Aug. 13, 1929. C. W. DOHERTY 1,724,753

CABLE TERMINAL CONNECTER

Filed Aug. 9, 1927

Fig. 1.

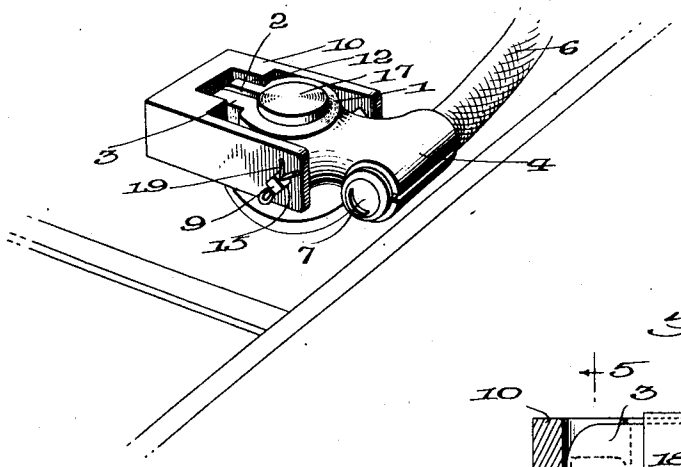


Fig. 2.

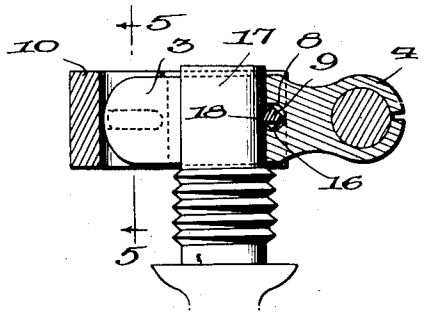


Fig. 3.

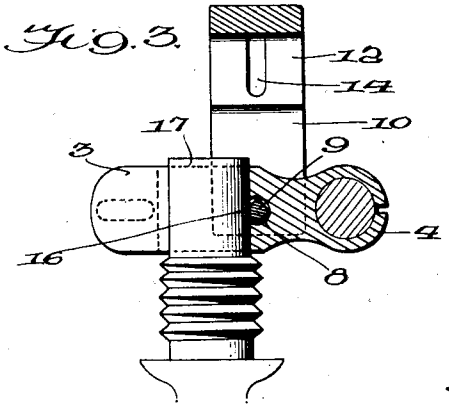


Fig. 4

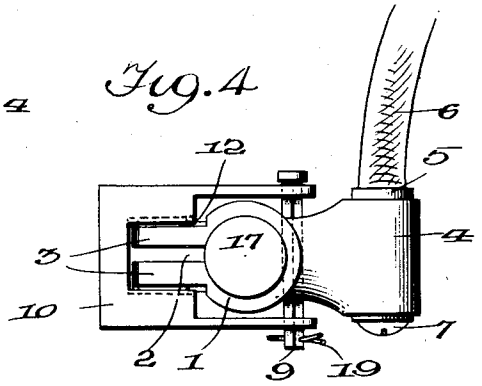
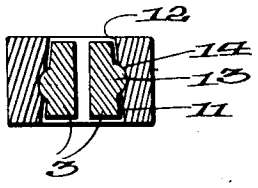


Fig. 5.



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UNITED STATES PATENT OFFICE.

CLARK WHITE DOHERTY, OF PHOENIX, ARIZONA.

CABLE TERMINAL CONNECTER.

Application filed August 9, 1927. Serial No. 211,789.

This invention relates to cable terminal connecters and has for its object to provide a device of this type which can be quickly attached and detached.

The principal use of cable terminal connecters of the class represented by my invention is for connecting cables to the terminals of storage batteries. The removal of the ordinary bolt and nut type of connecter now in use frequently requires considerable time due to corrosion and the rounding of the nut and bolt head. This difficulty is eliminated by my invention which combines with a simple wedging clamp a locking pin which digs into the battery terminal and insures a positive contact.

One illustrative embodiment of the invention is shown in the accompanying drawing in which

Fig. 1 is a perspective view of the device applied to a battery terminal,

Fig. 2 is a vertical section with the clamp in locked position,

Fig. 3 is a vertical section with the clamp applied to a battery terminal but in unlocked position,

Fig. 4 is a plan view, and

Fig. 5 is a vertical section on the line 5—5 of Fig. 2.

A sleeve 1 is split at 2 and has two substantially parallel arms 3 projecting outward at each side of the split. A second sleeve 4 is joined to the sleeve 1 at the side opposite the split 2. The sleeve 4 is adapted to receive the terminal 5 of a cable 6 which is secured in place by a screw 7. A hole 8 is bored transversely in the side of sleeve 1 opposite split 2 to provide a journal for a pin 9 which serves as a pivot for a clamping yoke 10. As can be seen in Fig. 5 the outer faces 11 of arms 3 are oblique with respect to the axis of sleeve 1 and the yoke 10 is provided with corresponding wedge faces 12 which press the arms 3 toward each other when the yoke is forced home. The sleeve 1 is made of springy material and the arms 3 have tongues 13 fitting into grooves 14 to hold the yoke in wedging position.

The pin 9 is preferably square and the holes 15 in the arms of yoke 10 which receive the ends of pin 9 are likewise square so that the pin rotates with the yoke. The hole 8 is so bored that for some distance on each side of its midpoint it opens into the interior of sleeve 1, the result being that a portion of pin 9 extends beyond the inner circumference of sleeve 1. However the inwardly directed side of pin 9, when yoke 10 is in the position shown in Fig. 3, is recessed as shown at 16 to conform to the inner circumference of the sleeve.

The operation is as follows: The yoke being in the position illustrated in Fig. 3 the sleeve 1 is slipped over a battery terminal 17. This is easily done since the sleeve is slightly expanded and the recess 16 registers with the inner circumference of sleeve 1. The yoke is now swung down and wedges the arms 3 together clamping the sleeve on the terminal. The tongues 13 snap into grooves 14 and hold the yoke in wedging position. Meanwhile the pin 9 has rotated so that its shoulder 18 has dug into the soft lead of the battery terminal and formed a positive contact as well as a secure lock.

When the connecter is to be removed from the battery terminal, after the parts have become corroded and stuck together, the connecter can be easily loosened from the battery terminal by inserting a screw driver or any convenient tool in the slit 2 and prying the arms 3 apart. While the pin 9 serves as a positive lock when the yoke is swung down, when the yoke is in the position shown in Fig. 3 the pin 9 offers no obstruction within the sleeve 1 which can therefore be applied to the battery terminals of various sizes by spreading the arms 3 apart and thus expanding the sleeve.

The pin 9 is held in the yoke by a cotter 19 and can be replaced by a new one if it becomes too badly corroded. It is to be understood that my invention is not confined to the use of a square pin as a pivot for the yoke but covers any shape of pin which can be nonrotatably secured to the yoke and will permit the entrance of a battery terminal into the sleeve in one position of the yoke, but which is provided with a shoulder for digging into the battery terminal in another position of the yoke.

Having described my invention, I claim:

1. A device of the class described comprising a split sleeve, a pair of substantially parallel arms projecting from said sleeve on opposite sides of said split, a yoke pivoted to said sleeve on the side opposite to said split and adapted to swing over said sleeve, wedge faces on said yoke adapted to wedge said arms toward each other, and means for

securing a cable terminal to said device.

2. A device of the class described comprising a split sleeve, a pair of substantially parallel arms projecting from said sleeve on opposite sides of said split, a yoke pivoted to said sleeve on the side opposite said split and adapted to swing over said sleeve, cooperating wedge faces on said arms and said yoke whereby said arms may be wedged toward each other, and means for securing a cable terminal to said device.

3. A device in accordance with claim 1 in which said wedge faces and arms are provided with cooperating tongues and grooves for holding the same in wedged position, said arms being of springy material.

4. A device of the class described comprising a split sleeve, a pair of substantially parallel arms projecting from said sleeve on opposite sides of said split, a yoke pivoted to said sleeve on the side opposite said split and adapted to swing over said sleeve, wedge faces on said yoke adapted to wedge said arms toward each other, the pivot of said yoke being secured thereto so as to rotate therewith and having a portion thereof exposed through the inner surface of said sleeve, a shoulder on said pivot projecting inwardly beyond the inner circumference of said sleeve when said yoke is in wedging position, and means for securing a cable terminal to said device.

5. A device of the class described comprising a split sleeve, a pair of substantially parallel arms projecting from said sleeve on opposite sides of said split, a pin of polygonal cross section journalled transversely in said sleeve at the side opposite to said split, a portion of said pin being exposed through the inner surface of said sleeve, a yoke having holes in its arms adapted to nonrotatably receive the ends of said pin, said yoke being adapted to swing over said sleeve, wedge faces on said yoke adapted to wedge said arms toward each other, one of the corners of said pin extending inwardly beyond the inner circumference of said sleeve when said yoke is in wedging position, a recess in said pin conforming to the inner circumference of said sleeve when said yoke is in another position, and means for securing a cable terminal to said device.

6. A device of the class described comprising a split sleeve, a pair of substantially parallel arms projecting from said sleeve on opposite sides of said split, a second sleeve joined to the first at the side opposite to said split and adapted to receive a cable terminal, and a yoke pivoted at the junction of said sleeves and adapted to swing over said first mentioned sleeve, said yoke having wedge faces adapted to press said arms toward each other.

The foregoing specification signed at Phoenix, Arizona, this second day of July, 1927.

CLARK WHITE DOHERTY.