June 14, 1932. H. P. CHANDLER 1,863,039

CLAMP

Filed May 14, 1930

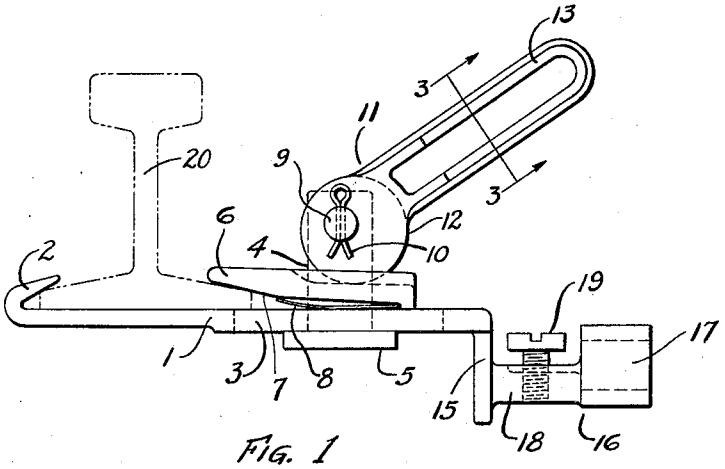


FIG. 1

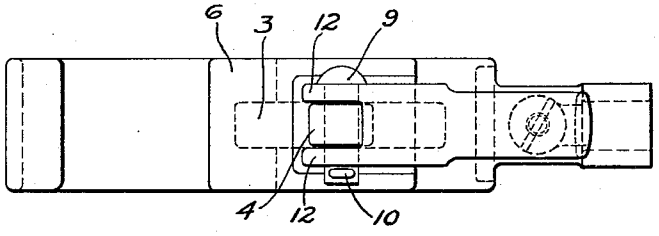


FIG. 2

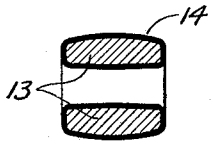


FIG. 3

WITNESS:
V. P. Sparks

By

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Patented June 14, 1932 1,863,039

UNITED STATES PATENT OFFICE

HOMER P. CHANDLER, OF MANSFIELD, OHIO, ASSIGNOR TO THE OHIO BRASS COMPANY, OF MANSFIELD, OHIO, A CORPORATION OF NEW JERSEY

CLAMP

Application filed May 14, 1930. Serial No. 452,361.

My invention relates to a clamping device for connecting cables to conductors and particularly to grounded conductors of the rail type.

The object of my invention is to provide a terminal clamp for a cable which is adjustable for application to conductors of various sizes and which may be applied to or removed from the conductor quickly and easily.

My invention resides in the new and novel construction, combination and relation of the various parts hereinafter described and shown in the drawing accompanying this specification.

In the drawing:—

Fig. 1 is a side view of my invention shown as applied to the base of the rail.

Fig. 2 is a top of my invention removed from the rail.

Fig. 3 is a sectional view of the handle portion taken on the line 3—3 of Fig. 1.

In the preferred embodiment of my invention I employ an elongated body 1 having its end 2 turned back upon itself to form a hook to receive one side of the conductor.

The member 1 is formed with a slot 3 in which is positioned a stud 4 having a headed portion 5. The stud 4 is movable in the slot 3. The stud 4 is a rectangular cross section which prevents its rotation in the slot 3.

Mounted upon the stud 4 is a clamping member 6 having a tapered face 7 to engage the conductor opposite that of the portion 2. The stud 4 passes through a rectangular shaped opening in the clamp 6 and is therefore prevented from rotating relative to the clamping member. From this it will be evident that the parts 1, 4 and 6 are prevented from rotating relative to each other, but that the stud 4 may move longitudinal of the member 1 and with it the clamping member 6 and also the clamping member 6 may move longitudinally of the stud 4.

Interposed between the body member 1 and the clamping member 6 is a flat leaf spring 8 which tends to move the clamping member 6 away from the member 1 when the clamping member 6 is released.

Pivotally mounted upon the stud 4 by means of a rivet 9 having a cotter 10, is an operating handle 11 having cam portions 12 and the handle portion 13. The handle portion 13 may be either insulated or bare and if insulated, one method of accomplishing this result is shown in section in Fig. 3 in which the metal portion which would be gripped by the hand is encased in an insulating portion 14.

Secured to one end of the member 1 is a downwardly projecting lug 15 from which projects a cable connecting portion 16 having a tubular portion 17 which is connected to the portion 15 by the lug 18. The lug 18 is provided with a screw 19 having an enlarged head. The cable, usually insulated, is inserted in the tubular portion 17 and the copper portion is wrapped around the screw 19 between the head and the portion 18 where it is held in place by the compression of the screw.

The operation of my invention is simple and quite obvious in that to apply it to a conductor such as a rail 20 it is only necessary to rotate the handle upon the pin 9 to release the clamp 6 and simultaneously draw the handle backward and with it the clamp and stud portions. This will space the members 2 and 6 apart to their maximum extent and the spring 8 will tend to hold the clamp 6 spaced from the body 1. The device is then hooked upon the rail with the portion 2 in position and the handle 11 is then pushed forward and with it the clamping member 6 until it overhangs the flange of the rail the proper distance and then the handle 11 is rotated upon the pin 9 and the portions 12 will force the clamping member 6 against the rail thus holding the device firmly in position.

Modifications will be quite evident to those skilled in the art and I therefore wish to be limited only by my claims.

I claim:—

1. A clamp comprising a body member having a turned back end to form a hook to engage an edge of a flange; an elongated slot in the body, a transverse stud slidably mounted in the slot and held against rotation, a clamping member mounted on the stud against rotation but movable longitudinally of the stud, a projecting portion on the clamp-

ing member having a sloping face to engage and grip another edge of the flange and force it against the body member, an insulated handle pivotally mounted on the stud and having a cam shaped portion to engage the clamping member to force the clamping member into engagement with the flange and hold the engagement and means on the body member to receive and hold a conductor.

2. A clamping device comprising a body member having a hook at one end to engage the upper and lower surfaces of a flange, an elongated slot in the body, a transversely disposed stud sildably mounted in the slot, a clamping member slidably mounted on the stud and having a portion to engage the flange, a handle pivotally mounted on the stud and having a cam shaped portion to engage the clamping member and force it into and hold it in engagement with the flange and force the flange into engagement with the body and means on the body to receive and hold a conductor.

3. A clamping device comprising an elongated body member having a hook shaped part to engage an edge of a flange at spaced points and a slot and means to receive and hold a conductor, a stud mounted in the slot against relative rotation, a clamping member slidably mounted on the stud and having a portion to engage another edge of the flange and a handle pivotally mounted on the stud to engage the clamping member to move it into engagement with the flange and press the body against the flange.

4. A clamping device comprising an elongated body having a hook shaped part to engage an edge of a flange, a transversely disposed stud projecting from the body, a clamping member mounted on the stud and movable transversely and longitudinally of the body and having a part to engage the flange, a handle movable in a plane parallel to the axis of the stud to engage the clamping member to move it and the body into clamping engagement with the flange to hold the device in place and means to clamp a cable to the device.

5. A clamping device comprising a body member having a part to engage a flange, a stud projecting from the body, a clamping member mounted on the stud against rotation and movable longitudinally and transversely of the stud and having a part to engage the flange, a handle on the stud to move into engagement with the clamping member to move the clamping member into engagement with the flange and hold the device in place on the flange, yielding means biased to move the clamping member away from the flange and means to connect a cable to the device.

6. A clamping device comprising a body member having a fixed part to engage a flange, an elongated slot in the body, a stud slidably mounted in the slot, a clamping member slidably mounted on the stud, a pivotally mounted handle upon the stud to engage the clamping member to move the clamping member into engagement with the flange and hold the device in position and means to connect a cable to the device, the stud, clamping member and handle movable as a unit longitudinally of the body to adjust for various flange widths and the clamping member movable transversely of the body to clamp the flange to the body.

7. A clamping device comprising a body having means to receive an edge of a flange, an elongated slot in said body spaced from said means, a member slidably mounted in the slot, means mounted on the member to be moved into clamping engagement with another edge of the flange, spring means tending to move the clamping means away from the flange and means to electrically connect a conductor to the device.

In testimony whereof I affix my signature.

HOMER P. CHANDLER.