

C. W. DAVIS.
 TERMINAL FOR ELECTRICAL CABLES.
 APPLICATION FILED MAY 8, 1909.

1,005,002.

Patented Oct. 3, 1911.

FIG. 1.

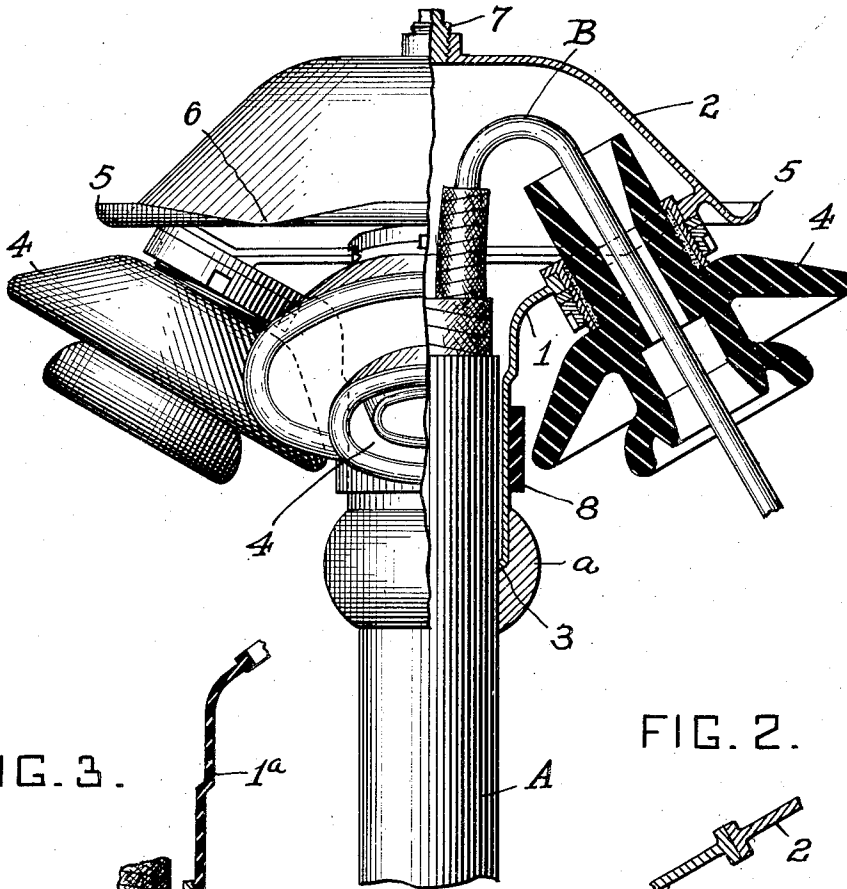


FIG. 3.

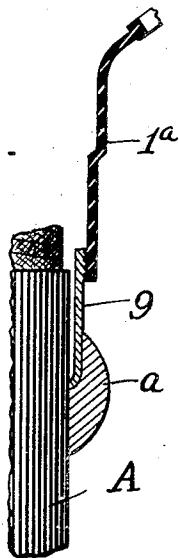
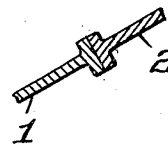


FIG. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

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

TERMINAL FOR ELECTRICAL CABLES.

1,005,002.

Specification of Letters Patent.

Patented Oct. 3, 1911.

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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 Electrical Cables, of which improvement the following is a specification.

My invention relates to the construction of terminals for electrical conductors, and particularly for metal sheathed cables, and its objects are simplicity in structure, compactness and facility in assembling.

My invention is illustrated in the accompanying drawing.

Figure 1 shows a terminal structure embodying my invention partly in elevation and partly in vertical section; Fig. 2 is a detail of the structure shown in Fig. 1; and Fig. 3 is a further detail illustrating a modification.

The terminal itself consists of a case or shell which is formed in two parts indicated in the drawing as 1 and 2. The general plane of meeting of these parts is preferably horizontal, and as shown in Fig. 2 the surface contact of the two parts when assembled is oblique to the horizontal. The upper portion of this two-part case or shell overhangs the seam of meeting of the two parts as the eaves of a house overhang a window to more securely protect this seam from the ingress of moisture. It will be understood that the reason for having the contact surface oblique is to the same end, that is, the prevention of ingress of moisture.

The nether part of the casing is provided with an orifice 3 for the introduction of the cable and it is preferably shaped as is indicated in the drawing, so that the sheath of the metal sheathed cable may be secured to it by a wiped solder joint. The orifices for the leads-out are so arranged that their widest part shall lie in the line of junction of the two halves of the shell or casing. The purpose of such an arrangement is this, that the cable may be introduced through the orifice arranged to receive it, the individual conductors thereof may be separated, insulators may be applied to them, and they may then be bent down and seated in the orifices adapted to receive them, and when thus assembled the upper portion of the case or

shell may be applied and secured in place. This is a distinct advantage over other constructions, wherein the divided conductors of the cable must be manipulated within a closed casing. The lead-out orifices, thus made readily accessible when the casing is opened, lie also within the protection of the overhang of the upper part of the casing when the whole is assembled. In the structure shown in the drawing there are a number of lead-out orifices and three insulators 4 as shown, through which the separate conductors of the introduced cable may be led out. These insulators are themselves preferably pecticoated as shown in the drawing. In order to further guard against the ingress of moisture to the structure, the overhang of the upper portion of the casing 2 is peculiarly arranged in that its edge where it projects above an insulator is re-curved, as is indicated at 5, to prevent moisture collecting upon the upper surface of casing 2 from dripping down upon the insulator and so finding a way of ingress to the interior of the terminal casing. At one side of the insulator the overhanging rim of the upper casing or shell is downwardly inclined, as is indicated at 6, forming a point of discharge for accumulated moisture and when the terminal includes a number of leads-out these discharge points will be arranged at intervening points between the adjacent insulators. The moisture then kept by the recurved edge of the overhang from dripping down upon the insulators is carried laterally and discharged at such intervening points.

As shown in the drawing the whole terminal structure is preferably of general circular contour, the intake orifice 3 is preferably centrally arranged in the lower part of the casing and the lead-out orifices are preferably disposed about the center at regular intervals, and are themselves preferably circular in form. Fig. 1 shows a lead sheathed cable A introduced through the orifice 3 and secured therein by the wiped solder joint *a*. Within the terminal structure the several conductors of the cable are separated and each one of them as for example B passes out through one of the lead-out orifices being surrounded at its point of issue by the insulator 4, suitably secured in the orifice itself.

The assembling of such a structure is apparent. The sheath and insulating envelopes of the cable are cut away to a sufficient degree and the lower half of the casing is slipped over the end of the cable and brought to place thereon, and the wiped solder joint made. The insulators 4 are then applied to the several conductors and properly secured thereon, and when so secured the conductors are bent so as to bring the several insulators to position relative to the lower part of the shell 1. The upper part 2 of the shell is then applied and secured in place in any suitable manner.

As shown in the drawing an opening 7 may be provided for introducing some insulating compound to fill the chamber within the terminal after it is fully assembled, and this opening 7 may be closed by a suitable plug.

The drawing shows a wiped solder joint *a*, directly connecting the sheath of the cable A with the lower part of the case or shell 1; and from this it is apparent that, as illustrated, the lower half of the case or shell may be made of metal. If the lower half of the case or shell be made of metal, it is desirable that a guard be placed against electrical discharge to the metal case from adjacent portions of each of the several leads-out. As shown in Fig. 1, such a guard may consist of an annulus, formed of insulating material, indicated at 8, surrounding and forming part of that portion of the shell 1 to which the insulator 4 surrounding the lead-out of the terminal approaches.

It is neither necessary, nor in every case desirable that the shell or either of its parts be formed of metal. Both of these parts may, if desired, be formed of insulating material; but, in such case, it will be understood that provision will preferably be made for the securing of the lower part of the casing with the sheath of the metal-sheathed cable by a wiped solder joint, such joint being the

most satisfactory form of joint in such installations.

Fig. 3 shows a portion of the casing 1^a, which it is to be understood is made of some insulating material. Into the orifice formed in this casing for the introduction of the cable, a metal thimble 9 is secured, preferably by being screw-threaded therein, and upon such projecting thimble the desired wiped solder joint may be made.

I claim herein as my invention:

1. A terminal structure for electrical conductors including a case or shell formed in two parts meeting in a substantially horizontal plane and provided with an inlet orifice formed centrally in the lower part, and with a plurality of lead-out orifices radially arranged with respect to said inlet orifice, and interrupting the line of union of said parts, substantially as described.

2. A terminal structure for electrical conductors including a case or shell formed in two parts, the line of union of whose meeting edges is interrupted by a plurality of lead-out orifices, the contacting surfaces of the said meeting edges extending angularly to the general plane in which the said edges meet, substantially as described.

3. In a terminal structure for electrical conductors a case or shell provided with a substantially cylindrical portion for the reception of an introduced cable, and with an orifice for a lead-out, and a lead-out structure in said orifice, and an annulus of insulating material surrounding and forming part of the aforesaid cylindrical portion of said case or shell at that part thereof which lies proximate to said lead-out structure, substantially as described.

In testimony whereof, I have hereunto set my hand.

CHARLES W. DAVIS.

Witnesses:

BAYARD H. CHRISTY,
CHARLES BARNETT.