Aug. 30, 1949. A. BALDWIN ET AL 2,480,107

CABLE STRIPPING TOOL

Filed May 21, 1945

Fig. 1

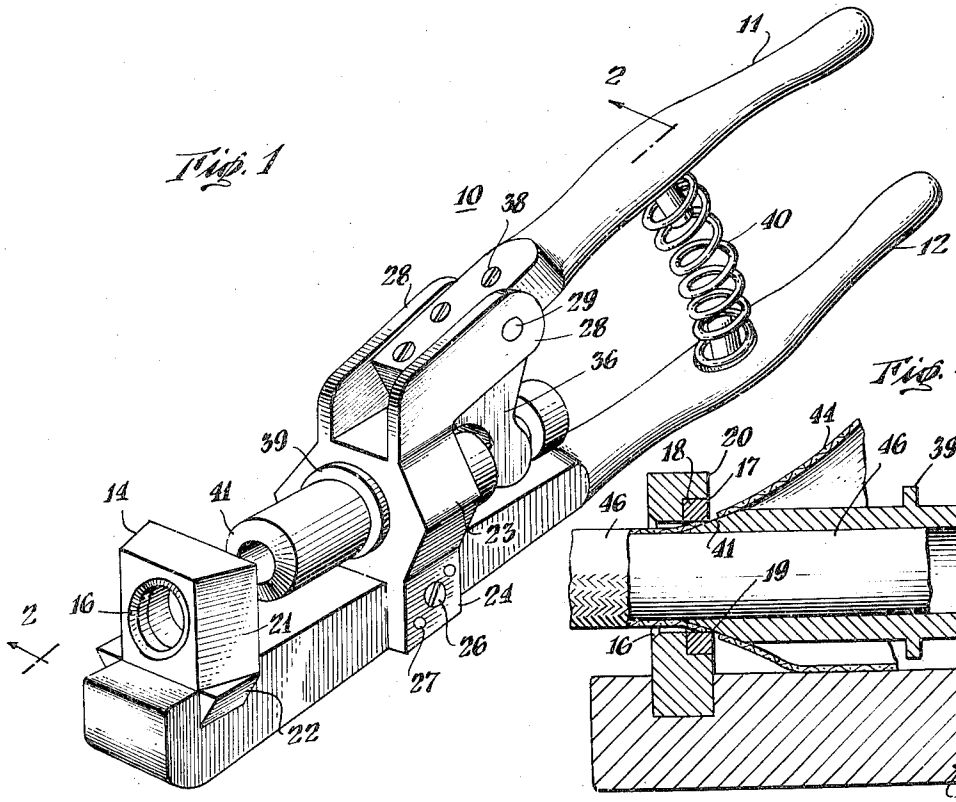


Fig. 4

Fig. 2

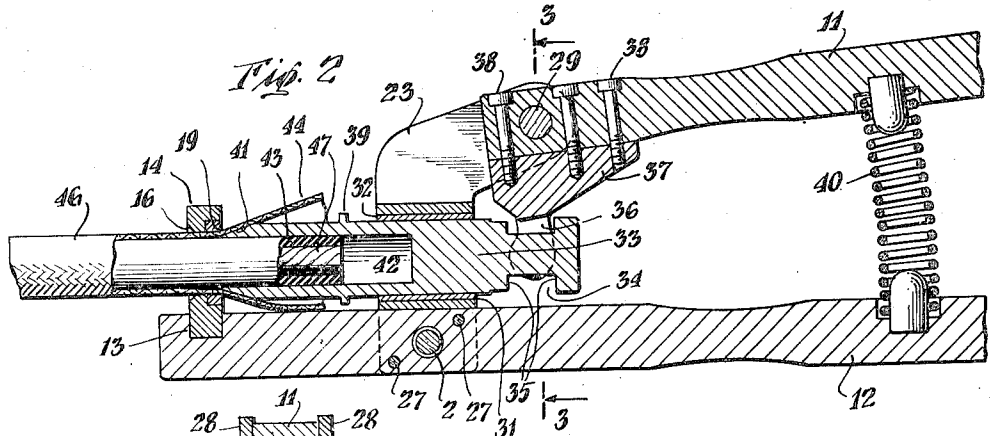
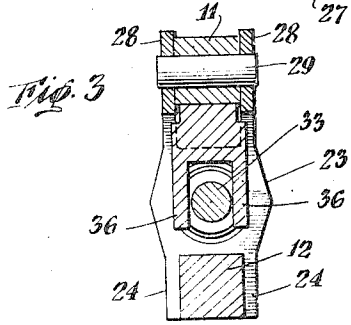


Fig. 3



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CABLE STRIPPING TOOL

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1 Claim. (Cl. 81—9.5)

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This invention relates to a cable stripping tool, particularly to a braid cutting tool, and has for an object to provide a tool for stripping braid from an insulated cable.

Another object of the invention is to provide a self-opening hand tool for readily separating braid from the insulation of a cable and for severing the separated braid.

A further object of the invention is to provide a portable tool which will strip only the braid from the cable without injuring the insulation or conductor.

With the above objects in view, one embodiment of the invention discloses a braid stripping tool having a pair of spring-separated handles to which are operatively connected a reciprocating hollow plunger with a bevelled cutting face and a cooperating stationary cutting die, the plunger in its forward movement being adapted first to separate the braid from the insulating material, next to receive the braidless insulated conductor within its bore, and finally to shear off the separated braid upon contact with the cutting edge of the die.

A more complete understanding will be obtained from the following description of a preferred embodiment of this invention taken in conjunction with the accompanying drawing in which:

Fig. 1 is a perspective view of the tool in its retracted or normally open position,

Fig. 2 is a sectional view taken along line 2—2 of Fig. 1, illustrating separation of the braid from the insulated donductor,

Fig. 3 is a sectional view taken along line 3—3 of Fig. 2, and

Fig. 4 is an enlarged view of the plunger-die portion of the tool in the operative or closed position illustrating severance of the braid from the cable.

Referring now to the drawing, there is shown a braid stripping tool 10 having a pair of handles 11, 12 of such size and shape as to be readily encompassed by a person's hand. Adjacent the forward end of lower handle 12 there is formed a groove 13 into which is secured, as by a press fit operation, a perforated block or die 14 having a bevelled inner peripheral edge 16 at the front and a counter bore 17 at the back. Into counterbore 17 is forced an annular bushing 18, preferably of hardened drill rod material, having a sharp cutting inner peripheral edge 19. The cutting face 20 of the die 14 is shown to be of greater width than that of the handle 12 in order to increase the strength thereof, particularly at its junction with the upper surface of the handle 12, the side edges 21 above the upper surface of the handle being tapered frontwardly and the lower side edges 22, downwardly to the width of this handle.

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Intermediate the handle 12 is shown a yoke member 23, preferably formed in the shape of a bell crank, having lower bifurcated arms 24 embracingly engaging handle 12, being affixed thereto by bolts 26 and pins 27. At the upper portion of the yoke member 23 is shown a pair of arms 28 between which is pivotally connected by pin 29 the upper handle 11 of the stripping tool 10. Intermediate the bifurcated arms 24 and 28 of member 23 is formed an axial bore 31 having a lining 32, preferably of hardened drill-rod material, for reciprocatingly supporting therein a plunger 33, also preferably of hardened drill-rod material. Adjacent the rearward end of the plunger 33 is shown a reduced section or groove 34 with shoulders 35 for abutting engagement by bifurcated arms 36 of a plunger-actuating member 37 fixedly secured by bolts 38 to the upper handle 11.

To provide a predetermined longitudinal movement of plunger 33, a peripheral protuberance or back-stop 39 is formed on the exterior thereof, as shown, a spring member 40 being interposed between handes 11, 12 for retracting the tool 10 to its open position with back-stop 39 abutting against yoke member 23. A bevelled edge 41 for cooperation with edge 19 is formed at the forward or cutting end of the plunger 33 with an axial bore 42 of predetermined diameter extending interiorly therein. The diameter of bore 42 is preferably equal to the outer diameter of the insulation 43, the bevelled edge 41 of the plunger 33 being adapted to slide between this insulation and the braid 44 of a cable 46.

In operation, a cable 46 having a braid 44, an insulation 43, and conductor 47 is inserted through the bore of die 14 until it engages the bevelled cutting edge 41 of plunger 33. While holding the cable 46 in this position, the handles 11, 12 are squeezed together, upper handle 11 pivotally moving actuating member 37 and yoke 36 in an arc whereby the plunger 33 is translatorily moved forward to separate the braid 44 from the insulation 43 without injuring the insulation, which with the contactor 47 is received into the plunger bore 42. Upon further movement the plunger 33 severs braid 44 from the cable 46 by shearing engagement with the cutting edge 19 of the die 14. Thereupon, release of the pressure opens handles 11, 12 retracts the tool 10 to its open

position under influence of spring member **40**. Additional portions of the braid **44** may be removed from the cable **46** by repeating the above process. It is, of course, understood that in the event that an additional length of braid **44** is to be removed from the cable **46** the first severing operation may be eliminated and the handles **11**, **12** released to their open position, the cable **46** being carried inwardly with the plunger **33**. Pressure is then re-applied to the handles **11**, **12** and the additional length of braid **44** is separated from the insulation **43** and severed in the above-described manner.

Although the invention has been described by illustrating a specific embodiment thereof, it is clear to anyone skilled in the mechanical art that many modifications are possible by the substitution of mechanical equivalents without departing from the spirit of the invention and the scope of the appended claim.

What is claimed is:

An instrument, for use in removing a portion of a sheath surrounding the end of a tubular member, that comprises a first handle element; an anvil mounted on said first handle element near the distal end thereof, having an annular cutting edge surrounding an opening extending through said anvil substantially parallel to the handle, adapted to receive the tubular member and surrounding sheath; a yoke mounted on said first handle element intermediate the ends thereof and having an opening formed therein axially aligned with the opening in the anvil; a hollow plunger slidably mounted in the opening in the yoke, having a bevelled cutting edge on the end facing the anvil, the opening in said hollow plunger being capable of receiving an end portion of said tubular member but not its sheath whereby when an end portion of the sheathed

tubular member is passed through the opening in the anvil and positioned within the plunger opening the sheath is radially spread and disposed around a portion of the plunger; a second handle element pivotally mounted in said yoke and resiliently urged away from said first handle element; and a coupling on said second handle element engaging with said plunger whereby movement of the second handle element toward the first handle element causes movement of the cutting edge of the plunger into contacting engagement with the anvil whereby the spread portion of the sheath is annularly cut from the end of the sheathed tubular member.

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