

T. W. DODD.
CABLE AND TUBE COUPLING.
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Patented Aug. 19, 1913.

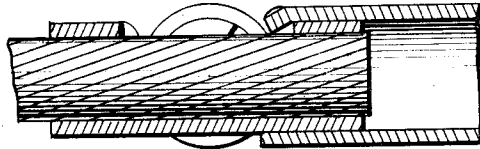


Fig. 7.

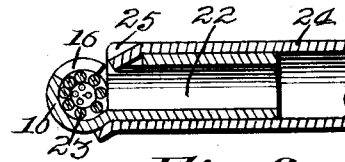


Fig. 6.

Fig. 2.

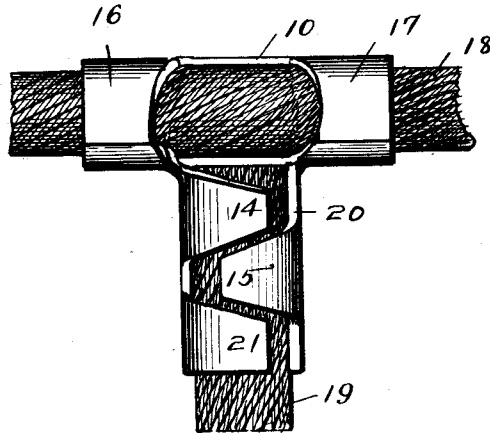


Fig. 3.

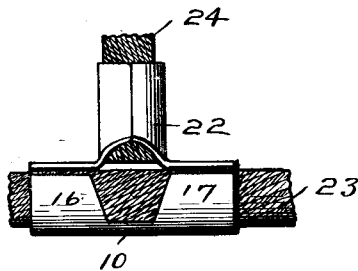


Fig. 4.

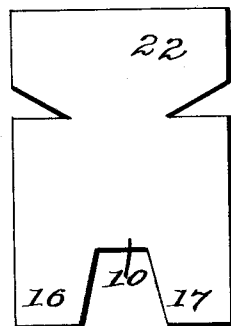
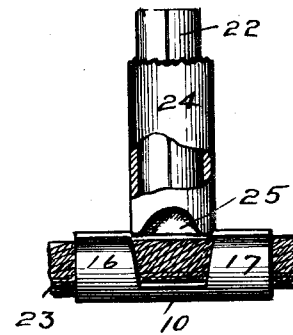


Fig. 5.

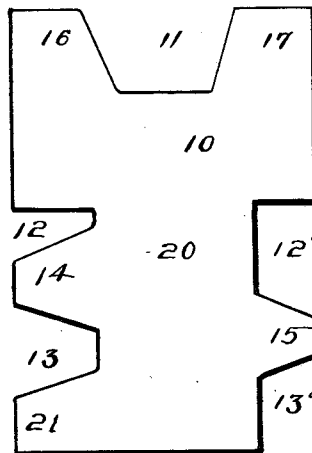


Fig. 1.

Witnesses.

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CABLE AND TUBE COUPLING.

1,070,948.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, THOMAS W. DODD, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented a new and useful Cable and Tube Coupler, of which the following is a specification.

The object of my invention is to provide a cable and tube coupler, of simple, durable and inexpensive construction, which may be made out of a sheet of copper in the form of a blank, stamped or cut from a sheet, which blank is then bent, folded and stretched into the shape of two cylindrical portions, one of which extends from the other at right angles to the middle.

A further object is to provide a cable and tube coupler which may be easily used for joining one cable to another at right angles thereto and which is adapted for connecting wire cables or rods.

A further object is to provide a cable and tube coupler made from a blank, cut or stamped from a copper sheet and pressed and stretched into convenient form for easily and firmly connecting a cable with a tubular upright.

A further object is to provide a cable and tube coupler, adapted for securing an upright to a cable in such a way as to provide a good electrical connection between such upright and such cable.

My invention consists in certain details, in the construction, arrangement and combination of the various parts, whereby the objects contemplated are attained, as hereafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which—

Figure 1 shows a plan view of the blank from which my improved cable and tube coupler is formed. Fig. 2 shows a plan view of one of my completed cable and tube couplers. Fig. 3 shows a plan view of a modified form of my device, and Fig. 4 shows a side elevation of a modified form of my improved cable and tube coupler with an upright tube secured thereto. Fig. 5 shows a plan view of the blank from which the form of device shown in Fig. 3 is made. Fig. 6 shows a sectional view through the portions 10, 16 and 17 of the device shown in Fig. 2. Fig. 7 shows a sectional view through the device shown in Fig. 2, showing the manner in which a tube is mounted on the part 16.

I make my improved cable and tube couplers from sheets of copper from which are cut blanks which may be in the form shown in Fig. 1. One end of the blank, which is indicated in the accompanying drawings by the reference numeral 10, is substantially rectangular in form and has in one edge a notch 11. The other portion, 20, of the blank extends from the side of the portion 10 opposite the notch 11 and is also in the general form of a rectangle in the sides of which are cut notches 12, 12^a, 13 and 13^a. The notches 12 and 12^a are opposite, while the notches 13 and 13^a are not. The notch 12^a is wider than the notch 12, it being my purpose to so arrange the notches that when the portion 20 is bent into a cylinder, the tongue 14, which is between the notches 12 and 13, will be received in the notch 12^a and the tongue 15, between the notches 12^a and 13^a will be received in the notch 13. For convenience in reference, I have indicated the parts of the portion 10 on each side of the notch 11, by the reference numerals 16 and 17.

In completing my tube and cable coupler, I bend and stretch the portion 10 into cylindrical form. I also bend the portion 20 into a semi-cylinder extending at right angles from the portion 10. I have found that the notches 12 and 12^a are necessary at points adjacent to the portion 10, for the reason that it is necessary to stretch the metal somewhat in forming the portion 20 into a cylinder, and unless the notches 12 are provided, the metal frequently breaks. The notches 12 and 12^a also serve another purpose which will be hereinafter set forth.

In securing two cables together, I place one cable 18 in the cylindrical portion 10 and I place the end of another cable 19 in the cylindrical portion 20. The parts 16 and 17 are then bent around the cable 18 until their outer edges are adjacent to the body of the portion 10 as shown in Fig. 2. The parts 14, 15, and the part 21 adjacent to the notch 13, are bent around the cable 19 with the part 14 received in the notch 12^a, the part 15 received in the notch 13, and the part 21 received in the notch 13^a. By cutting the notches 13 and 13^a it is easier to bend the parts 14, 15 and 21 around the cable for making connections. The same thing may be said of the notch 11 and the parts 16 and 17.

In Figs. 3 and 4 I have shown a modified

form of my device in which the portion 10 is made the same as in Fig. 1, while the portion 22 is made similar to the portion 20 with the exception that I do not cut the notches 13 and 13^a in a blank and the notches 30 and 31 are of the same width. In completing the cable and tube couplers shown in Figs. 3 and 4, I secure a cable 23 in the portion 10 in the same way as in Fig. 2. The portion 22 is stretched and bent into a cylinder, as shown in Fig. 3, and may be used to receive a cable 24 as shown in said figure. My improved cable and tube coupler is also used to connect a cable 23 with an upright tube 24 on which may be secured a point. The portion 22 is received within the tube 24 which rests against the body of the portion 10. A portion 25 of the tube 24 may be bent inwardly until it is received in the notches 12 and 12^a, thus forming a firm connection and means for mounting the tube 24 on the portion 22. It will be seen that one of the important purposes of the notches 12 and 12^a is to receive the inwardly bent portion 25 of the tube 24 for making the connection referred to.

My improved cable and tube coupler is used especially in lightning rod construction and has many advantages. Its construction from a blank cut from a sheet of copper is simple and less expensive than the construction of cast couplers, which are sometimes used. The form of the blank from which are cut the notches hereinbefore described, requires only a minimum of material. In this connection, it will be noted that in the form of my device shown in Fig. 2, the notch 11 is of sufficient width to permit tubes 34 to be mounted on the ends of the cylinder formed by the portion 10 and to be secured on such ends by driving a small portion of the ends of said tube into the sides of the notch 11.

By making my improved cable and tube coupler from sheet copper, and bending the portions 10 and 20 into semi-cylindrical form, and by cutting the notches hereinbefore described in the blank, I provide a cou-

pler which is easily and readily secured to cables by bending the parts 16 and 17 and the parts 14, 15 and 21 around the cables.

It will be seen that my improved cable and tube coupler is adapted for securing together two wire cables or for connecting tube cables or for connecting a wire cable with a tube. I have found also that I can connect together, square or other angular cables with my device.

I claim as my invention:

A device of the class described, comprising a blank, having one portion approximately rectangular in form provided with a notch in one side thereof, and having another portion substantially rectangular in form and extending from said first portion on the side thereof opposite the notch therein and provided with oppositely disposed notches in its sides adjacent to said first portion, one of said notches being wider than the other and said second portion being also provided with alternately disposed notches spaced apart from the opposite notches and with tongues opposite said last named notches and a tongue opposite said wider notch spaced apart from said first portion, said first portion being bent into a cylinder, said second portion being stretched and bent into a cylinder extending at right angles from the cylinder formed by said first portion, the opposite notches in said second portion being of sufficient width so that a portion of a tube mounted on the cylinder formed by said second portion may be bent into the opening formed in said last named cylinder by said notches, and the notch in said first portion being of sufficient width so that a portion of a tube mounted on the end of the cylinder formed by said first portion may be bent into the opening formed by said notch.

Des Moines, Iowa, February 9, 1912.

THOMAS W. DODD.

Witnesses:

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