

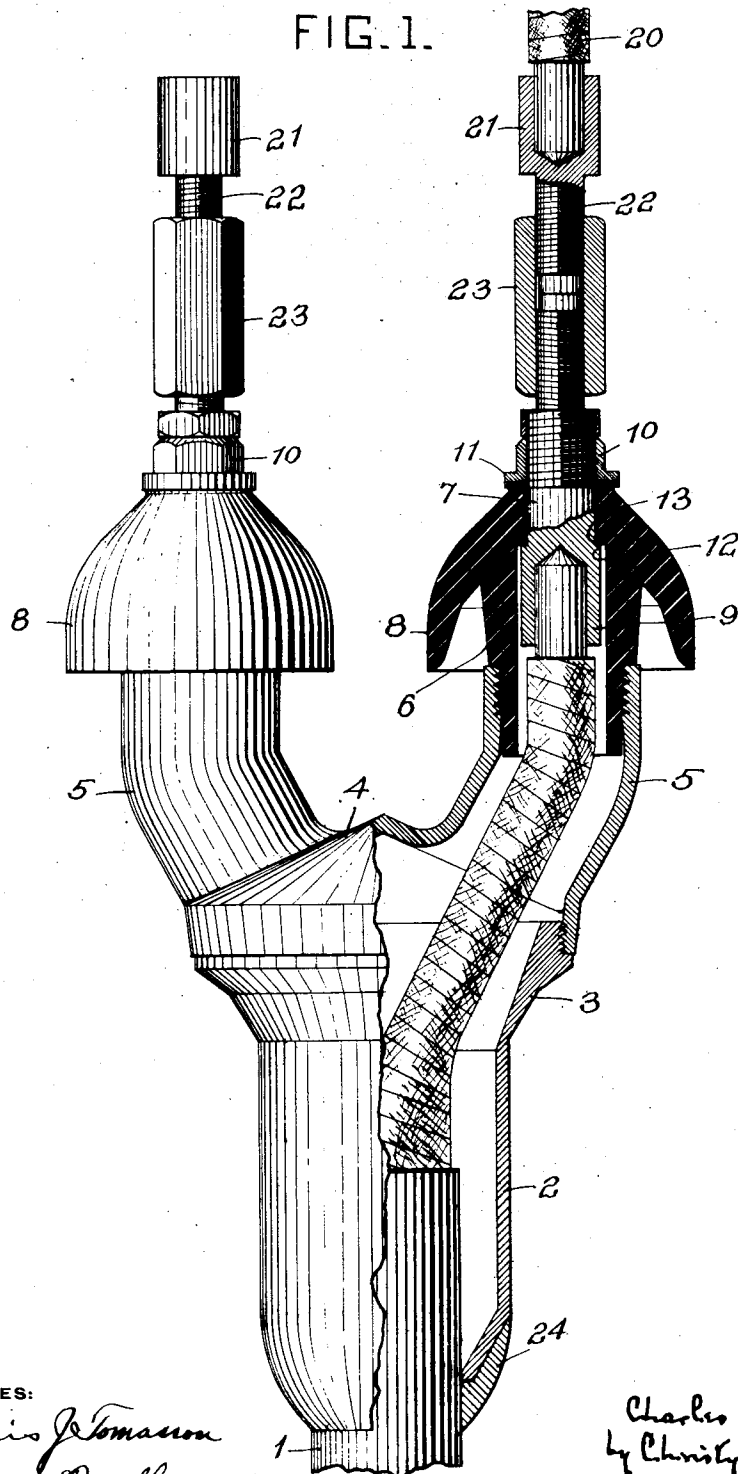
C. W. DAVIS.
 TERMINAL FOR ELECTRIC CABLES.
 APPLICATION FILED AUG. 3, 1908.

941,859.

Patented Nov. 30, 1909.

3 SHEETS—SHEET 1.

FIG. 1.



WITNESSES:

Francis J. Tomason
J. Herbert Bradley.

INVENTOR

Charles W. Davis.
 by *Christy & Christy*
 Attys.

C. W. DAVIS.
 TERMINAL FOR ELECTRIC CABLES.
 APPLICATION FILED AUG. 3, 1908.

941,859.

Patented Nov. 30, 1909.

3 SHEETS—SHEET 2.

FIG. 4.

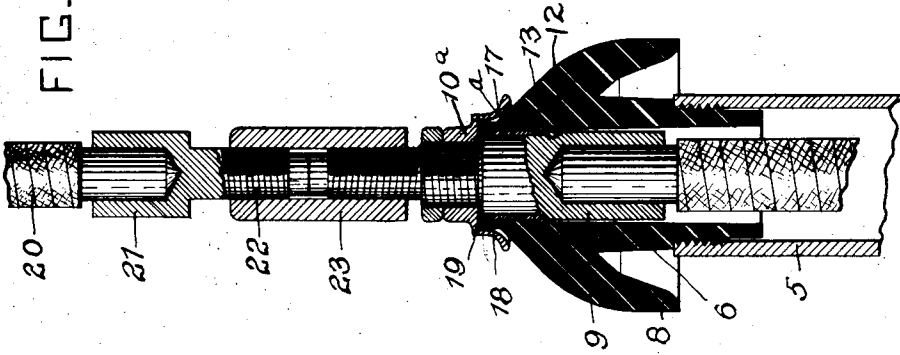


FIG. 3.

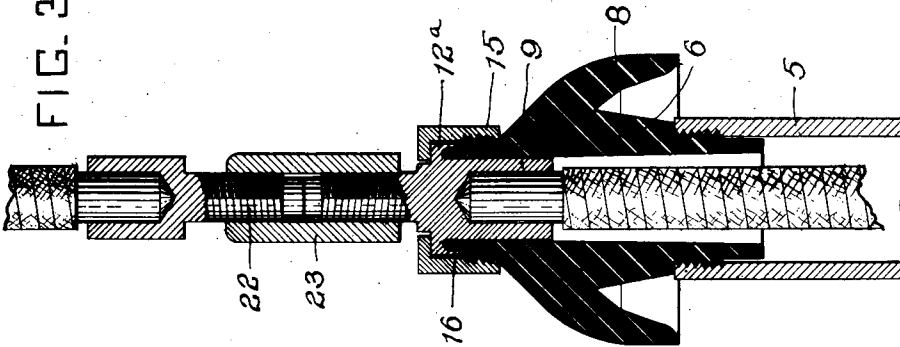
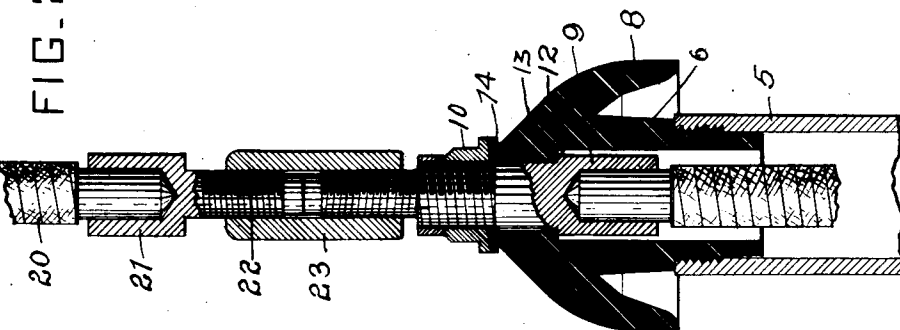


FIG. 2.



WITNESSES:

Francis J. Tomason
J. Herbert Bradley

INVENTOR

Charles W. Davis,
by Clarity & Christie,
 Attys

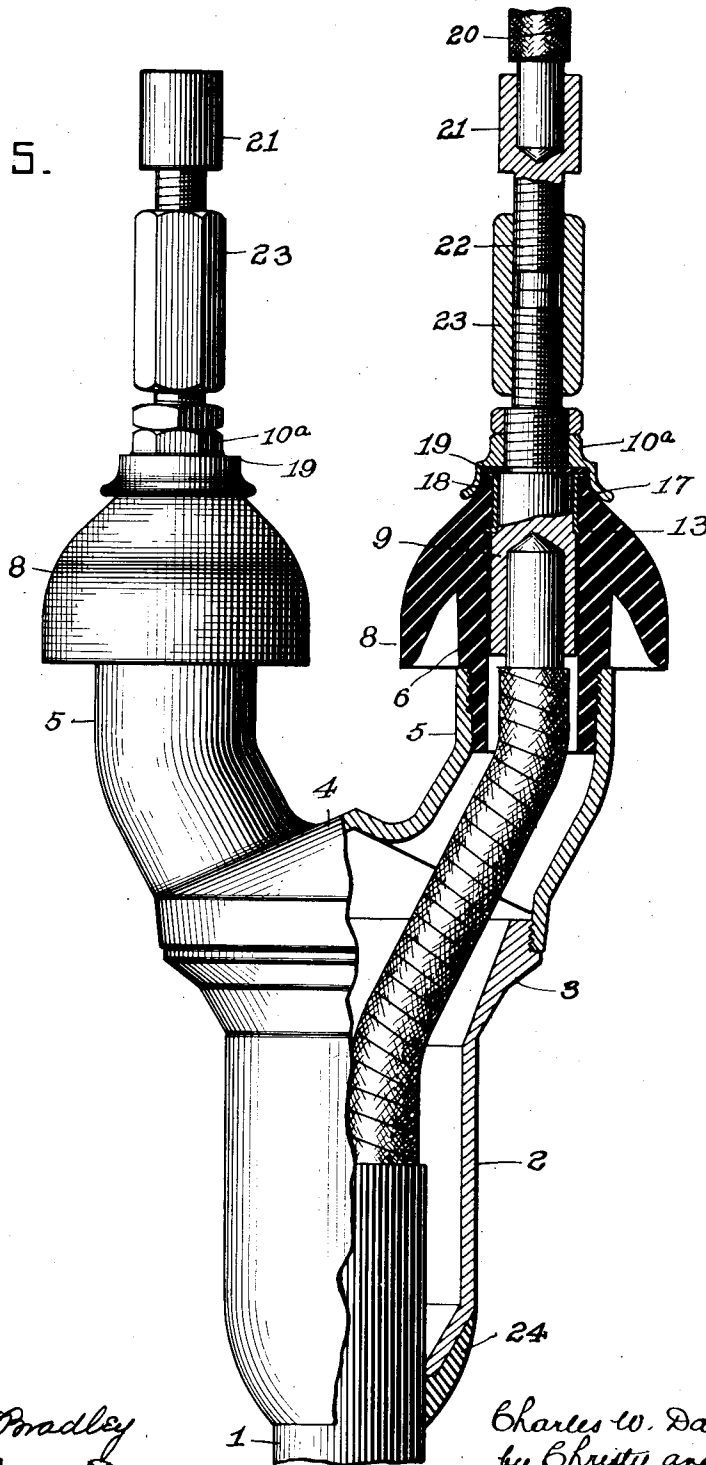
C. W. DAVIS.
 TERMINAL FOR ELECTRIC CABLES.
 APPLICATION FILED AUG. 3, 1908.

941,859.

Patented Nov. 30, 1909.

3 SHEETS—SHEET 3.

FIG. 5.



WITNESSES:

J. Herbert Poadley
Charles Barnard

INVENTOR

Charles W. Davis
 by *Christy and Christy*
 Attys

UNITED STATES PATENT OFFICE.

CHARLES W. DAVIS, OF EDGEWORTH, PENNSYLVANIA, ASSIGNOR TO STANDARD UNDERGROUND CABLE COMPANY, OF PITTSBURG, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

TERMINAL FOR ELECTRIC CABLES.

941,859.

Specification of Letters Patent. Patented Nov. 30, 1909.

Application filed August 3, 1908. Serial No. 446,620.

To all whom it may concern:

Be it known that I, CHARLES W. DAVIS, residing at Edgeworth, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Terminals for Electric Cables, of which improvement the following is a specification.

The invention described herein relates to certain improvements in structures known as terminals or terminal heads, which are employed for protecting the ends of lead covered cables, when they are exposed, for the purpose of connecting the conducting cores of such cables with aerial lines.

The invention is hereinafter more fully described and claimed.

In the accompanying drawings forming a part of this specification, Figure 1 is a view partly in section and partly in elevation of a terminal embodying my invention, Figs. 2, 3 and 4 are sectional views of branches of the terminal head illustrating certain modifications; and Fig. 5 is a view similar to Fig. 1, showing a terminal head having branches constructed as shown in Fig. 4.

My improved head consists of a sleeve or tubular portion 2 having its lower end contracted to nearly the diameter of the sheath of the cable 1, while its upper portion 3 is flared or spread out to permit the proper separation of the conducting cores as hereafter described. This head is closed by a cap or cover 4 preferably connected to the head by screw-threads. The cap or cover is preferably formed with an inclined top wall so as to prevent snow or ice lodging thereon, and is provided with a plurality of nipples 5 dependent upon the number of conducting cores in the cable. The enlargement 3 permits of such a spreading of the conducting cores of the cables as is necessary for electrical reasons and also facilitates the threading of the cores into the nipples 5. The insulators 6 are made tubular to permit of the connection of the cores and the lead outs 7 within them, and are preferably connected to the nipples by screw-threads. This screw-thread connection between the nipple and insulator is protected by a petticoat 8 formed on the insulator. The lead-out 7 is provided with a socket 9 in which the bared end of the core is secured preferably by sweating.

After the lead out has been secured, as stated, on the end of the core projecting through the nipple, the insulator is slipped over the lead-out and secured into the nipple. A nut 10 is now screwed onto the threaded portion of the lead-out until it bears on the end of the insulator and a shoulder 12 on the lead-out bears against a corresponding shoulder 13 on the insulator, thus firmly clamping the insulator and lead-out together. It is preferred that the nut 10 should be formed with a peripheral curtain 11, which extends down over the seat of the nut on the insulator. As shown in Fig. 2 a rubber gasket 14 may be interposed between the nut and its seat so as to insure a moisture tight joint. It is preferred that the gasket and the surface bearing thereon should be so shaped that the gasket will be squeezed in against the lead-out and form therewith a moisture proof joint.

In the construction shown in Fig. 3, the clamping shoulder 12^a on the lead-out is so located as to bear on the upper end of the insulator and the lead-out is secured to the insulator by an internally threaded sleeve 15 engaging threads on the insulator and having an inwardly projecting flange engaging the shoulder 12^a. It is preferred that the shoulder 12^a should be grooved on the underside for the reception of a packing ring and a rib 16 formed on the end of the insulator.

In the construction shown in Fig. 4 the shoulder 13 is formed by the inner end of a flanged sleeve 17 on which the insulator is molded in moisture proof contact. The upper flange of the sleeve forms the bearing surface for the nut 10^a, and a shoulder 18 is formed on the lead-out so located that when the shoulder 12 is in contact with the shoulder 13, the shoulder 18 will be flush with the end of the insulator. A rubber washer 19 is slipped onto the lead-out and seated on the shoulder 18 and the end of the insulator by the nut 10^a, so that said washer will seal not only the joint between it and the insulator but also between the insulator and the lead-out. It is preferred that the nut should be formed with an outwardly flaring petticoat *a* which should not contact with the insulator so as to avoid capillary action. The aerial line 20 may be connected to the cable cores in any suitable manner. As, for

example, the bared end of the aerial line may be sweated into a metal socket 21 provided with a threaded stem 22 and this stem connected to the threaded portion of the lead-out by an internally threaded sleeve 23.

In making a connection between a cable and aerial lines, the metal sheath is removed for a suitable distance and the head 2 slipped over the end of the cable, the cores 10 of the latter being passed through the nipples 5. The lead-outs are then secured to the cores by sweating the ends of the matter in the sockets 9, and the insulators passed over the lead-outs and screwed into the nipples. The nuts 10 are then screwed onto lead-outs firmly securing the lead-outs and cores to the insulators. The lower ends of the head 2 are then secured to the cable sheath in any suitable manner as by a wipe joint 24. It will be understood that in the construction shown in Fig. 3 the insulators should be slipped onto the cores before the lead-outs are secured thereto. After the head 2 has been attached to the cable one of the insulators is removed and insulating material poured in through one of the nipples.

I claim herein as my invention:

1. In a terminal structure for an electric cable, an annular insulator, a lead-out adapted to be secured to a conducting core of the cable and extending through the insulator, the lead-out and insulator being provided with abutting portions and means external of the insulator for drawing such portions into contact whereby the insulator and lead-out may be locked together after the latter has been secured to the conductor of the cable.

2. In a terminal structure for an electric cable, the combination of a head adapted to

be secured at one end to the sheath of the cable and provided at its opposite end with a plurality of nipples, annular insulators connected to the nipples, lead-outs adapted to be connected to the cores of the cable and extending through the insulators, the lead-outs and insulators being provided with abutting portions and means for drawing such portions into engagement and thereby locking the lead-outs in the insulators.

3. In a terminal structure for electric cables, the combination of a shell, an annular insulator detachably connected to the shell, a lead-out extending through the insulator and adapted to be connected to the conducting core of the cable the insulator and lead-out being provided with shoulders arranged to bear against each other and removable means for holding said shoulders in contact.

4. In a terminal structure for electric cables the combination of a shell, an annular insulator detachably connected to the shell and provided with an internal shoulder or abutment, a lead out extended through the insulator and provided with shoulders so spaced that when one shoulder bears on the shoulder in the insulator, the other shoulder will be flush with the end of the insulator, a washer bearing on the end of the insulator and the shoulder flush therewith and means engaging the lead-out and pressing said washer to its seat.

In testimony whereof, I have hereunto set my hand.

CHARLES W. DAVIS.

Witnesses:

CHARLES BARNETT,
FRANCIS J. TOMASRON.