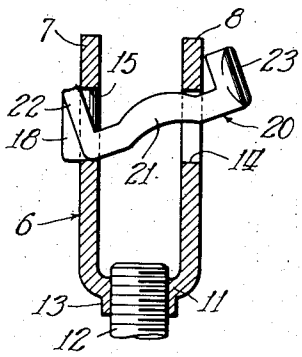


Fig. 5

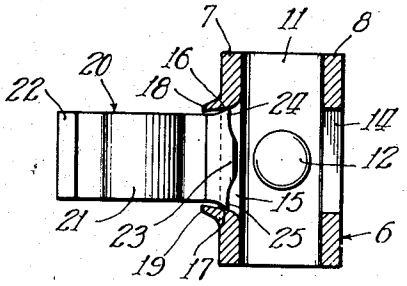
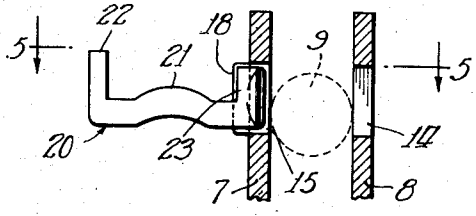


Fig. 4



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UNITED STATES PATENT OFFICE

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ELECTRICAL CONNECTER

William G. Fotsch, Chicago, Ill., assignor to Reliable Electric Co., Chicago, Ill., a corporation of Illinois

Application January 27, 1936, Serial No. 61,037

3 Claims. (Cl. 173—263)

This invention relates to electrical connecters and more particularly to clamps for securing to conductors in parallel relation to each other.

It is the principal purpose of this invention to provide a device of this character which is simple in structure and economical to manufacture and which at the same time may be readily assembled on a pair of conductors without danger of any of the parts falling off.

To the men working with electrical conductors, it is essential to have a connecter which effectively holds all of the parts in one unit. It is also highly advantageous to have a device of this character that can be readily hung upon a continuous conductor so that it will stay in place while another conductor is inserted parallel to the continuous conductor.

The present invention contemplates a structure which is capable of producing the above results.

The invention further contemplates the structure of this character consisting of a U-shaped body form by bending up a strip of sheet metal, a clamping screw, and a cross bar that is permanently attached to the U-shaped body but is movable to clear the channel of the U-shaped body for inserting a continuous wire and to tie the ends of the legs of the U-shaped body together after the wire is inserted. The top wire can then be inserted.

The objects and advantages of the invention will more clearly appear as the description proceeds in connection with the accompanying drawing. It is to be understood, however, that the drawing and description are illustrative only and are not to be taken as limiting the invention except insofar as it is limited by the claims.

In the drawing—

Fig. 1 is a view in side elevation of a connecter shown in clamping position;

Fig. 2 is a sectional view on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view similar to Fig. 2 but showing the conductors removed and the cross bar in one limiting position;

Fig. 4 is a fragmentary sectional view like Fig. 3 showing the cross bar withdrawn to clear the channel of the U-shaped body; and

Fig. 5 is a sectional view on the line 5—5 of Fig. 4.

Referring now in detail to the drawing, the improved connecter consists of a U-shaped body 6 which is formed of a fairly heavy strip stock of metal bent up into U-shape so as to provide a pair of legs 7 and 8 between which conductors such as 9 and 10 may be laid in parallel relation.

The body 6 has a base 11 in which a clamping screw 12 is screw threaded, the base being formed with a cylindrical flange 13 to give additional threads for the screw 12. The legs 7 and 8 are provided with apertures 14 and 15 which apertures are adjacent the free ends of the legs 7 and 8. These apertures are substantially rectangular and are of the same dimensions longitudinally of the legs. The aperture 15 however, is not as wide as the aperture 14 transversely of the legs and it further has the side faces at 16 and 17 directed at an angle to each other so that they approach more closely to each other toward the outside of the leg 7. The metal is also pressed out beyond the outer surface of the leg 7 as shown at 18 and 19 so as to provide means for holding a cross bar 20 from dropping completely out of the aperture 15.

The cross bar 20 is adapted to extend across the channel between the legs 7 and 8 and serve as a stop against which the conductors 9 and 10 can be pressed by the screw 12. This cross bar has an intermediate curved portion 21 and has upturned end portions 22 and 23. The end portion 22 is longer than the dimension of the openings 14 and 15 in a direction longitudinally of the legs so that it cannot pass through either openings 14 or 15.

The width of the cross bar 20 is slightly less than the smallest width between the projections 18 and 19 at the sides of the aperture 15. The end 23 of the cross bar 21 is shorter than the dimension of the apertures 14 and 15 lengthwise of the legs 7 and 8 and the width of the portion 23 is less than the width of the opening 14. However, the portion 23 is held by projections 18 and 19 after the cross bar is inserted through the openings 15 and 14. The portion 23 has ears at 24 and 25 to make the total width of the portion 23 somewhat in excess of the distance between 18 and 19. The ears 24 and 25 fit between the side faces 16 and 17 of the opening 15 to permit the cross bar to be moved to the position shown in Figs. 4 and 5 so that the upturned portion 23 is completely out of the channel between the legs 7 and 8. The ears 24 and 25 are prevented from passing out through opening 15 by bending the projections 18 and 19 toward each other after inserting the bar. This is an inexpensive way to prevent the cross bar 20 from falling out of the opening 15.

The upturned portions 22 and 23, when clamping pressure is applied to the conductors

9 and 10, are drawn inwardly against the free ends of the legs 7 and 8 by any bending that takes place in the curved portion 21 of the cross bar. Thus any tendency that the free ends of the legs 7 and 8 would have to spread due to the conductors 9 and 10 pressing against them is opposed by the portions 22 and 23.

One of the features of this connecter is the ease with which it may be installed. The cross bar 20 is so loose in the openings 14 and 15 that it will move to open position by force of gravity if the connecter is tilted to bring the leg 7 below the leg 8. The operator can then push the connecter up from below a line wire and turn it to bring leg 8 underneath which will cause the cross bar to drop into locking position.

From the above description, it will be evident that I have provided a very simple economical unit connecter.

It is believed that the construction and operation of the device will be readily understood from the foregoing description.

Having thus described one specific form of my invention, what I claim as new and desire to secure by Letters Patent is:

1. A connecter for electrical conductors comprising a U-shaped body having aligned apertures in the legs thereof, a cross bar slidable transversely of the body in said apertures and having end portions turned toward the free ends of said legs, one of said end portions being slidable through its aperture, and into the other aperture, means cooperating with said end portion to prevent its passing through said other aperture, and means adjustably mounted in the base of said body to press conductors between said legs against said cross bar, said cooperating means comprising projections at the opposite sides of said other aperture extending outwardly from the leg and toward each other.

2. A connecter for electrical conductors comprising a strip of metal bent into substantially U-shape and having aligned apertures in the legs thereof adjacent the free ends of said legs, one of said apertures being wider transversely of the leg than the other, a cross bar mounted in said apertures and having end portions turned parallel to said legs, one of said end portions being of greater dimension than its adjacent aperture, the other of said end portions being movable through its adjacent aperture and into the other aperture, the leg in which said other aperture is located having means thereon to prevent said last named end portion from passing out through said other aperture whereby the cross bar is permanently attached to the U-shaped strip.

3. A connecter for electrical conductors comprising a U-shaped body having aligned apertures in the legs, a cross bar having end portions engageable with the outer surfaces of said leg to prevent their spreading and having an intermediate portion extending through said apertures to provide a surface against which conductors extending through said body may be clamped, means adjustably mounted in the base of said body to clamp conductors against said cross bar, one of said end portions being too long to pass through its adjacent aperture, the other of said end portions being of smaller dimensions than its adjacent aperture, but being too wide to pass out of the aperture adjacent the other end portion.

WILLIAM G. FOTSCH.