Feb. 12, 1935. L. E. BLOOMQUIST 1,991,075

CONNECTER

Filed March 9, 1932

Fig. 1.

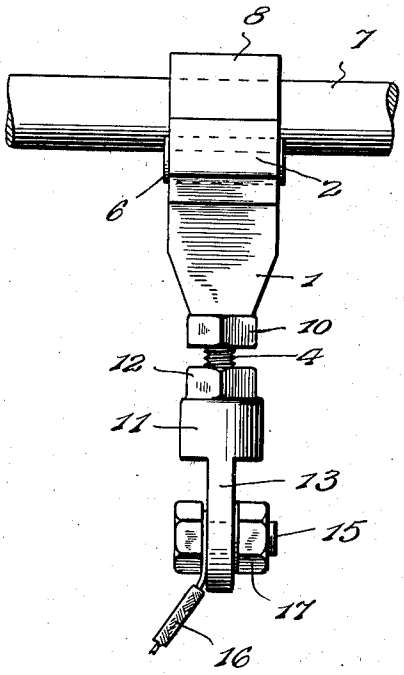


Fig. 2.

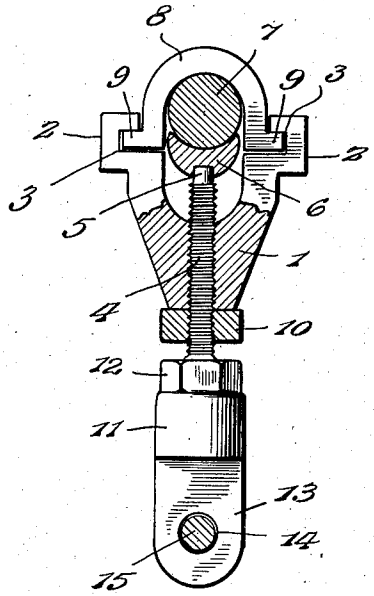


Fig. 3.

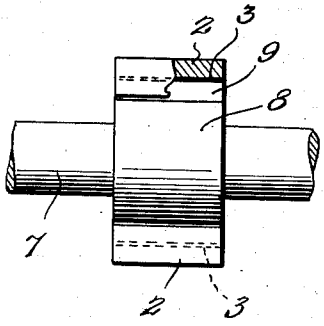
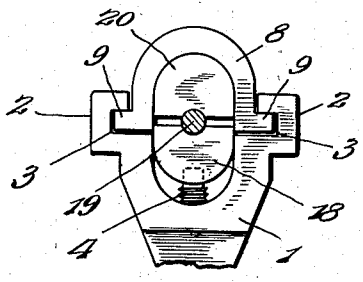


Fig. 4.



Inventor

L. E. Bloomquist.

By Lacey & Lacey, Attorneys

Patented Feb. 12, 1935 1,991,075

UNITED STATES PATENT OFFICE

1,991,075

CONNECTER

Leonard E. Bloomquist, Newberry, Mich.

Application March 9, 1932, Serial No. 597,786

1 Claim. (Cl. 173—273)

This invention relates to connecters or couplings by the use of which a main electrical conductor may be tapped to connect branch lines thereto or the operation of various electrical devices may be tested. The object of the invention is to provide a simple device of inexpensive construction which may be easily and quickly applied to a main line conductor and to which branch conductors may be securely attached and which will effect firm mechanical coupling as well as good electrical contact. The invention is illustrated in the accompanying drawing and will be hereinafter fully set forth and defined.

In the drawing, Figure 1 is a side elevation of a connecter embodying the present invention,

Fig. 2 is a view of the device taken at a right angle to the viewpoint in Fig. 1 and showing parts in section,

Fig. 3 is a top plan view partly broken away and in section,

Fig. 4 is a detail elevation showing a slight modification.

In carrying out the invention, there is provided a yoke or V-shaped body 1 the side arms of which are provided with offset flanges 2 at their upper ends and have longitudinal grooves 3 formed in the inner opposed faces of said flanges. A central threaded bore or opening is formed through the body or yoke 1 and a screw or threaded shank 4 is inserted through and engaged in said opening, as clearly shown in Fig. 2, the upper extremity of this screw or threaded shank being smooth, as indicated at 5. A clamping jaw or movable contact 6 is disposed between the upper extremities of the sides of the yoke or body 1 and is provided in its underside with a socket to receive the upper threadless extremity 5 of the threaded shank. This movable contact or clamping jaw may be of any desired configuration to conform to the conductor or bus bar with which it is to be engaged and in the present drawing is shown as having a concave upper face or seat to fit onto a main conductor 7 of circular cross section. A cap 8 is also provided to extend over the conductor 7 and this cap is provided, on its sides, with longitudinal flanges 9 adapted to engage in the grooves 3 of the body, as will be understood. The cap is disposed over the conductor and the body is slid endwise along the cap so that the flanges of the cap will engage in the grooves of the body and the body will be thereby suspended upon the cap, as will be understood upon reference to Fig. 2. The threaded shank or screw 4 is then turned upwardly so that the contact or jaw 6 will be caused to bear against the underside of the conductor and clamp it against the cap, this action causing the flanges 9 and the overhanging portions of the flanges 2 to come into binding contact so that the parts will be firmly held together. A lock nut 10 is fitted upon the threaded shank 4 below the body and is adapted to be turned home against the lower end of the body so as to lock the shank in the conductor-clamping position and thereby resist any tendency of the parts to accidentally loosen.

The threaded shank 4 is provided with an enlarged head 11 below the yoke or body 1 and this head is provided with flat faces 12 whereby it may be easily engaged by a wrench or other turning tool when the shank is to be turned home. Below the head, a lug 13 extends therefrom and this lug is provided with an opening 14 therethrough to receive the shank of a bolt 15, as shown and as will be understood. A branch conductor, indicated at 16, is engaged around the bolt 15, between the head of the same and the side of the lug 13, and a nut 17 fitted upon the bolt is turned home against the lug so that the terminal will be securely clamped between the lug and the head of the bolt. It will thus be seen that a branch conductor may be very quickly and easily connected with a main line conductor so as to establish a side circuit or to test out electrical apparatus. A plurality of branch conductors may be attached to the lug 13, if desired, and as many as desired may be so attached provided the total capacity of all the branch conductors does not exceed the capacity of the lug and the screw threaded shank. All the parts are of metal so that good electrical contacts will be made and there will be no obstruction to the flow of the current. It will also be noted that no bolts or screws are needed to secure the cap to the body, and the threaded shank 4 with its lock nut 10 provides the entire fastening device so that a multiplicity of bolts or screws is not required.

In Figs. 1, 2 and 3, the device is shown adapted for attachment to a large main line conductor. It may be easily adapted to smaller conductors and to conductors of any size or outline. In Fig. 4 there is illustrated a lower clamping jaw 18 which occupies the same position as the clamping contact 6 previously described, but is of a slightly different contour, presenting a small groove in its upper face to accommodate a small conductor 19, and, above the conductor 19, a mating clamping block 20 is inserted to fit within the cap 8 so that a very firm clamping of the conductor will be attained.

The device is very simple in construction and may be easily and quickly applied to any conductor.

Having thus described the invention, I claim,

A device of the character described comprising a yoke adapted to span a conductor and having its arms terminating in enlarged end portions slotted from their inner side faces to define flanges forming seats, an inverted U-shaped cap having outstanding feet at lower ends of its arms and adapted to span the conductor in opposed relation to the yoke with its feet engaging the seats of the yoke and overlapped by the flanges thereof, a threaded shank engaged through a threaded opening formed in the yoke, a block swiveled to the inner end of said shank to engage the conductor in opposed relation to the cap and firmly grip the conductor when the shank is rotated in a tightening direction, an enlarged head at the outer end of said shank formed with wrench engaging faces, a locking nut upon the shank between the head and yoke for engaging the yoke and securing the shank in an adjusted position, a flat sided lug extending from the head in alinement with the shank, and a bolt fitted through said lug for securing a branch conductor against a flat side face of the lug.

LEONARD E. BLOOMQUIST. [L. S.]