Oct. 30, 1934.

P. P. PIPES

1,978,867

POTHEAD

Filed March 2, 1933

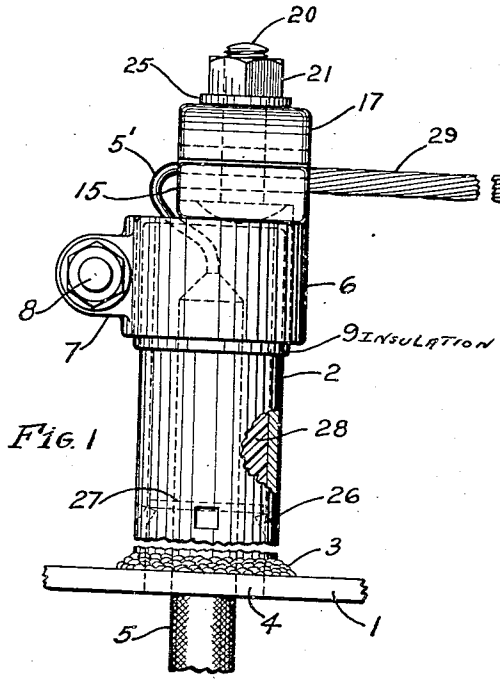


FIG. 1

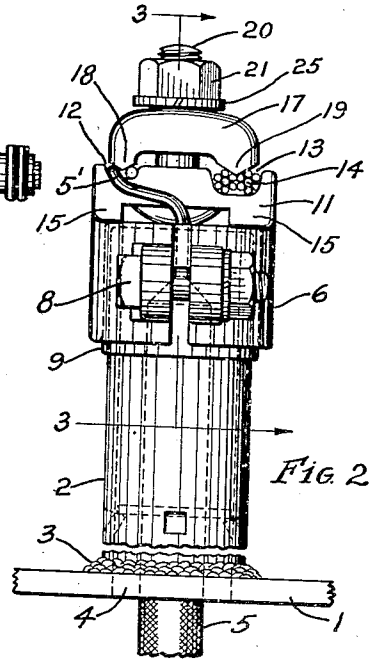


FIG. 2

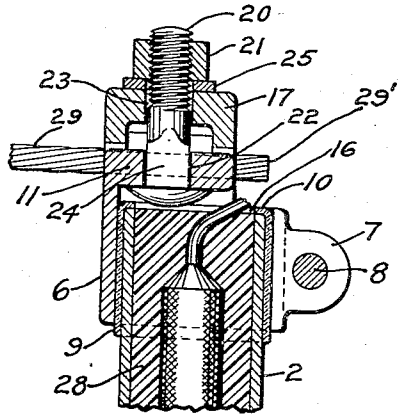


FIG. 4

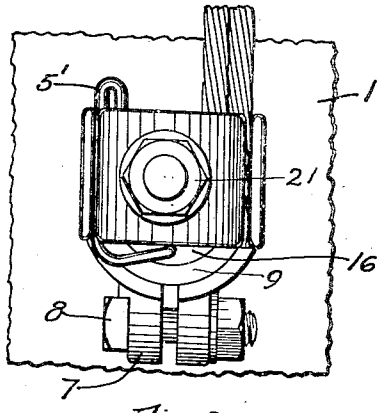


FIG. 3

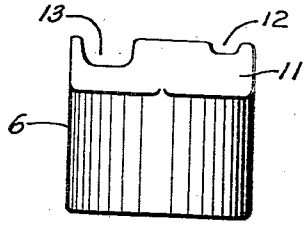


FIG. 5

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UNITED STATES PATENT OFFICE

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POTHEAD

Pliny P. Pipes, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey

Application March 2, 1933, Serial No. 659,290

4 Claims. (Cl. 247—1)

My invention relates to potheads or terminals for use with cables, wires, and other conductors which are placed under ground and the ends thereof brought above ground for connection to track rails, or other conductors. My invention is particularly adapted for connecting underground signal wires to track rails.

The object of my invention is to provide a simple, inexpensive device and one in which the cables or wires may be quickly and efficiently connected thereto.

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

In the drawing:—

Fig. 1 is a side view in elevation of my invention.

Fig. 2 is a side view in elevation of Fig. 1 at a different angle.

Fig 3 is a top view of Fig. 1.

Fig. 4 is a sectional view of the upper portion of my invention taken on the line 3—3 of Fig. 2.

Fig. 5 is a side view of the cap taken at still a different angle from that shown in Figs. 1 and 2.

It is frequently required to bury a portion of the cable in the ground and bring the end thereof above ground and connect it to another conductor or to a track rail, as in the case of a signal system and in doing so it is desirable to provide a simple, inexpensive device and one in which the connections may be easily inspected and made or broken at will.

In the preferred embodiment of my invention I provide a base plate 1 which may be of any desired size and is intended to be positioned in the earth below the frost or freezing line to safely anchor the pothead permanently in position.

Secured to the base 1 is a hollow standard 2 of required length to bring the upper end of the device to a predetermined height above ground. The lower end of the standard may be secured to the base 1 in any suitable manner as by welding metal 3 fused to the parts 1 and 2. The standard 2 is positioned over an opening 4 in the plate 1 through which the insulated or parkway cable 5 may be led. Mounted on the upper end of the standard 2 is a cap 6 which is split a'ong one side and provided with projecting lugs 7 which may be drawn together by means of the clamping bolt 8.

Interposed between the standard 2 and the cap 6 is an insulating sleeve or bushing 9 which has an inwardly turned flange 10 at its upper end to overlap the upper end of the standard 2.

Forming an integral part of the cap 6 is the head 11 provided with the grooves 12 and 13 to receive the underground or parkway cable 5 and track or other cable 14 respectively.

The head portion has a part 15 which projects inwardly sufficiently to overhang the upper edge of the standard 2 and rest upon the insulating flange 10 if desired, or the head may be raised above this point if desired and clamped into position by means of the bolt 8. The head portion 11 does not completely overhang the entire upper edge of the standard 2 thus leaving an opening 16 through which the cable 5 may be brought.

Mounted upon the head portion of the cap is a clamping member 17 having lugs 18 and 19 respectively for entering the grooves 12 and 13 respectively to engage the cables reposing therein. The contact edges of the lugs 18 and 19 are provided with a pair of faces angularly disposed to each other and which are found to most efficiently grip the cables 5 and 14.

The clamping member 17 is held in position by means of the bolt 20 and nut 21 passing through an opening 22 in the head portion 11 and through the opening 23 in the clamping member 17. The bolt 20 is preferably of the carriage bolt type having a square shank 24 fitting loosely into the squared opening 22, thus preventing its rotation when the nut 21 is tightened or loosened. The head of the bolt 20 overhangs the end of the standard thus preventing the bolt from dropping into the standard when the nut 21 is removed. This is particularly valuable in installing the device. A lock washer 25 is used to prevent unintentional loosening of the nut 21.

The standard 2 has inwardly pressed lugs 26 which form supports for a ring member 27 preferably of insulating material as, for instance, fibre, and which has an opening therein of sufficient size to permit the passage of the cable 5.

The device, after being positioned with the cable 5 in place, is protected from moisture entering therein by filling the interior of the standard 2 with an insulating compound 28, such as bitumen or asphaltum in the molten state and which will harden when cold. The entire standard or only a portion of it may be filled with the insulating compound and the washer 27 tends to support the same and assists materially in the filling. The standard may be filled after the device is completely installed by pouring the compound through the opening 16. The cable 5 has a considerable portion

of its end removed of insulation and the wire 5' doubled back upon itself and positioned in the groove 12 as shown in Figs. 2 and 3.

In the drawing I have shown a bond connection adapted to have its free end secured to a rail and which usually comprises a pair of cables 29 having a metal sleeve 30 at the free end for attachment to the rail and the other end positioned in the groove 13. Having positioned the wires, the clamping member 17 is placed in position and the nut 21 tightened thus clamping the cables in position and effectively connecting them electrically.

If desired, the extreme end of the wire 5' which is doubled back upon itself may be wound about the end of the projecting end 29' of the cable 29 shown in Fig. 4 and soldered thereto.

Modifications may be made in my invention which will be evident to those skilled in the art and I wish to be limited only by my claims.

I claim:—

1. A cable outlet comprising in combination a standard through which a cable may pass, a one-piece head removably secured to the upper end of the standard and means to insulate the head from the standard, the head comprising a split sleeve to receive the end of the standard and the insulating means, and means to draw the sleeve into clamping relation to the standard and insulating means, a projecting portion integrally formed with the sleeve and extending over a portion only of the end of the standard and forming an opening between the projecting portion and the standard and through which the cable may be brought from within the standard, means on the projecting portion to receive a plurality of conductors, a separately formed clamping member to engage the conductors and holding means passing through registering openings in the projecting portion and clamping member to draw the said portion and member together and simultaneously grip the said conductors.

2. A cable outlet comprising in combination an elongated hollow standard having a passage therethrough for a cable, an insulating sleeve at the upper end of the standard encircling the standard, a cable head secured to the standard with the insulating sleeve interposed and means to adjustably secure the head in position, means on the head to receive the conductor of the cable, means to permit bringing the cable end out between the head and standard, clamping means to engage the conductor and headed means to draw the clamping means towards the head and securely clamp and hold the conductor in place, the head of the said headed means being positioned within the cable head and arranged to overlap the end of the standard to prevent the headed means dropping into the standard.

3. A cable outlet comprising in combination, a hollow standard through which a cable may pass; a sleeve of insulating material surrounding the end of the standard for a distance back from the end face and a flange on the sleeve projecting inwardly and overlapping and resting upon the end face of the standard; a one-piece head mounted on the sleeve comprising a split collar surrounding the sleeve and having means to draw the collar into gripping engagement with the sleeve; a projecting portion extending above the end of the standard and united with the collar for a portion only of the circumference of the collar and a second projecting portion from said first projecting portion at right angles to the longitudinal axis of the collar and extending over the end of the standard for a portion of its area whereby a space is formed between the second projecting portion and the end of the standard through which the cable may be passed and the standard filled with a compound; an opening through the second said projecting portion; a separately formed clamping member mounted on the second projecting portion and arranged to clamp a pair of conductors to the head, an opening through the clamping member and a securing means through the said openings to effect the clamping of the conductors.

4. A cable outlet head comprising a body having a split sleeve portion, means to change the size of the opening through the sleeve to clamp it to a standard, an inwardly projecting portion from one end of the sleeve portion and extending over a part of the sleeve opening and at right angles to the wall of the sleeve portion and leaving a space between the projecting portion and the adjacent end of the sleeve portion, an opening through the projecting portion to slidably receive a securing member and a groove in the exposed face of the projecting portion to receive a conductor.

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