April 21, 1931. L. W. WESTFALL 1,801,706

SLITTING TOOL

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Fig. 1.

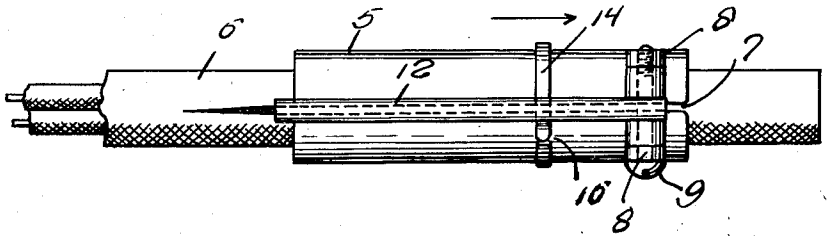



Fig. 2.

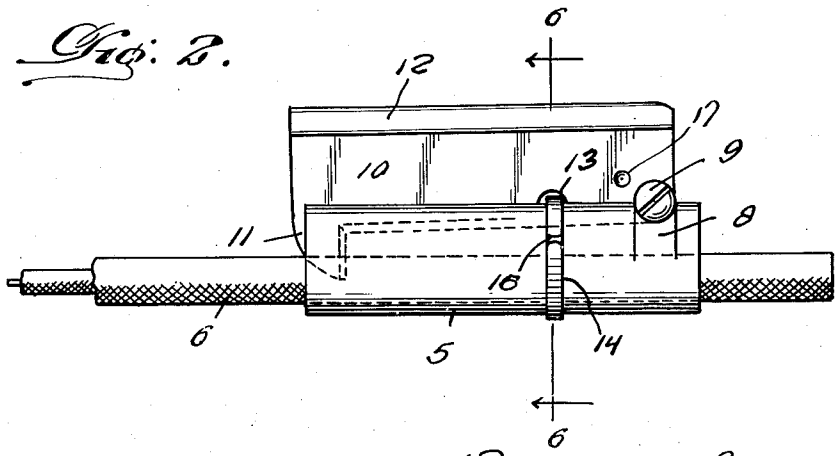
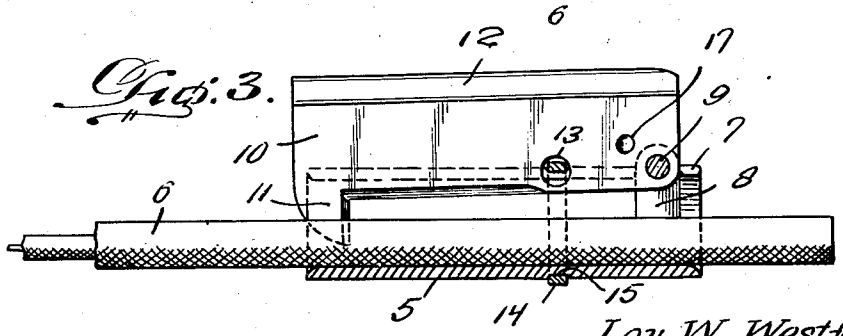



Fig. 3.




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Fig. 4.

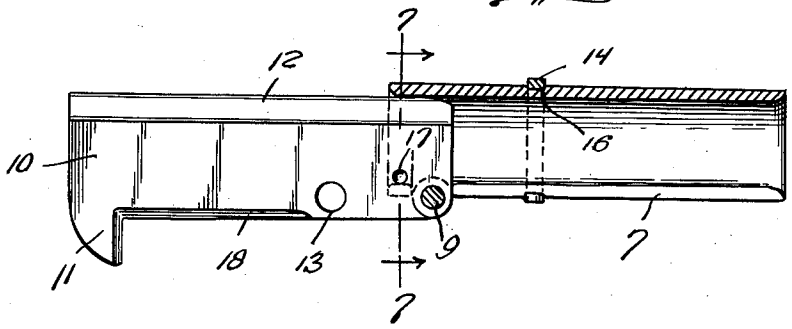



Fig. 5.

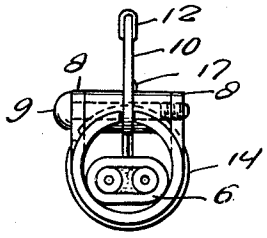



Fig. 6.

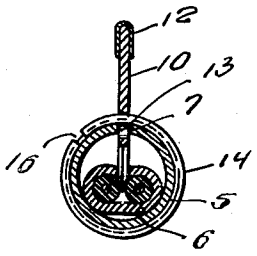



Fig. 7.

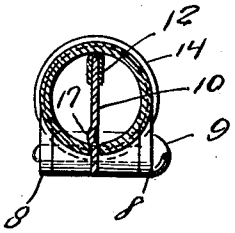
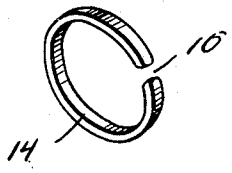



Fig. 8.




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Patented Apr. 21, 1931 1,801,706

# UNITED STATES PATENT OFFICE

LOY W. WESTFALL, OF AKRON, OHIO

## SLITTING TOOL

Application filed July 24, 1929. Serial No. 380,703.

This invention relates to slitting tools, and has more particular reference to an improved device for longitudinally slitting the sheath or outer covering of electric cables having a plurality of separately insulated conductor wires.

Electric cables are made of two or more conductor wires, separately insulated and surrounded by a non-metallic covering, and when it is necessary to splice the wires or connect them to terminals, the outer covering must be slit.

The object of this invention is to provide a highly efficient tool by means of which the outer covering of such a cable may be readily slit without damaging the insulation of the individual wires, and wherein the tool is of simple and durable construction and capable of economical manufacture.

The invention consists in the novel construction hereinafter more fully described and claimed.

In the accompanying drawings:

Figure 1 is a plan view of a tool embodying the present invention, and showing the tool in use for slitting the covering of a cable.

Figure 2 is a side elevation thereof.

Figure 3 is a central vertical longitudinal section of the same.

Figure 4 is a view similar to Figure 3 with the blade open for using the tool as an ordinary knife.

Figure 5 is an end elevation looking toward the left of Figure 2.

Figure 6 is a transverse section on line 6—6 of Figure 2.

Figure 7 is a transverse section on line 7—7 of Figure 4; and

Figure 8 is a perspective view of the blade holding ring.

Referring more in detail to the drawing, the present tool consists of a cylindrical body 5 having an open cylindrical axial bore of a size slightly larger than the cross-section of the cable 6 whose outer covering is to be slit. The body 5 is in one piece and divided longitudinally at the top to provide a longitudinal slot 7. A pair of opposed ears 8 are struck outwardly from one end portion of the body 5 at opposite sides of the slot 7, and connecting these ears is a pivot bolt or pin 9. A knife blade 10 is pivoted at one end on the pin 9 and arranged to swing inwardly through the slot 7. This knife blade embodies a plate having an inwardly projecting sharpened extension at its free end forming a slitting portion 11. The blade is also provided with a binding strip 12 on the back edge thereof to permit manual pressure thereon without danger of injury to the user. The blade 10 has an opening 13 intermediate its ends through which loosely extends a ring 14 that is rotatably fitted in a circumferential groove 15 of the body 5. The diameter of the opening 13 is much greater than the cross-sectional size of the ring 14, thus permitting the knife to have limited swinging movement just sufficient to allow withdrawal of the blade 11 from the cable, and to limit the depth of cut when the knife is pressed inwardly. This prevents damage to the insulation of the conductor wires, and injury to the user by contact with blade 11 is made impossible because the knife cannot accidentally swing entirely out of the slot 7.

As shown in Figures 2 and 8, the ring 14 is of split form so as to present a space 16 between its ends. By turning the ring 14 to register the space 16 with the blade 10, said ring may be disengaged from the opening 13 so as to release the blade 10 and permit the latter to be swung to an open position outwardly of and coextensive with the body 5 as shown in Figure 4. When in this position, the back of the blade 10 at its inner end abuts the inner face of the body 5 opposite the slot 7 to limit the opening movement of and steady the blade. To releasably hold the blade open, it is provided with a laterally pressed teat 17 adjacent the pivot pin 9 adapted to snap past one edge of the body 5 at the slot 7 just prior to engagement of the back edge of the blade with the inner face of the body. The blade 10 has its longitudinal edge sharpened as at 18.

In using the tool for slitting as shown in Figures 1 to 3 and 5 to 6, the cable is inserted through the body 5, after which the blade 10 is pressed inwardly to cause the blade 11 to

pierce the covering of the cable. While the blade is held in this position, the tool is pulled relative to the cable and the covering of the latter is thereby slit on a straight line between the insulated wires. To bare the wires for making connections, the blade is opened as shown in Figure 4, and the tool is used in the same manner as a pocket knife to strip the insulation from the wires.

What I claim is:

1. A slitting tool of the character described comprising a hollow open-ended body through which a cable may be passed, said body having a longitudinal slot, and a knife pivoted at one end to one end of the body and movable through said slot, said knife having an inwardly projecting slitting portion at its other free end, and means to limit swinging movement of said blade to prevent withdrawal thereof outside the body and to limit the depth of cut of said slitting portion, said blade having an opening, and said means comprising a ring on the body loosely passing through said opening.

2. A slitting tool of the character described comprising a hollow open-ended body through which a cable may be passed, said body having a longitudinal slot, and a knife pivoted at one end to one end of the body and movable through said slot, said knife having an inwardly projecting slitting portion at its other free end, and means to limit swinging movement of said blade to prevent withdrawal thereof outside the body and to limit the depth of cut of said slitting portion, said blade having an opening, and said means comprising a ring on the body loosely passing through said opening, said ring being split and rotatably fitted on the body whereby the space between its ends may be registered with the blade to permit opening of the latter to a position out of and coextensive with the body.

In testimony whereof I affix my signature.

LOY W. WESTFALL.