Dec. 26, 1939. H. G. ADDIE 2,184,574

BURIED CABLE TERMINAL

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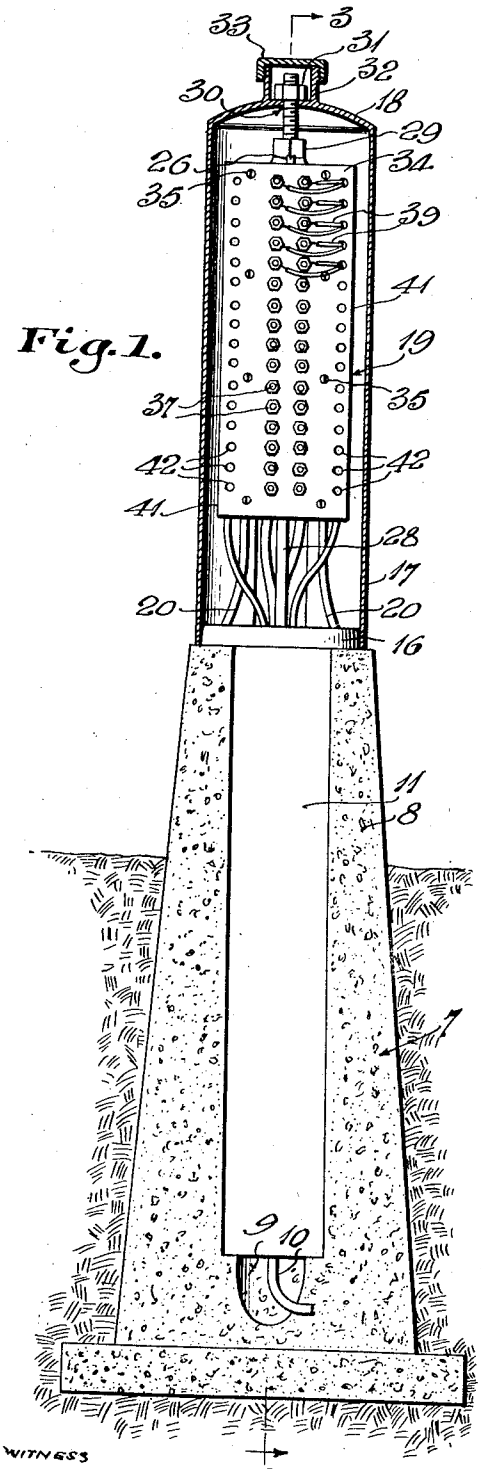


Fig. 1.

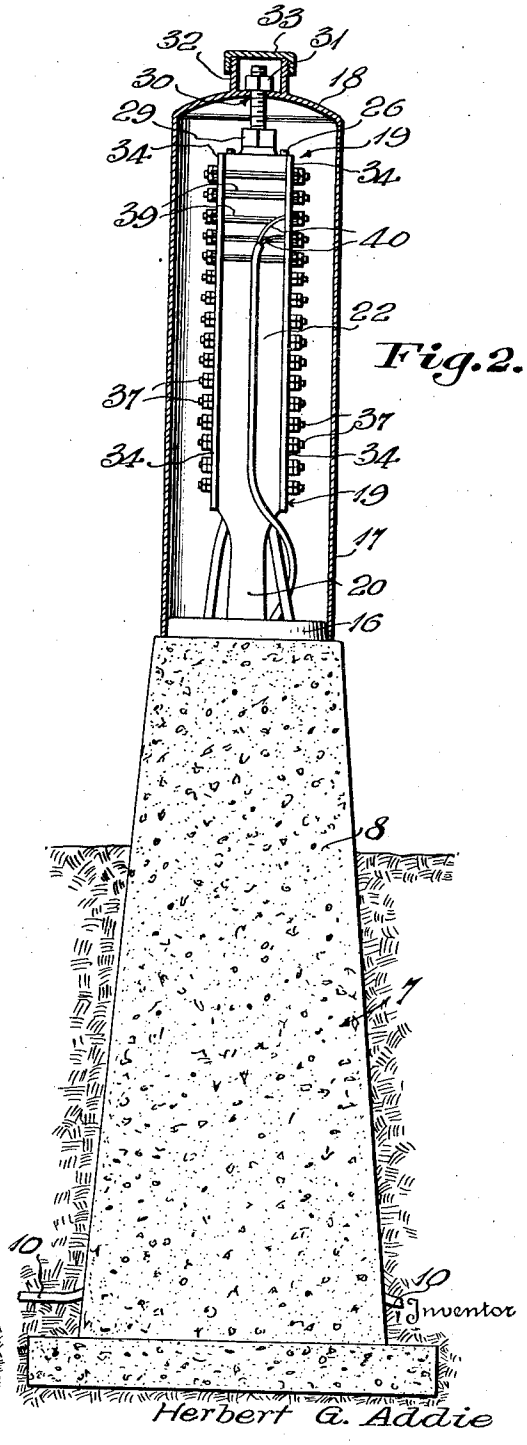


Fig. 2.

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Fig. 3.

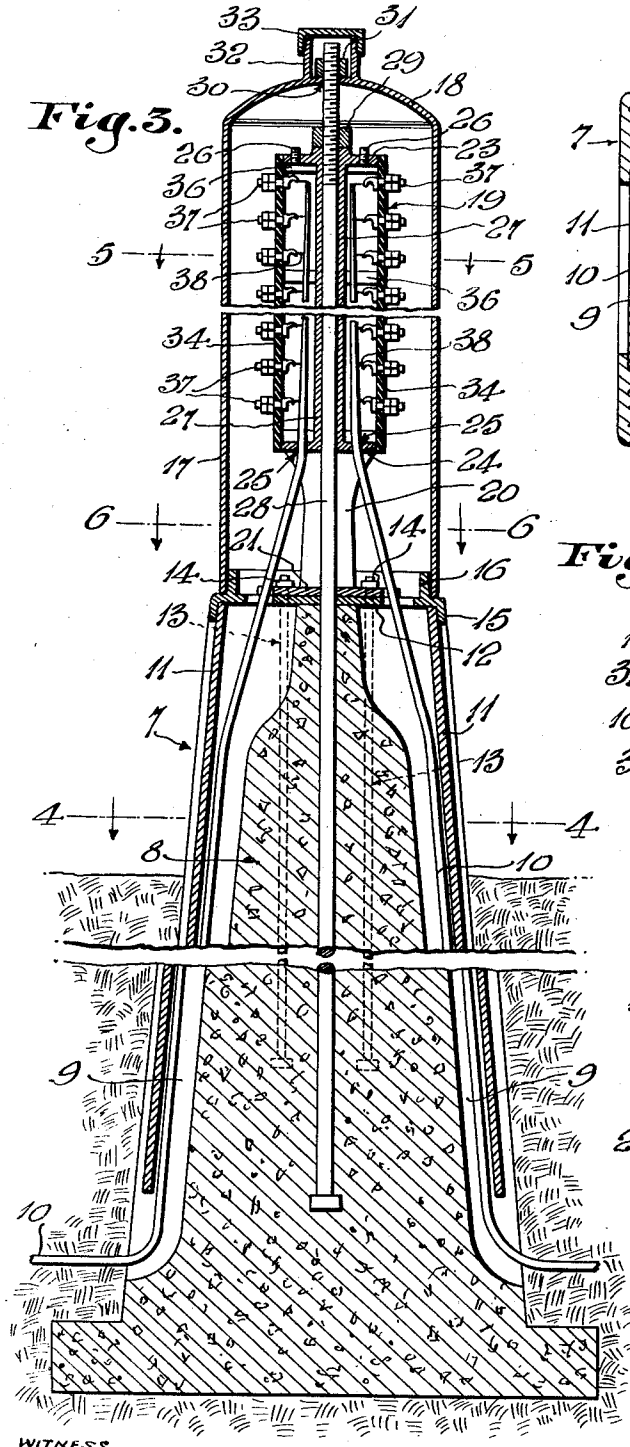


Fig. 4.

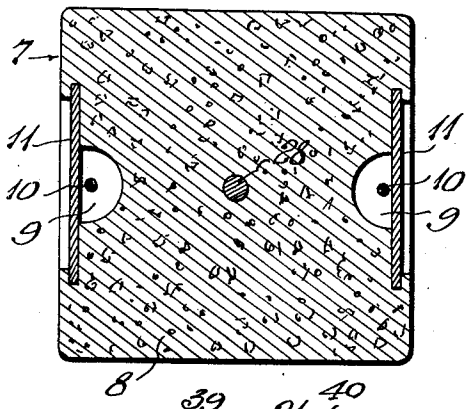


Fig. 5.

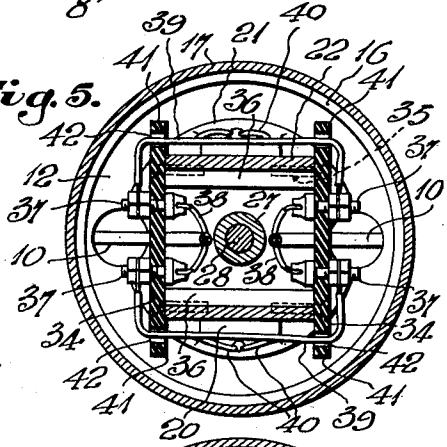
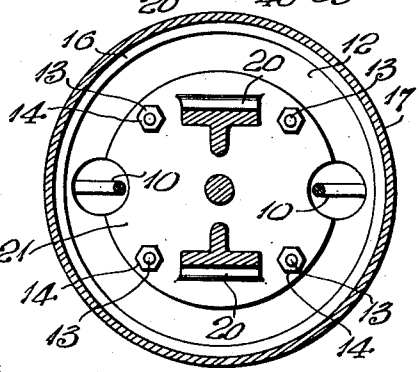


Fig. 6.



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UNITED STATES PATENT OFFICE

2,184,574

BURIED CABLE TERMINAL

Herbert G. Addie, Cresco, Iowa

Application April 12, 1938, Serial No. 201,603

3 Claims. (Cl. 174—60)

The invention aims to provide a new and improved terminal for underground multiple-wire cables used in telephone systems, of such construction that any required electrical connections may be easily made for through lines, private lines, party lines, etc., and said connections will be readily accessible for testing purposes in case of trouble.

With the foregoing in view, the invention resides in the novel subject matter hereinafter described and claimed, description being accomplished by reference to the accompanying drawings.

Figs. 1 and 2 are side elevations of the improved terminal looking in directions at right angles to each other, the casing being in section.

Fig. 3 is a vertical sectional view on line 3—3 of Fig. 1.

Figs. 4, 5 and 6 are horizontal sectional views on lines 4—4, 5—5 and 6—6 respectively of Fig. 3.

A construction has been illustrated which has proven advantageous from all standpoints, and while said construction may be considered as preferred, variations may be made within the scope of the invention as claimed.

A base 7 is provided to be embedded in and project above the ground. The main body 8 of this base is formed from concrete, opposite sides of said body being provided with longitudinal grooves 9 to receive multiple-wire cables 10, said grooves extending from points near the lower end of the base entirely to the upper end of the latter. In the present showing, metal side plates 11 close the outer sides of the grooves 9 except at the lower ends of the latter, the edges of said plates being embedded in the concrete. A metal cap plate 12 rests on the body 8 and is secured thereto by bolts 13 and nuts 14, said bolts being embedded in the concrete body 8. The plate 12 is provided with a downwardly projecting flange 15 which surrounds the upper portion of the body 8 and the side plates 11, and said plate 12 is provided also with an upwardly projecting flange 16 which is surrounded by the lower end of a vertically elongated tubular casing 17, the upper end of said casing being provided with a closure 18 which is preferably integral therewith. The casing 17 contains the structural characteristics now to be described and said casing is removably secured upon the base in a manner hereinafter explained, so that upon removal of the casing, all electrical connections are readily accessible for testing purposes.

A vertically elongated box-like structure 19 rises rigidly from the base 7 and is preferably of the construction shown. Two spaced metal supporting legs 20 are provided for this structure 19, said legs being integral with a foot plate 21 which rests upon the cap plate 12 of the base 7, said foot plate being secured in place by the bolts 13 and the nuts 14 above described. Integral with the upper ends of the legs 20, are two parallel vertical side plates 22, the upper and lower ends of these side plates being integrally connected with each other by top and bottom plates 23 and 24 respectively, said bottom plate being provided with openings 25 between the laterally spaced vertically elongated legs 20, through which the cables 10 may enter the structure 19. The spacing and elongation of these legs gives ample room in which to work, permitting easy guiding of the cables 10 from the passages 9 into the openings 25. The top plate 23 is preferably formed with openings closed by plugs 26, permitting the introduction of "pot-head" compound or the like to fill and seal the interior of the structure 19 after all cable connections have been completed. The top and bottom plates 23 and 24 are preferably integrally connected with each other by a vertically disposed tube 27. Through this tube, a vertical rod 28 passes, the lower portion of said rod being embedded in the concrete body 8 of the base 7. This rod projects above the top plate 23 and a nut 29 is threaded upon said rod in abutting relation with said top plate, thus assisting in rigidly securing the box-like structure 19 upon the base. This same rod 28 is also instrumental in securing the tubular casing 17 upon the base, the top 18 of said casing being provided with an opening 30 through which said rod passes, a nut 31 being threaded on said rod in contact with the upper side of said top 18. Preferably an upstanding guard sleeve 32 rises from the top 18 around the nut 31 and is provided with a protecting cap 33. When this cap is removed, the nut 31 is accessible with a socket wrench and may be removed from the rod 28, whereupon the entire casing 17 may be lifted from the base 7 to expose its contents.

In addition to the parallel side plates 22 above described, the box-like structure 19 includes two additional side plates 34 formed from suitable insulating material, these plates 34 being secured to the plates 22 by screws or the like 35. In the present showing, the inner sides of the plates 22 are provided with transverse ribs 36 having openings in their ends receiving the screws 35. The intermediate portions of the plates 34 are provided with any desired number and arrangement of binding posts or terminals 37 to which all

required electrical connections may be made. The individual wires **38** of the cables **10** may be soldered or otherwise secured to the inner ends of these terminals or binding posts **37**, and any other necessary wires, such as jumpers **39** or branch wires **40**, may be connected with the outer ends of said binding posts or terminals. The vertical edge portions of the side plates **34** project laterally beyond the side plates **22** as seen at **41** and are provided with vertically spaced openings **42** through which the jumper wires **39** or any of the other necessary wires may be passed, to hold them in orderly spaced relation.

When connecting the cable wires **38** with the terminals or binding posts **37**, the casing **17** is of course off of the base **7** and the side plates **34** are detached from the side plates **22**. After the connections have been made, however, the plates **34** are secured in place by the screws **35**, the "pothead" compound or the like is poured into the box-like structure **19** to seal against moisture, and any other electrical connections may then be made, such as applying jumper wires **39** or branch wires **40**. When the casing **17** is now applied and secured in place, the various wires and electrical connections are effectively protected against weather conditions and other hazards. Whenever trouble develops, it is an easy matter to remove the casing **17**, giving access to all of the terminals for testing purposes.

As excellent results may be obtained from the details disclosed, they may well be followed. However, within the scope of the invention as claimed, variations may be made as above stated, and obviously I am not limited to size, proportions, materials, number of terminals, arrangement of terminals, etc.

I claim:—

1. A buried cable terminal comprising a base to be embedded in and project above the ground, said base having passage means through which buried cables may pass to the upper end of said base, a vertically elongated box-like structure spaced upwardly from said base and having vertically elongated supporting legs secured upon said base, said legs being laterally spaced to permit easy guiding of cables from said passage means into said box-like structure, said structure comprising two parallel vertical side plates, top and bottom plates rigidly connecting said side plates, and two additional side plates secured to and extending between the first mentioned side plates, said bottom plate being apertured between said legs to permit upward passage of the cables into the box-like structure, said additional side plates having terminals to which the cable wires may be secured, a rod anchored to said base and extending upwardly through said bottom and top plates and projecting above the latter, a nut on said rod abutting said top plate, a casing enclosing said box-like structure and resting removably on said base, said casing having a closed upper end provided with an opening through which the upper end of said rod passes, and a second nut on said rod end abutting said casing end.

2. A cable terminal comprising a vertically elongated box-like structure having integrally attached laterally spaced vertically elongated supporting legs, said structure comprising two parallel vertical side plates, top and bottom plates integral with said side plates and rigidly connecting the same, a central vertical tube extending between said top and bottom plates through which to pass an anchoring rod, said tube being integrally joined to said top and bottom plates, and two additional side plates extending between and detachably secured against the edges of the first mentioned side plates, said bottom plate being apertured between said legs to permit upward insertion of a cable into said box-like structure, said additional side plates being provided with terminals to which the cable wires may be connected.

3. A buried cable terminal comprising a base to be embedded in and project above the ground, said base having passage means through which buried cables may pass to the upper end of said base, a vertically elongated box-like structure spaced upwardly from said base and having vertically elongated supporting legs secured upon said base, said legs being laterally spaced to permit easy guiding of cables from said passage means into said box-like structure, said structure comprising two parallel vertical guide plates, top and bottom plates rigidly connecting said side plates, and two additional side plates secured to and extending between the first mentioned side plates, said bottom plate being apertured between said legs to permit upward passage of the cables into said box-like structure, said additional side plates having terminals to which the cable wires may be secured, a rod anchored to said base and extending upwardly through said bottom and top plates and projecting above the latter, a casing enclosing said box-like structure and resting removably on said base, said casing having a closed upper end provided with an opening through which the upper end of said rod passes, and a nut on said rod abutting said casing end.

HERBERT G. ADDIE.