# United States Patent

**Muller**

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[54] **INSULATION CABLE CUTTER**


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[52] **U.S. Cl.** ..... **30/91.2**
[51] **Int. Cl.** ..... **B26b 27/00**
[58] **Field of Search** ..... 30/90.1, 90.2, 91.2



[56] **References Cited**

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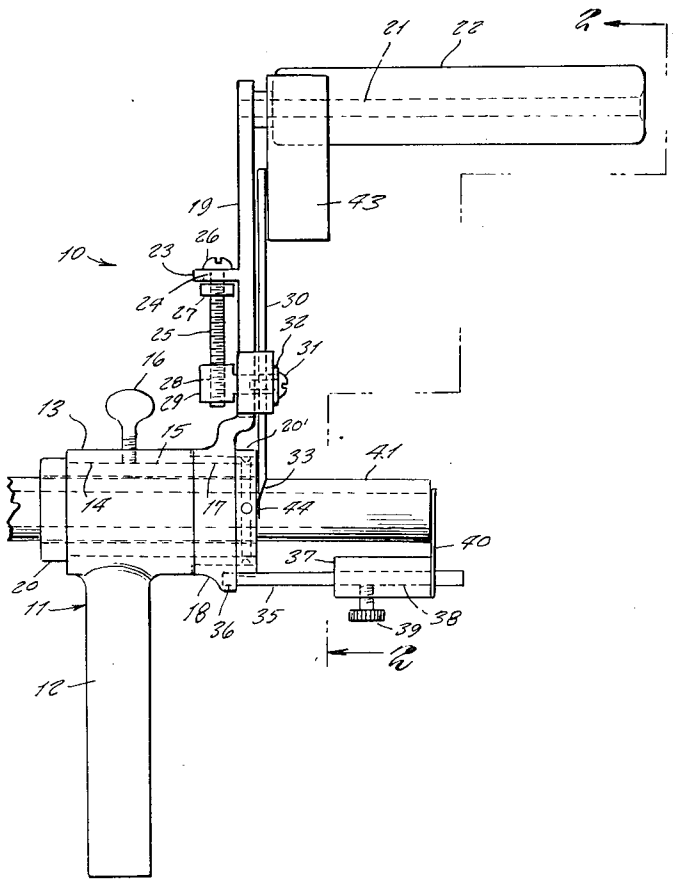
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[57] **ABSTRACT**

A hand tool for cutting through the insulation casing without injury to the wire conductors carried through the center of the cable, the device comprising a holder for securing the cable from which a portion of the cable to be skinned extends an adjustable stop for measuring the length of the cable to be skinned, and rotatable hand crank carrying a knife that is preset to a desire cutting depth through the cable, the knife accordingly cutting only through the insulation, after which the cut off insulation can be pulled off the exposed end of the cable.


**3 Claims, 3 Drawing Figures**



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Fig. 1

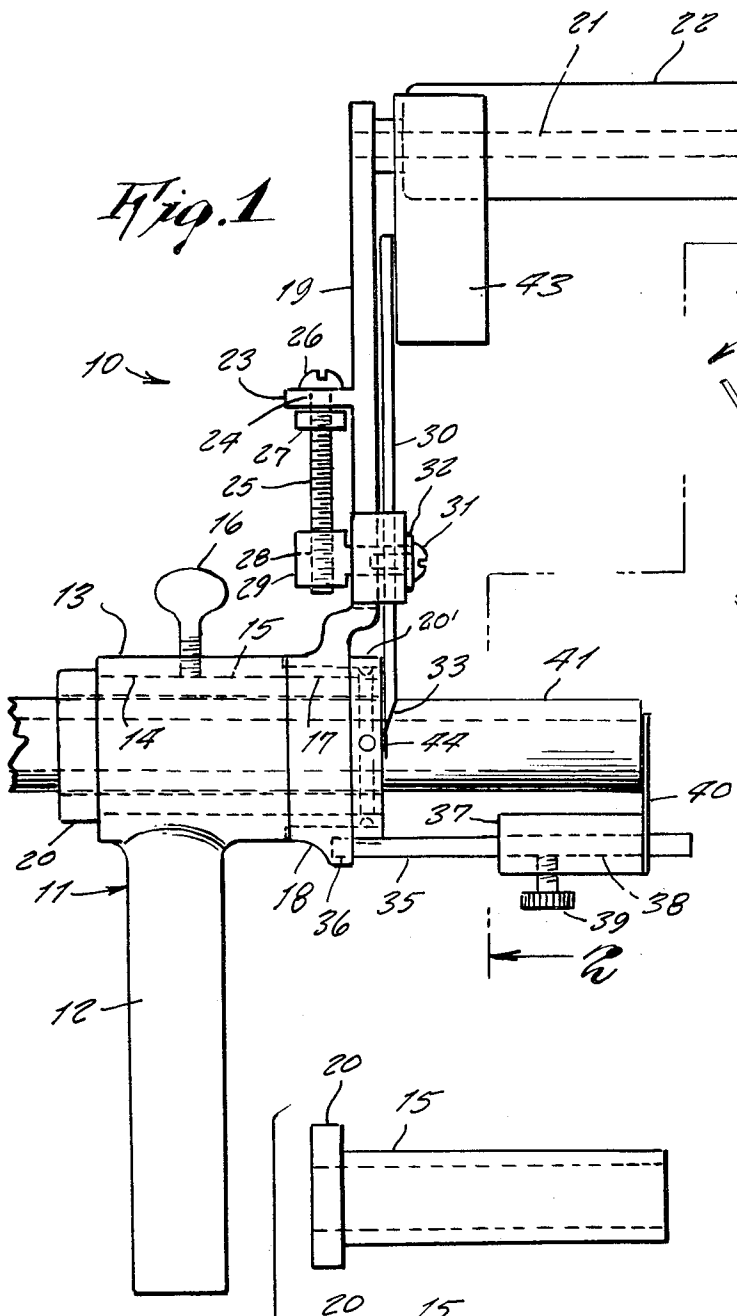



Fig. 2

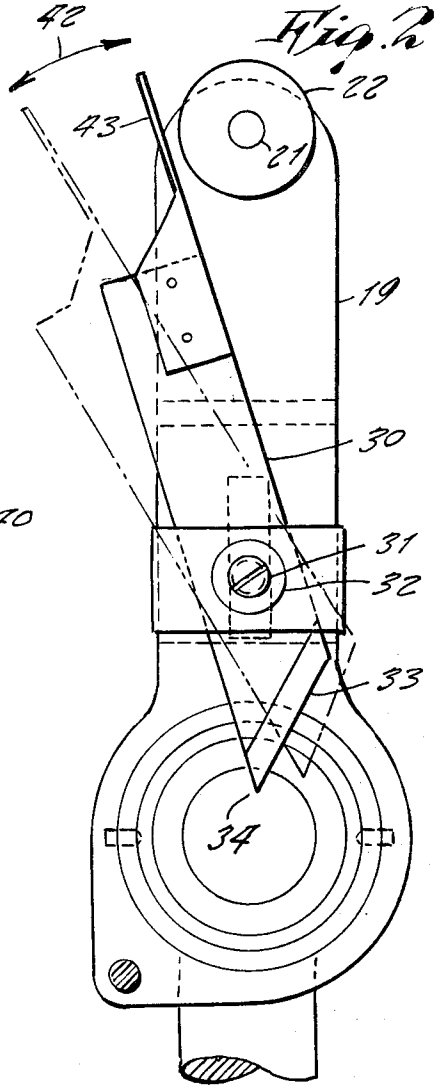



Fig. 3




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# INSULATION CABLE CUTTER

This invention relates generally to cutting tools. More specifically it relates to cable cutting tools.

A principle object of the present invention is to provide a cable cutter which can quickly cut through an insulation around a bundle of electrical conductors within a cable, and which will cut through the insulation in a thorough manner without injury to the conductors.

Another object is to provide an insulation cable cutter which includes a gauge that can be specifically preset so that a particular length of insulation can be skinned from a cable, and which accordingly can serve to skin equally in length several cables one after the other.

Yet another object is to provide an insulation cable cutter which incorporates a cutting knife that may be accurately set so to cut a specific depth into the cable so to insure a thorough cutting of the cable only but not cut the brindle of electrical conductors.

Another object is to provide an insulation cable cutter which interchangably receives mandrils of different sizes so to accomodate cables of various diametrical dimensions.

Other objects are to provide an insulation cable cutter which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specification and the accompanying drawing wherein:

FIG. **1** is a side view of the invention.

FIG. **2** is a front end view thereof.

FIG. **3** is a side view of different sized mandrils which are interchangably securable on the device for accomodating different diameter cables.

Referring now to the drawing in detail, the reference numeral **10** represents an insulation cable cutter according to the present invention, wherein there is a holder **11** that includes an arm **12** adaptable for being rigidly held in a person's hand or vise, and the holder including a cylinder **13** with opening **14** therethrough and into which interchangably different size of mandrils **15** are slidably receivable and secured therein by a winged set screw **16**.

Each of the mandrills **15** are longer than the cylinder **13** so that they may be additionally inserted through a central opening **17** of a collar **18** formed at one end of a crank arm **19**; the mandrils **15** having a diametrically enlarged flange **20** at one end for being positioned adjacent the end of the cylinder **13**. A securing collar **20'** fits over the end of the mandril and is secured thereto by a set screw, as shown in the drawing; the flange **20** and collar **20'** on the opposite ends of the mandril thus serving to retain together the assembly of the cylinder **13** and the crank arm **19** which is fitted on the end of the cylinder.

The opposite end of the crank arm **19** has a pin **21** secured thereto upon which is mounted a freely rotatable crank handle **22**.

Intermediate the opposite ends of the crank arm **19**, a rearward extending lug **23** has an opening **24** through which is fitted a screw **25**, the lug being positioned between a head **26** of the screw and a nut **27** threadingly engaged on the screw, the opposite end of the screw **25** threadingly engaging a threaded opening **28** in a slide **29** slidable along the crank arm **19**.



A blade **30** is secured to the slide **29** by means of a screw **31** and washer **32**. An inclined cutting edge **33** on the blade **30** terminates at one end accordingly in a point **34** which points toward a central axis extending through the cylinder and mandril.

A post **35** is fitted at one end in an opening **36** on one side of the collar, the post being parallel to the axis of the mandril; the post having a slidable gauge block **37** with a central opening **38** fitted thereupon, and secured in a selected position by means of a set screw **39**. An end plate **40** is affixed to the end of the block **37**, the plate extending transversely across the axis of the mandril so to act as a stop for the end of a cable **41** that is to be skinned.

In operative use, a proper size mandril is selected so to suit the particular cable; the mandrel being secured to the cylinder. The gauge block is then set to the desired distance for guiding the length of the cable to be skinned. The blade is then set for the depth of the cut into the cable, by inserting a cable into the mandrill and positioning it at a rear side of the blade so that the point **34** is exactly at the base of the insulation, when the point **34** is in the position as is shown by solid lines in FIG. **2**. The blade thus preset in cutting depth is however pivotable as is indicated by the phantom lines and arrow **42** of FIG. **2**. With the blade pivoted out of the way to the phantom line position, the cable end is inserted up to the stop plate **40** and the crank handle is rotated while pressure against a pad **43** of the blade causes the cutting edge to make a cut **44** around the insulation to the full depth permitted, after which the insulation may be pulled off.

While certain novel features of my invention have been shown and described and are pointed out in the annexed claims, it will be understood that various omissions, substitutions and changes in the forms and details of the device illustrated and in its operation can be made by those skilled in the art without departing from the spirit of the invention.

What I claim as new and desire to secure U.S. Letters Patent is:

**1**. In an insulation cable cutter, the combination of a holder having an extending arm for being stationarily held and a hollow cylinder which is integral with one end of said arm and on an axis that is at right angle to said arm for receiving a cylindrical tubular mandril through which a cable is receivable, a crank pivotable about said mandril, said crank carrying a cutting blade for cutting the insulation from an outer side of said cable, and a gauge for guiding the position of a cut around said insulation, said crank including a collar rotatable about said mandril and a radially extending crank arm which at its outer end has a pin with a pivotable crank handle fitted thereupon for handgripping, an intermediate portion of said crank arm has a rearward extending lug integral therewith, a clearance opening through said lug, a screw fitted through said opening, a head of said screw placed adjacent one side of said lug, a nut engaged on said screw being positioned adjacent an opposite side of said lug, the opposite end said arm, said slide supporting a pivot screw which pivotally supports said cutting blade along a longitudinal intermediate portion thereof where a screw opening is provided for receiving said screw, said cutting blade including a diagonal cutting edge along one longitudinal end thereof which terminates in a point, the opposite

end of said blade having an extending pad for abutment with a side of said handle which thus serves as a stop against the pivot force on said blade caused by the pressure of said blade point as it cuts through said insulation while said crank is rotated.

2. The combination as set forth in claim 1 wherein a post parallel to an axis of said mandril is secured to a front side of said collar, said post slidably supporting a slide block having an end plate secured thereto which



extends across said mandril axis for serving as a stop for an end of said cable, and a set screw for securing said block on post.

3. The combination as set forth in claim 2 wherein said mandril is interchangably supported in said cylinder by different size mandrils for accomodating different diameter said cables.

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