Oct. 15, 1957 E. KIRKWOOD 2,809,676

TOOLS FOR FORMING TERMINAL COILS

Filed April 28, 1955

Fig. 1

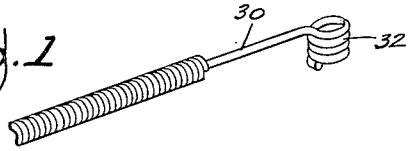


Fig. 2

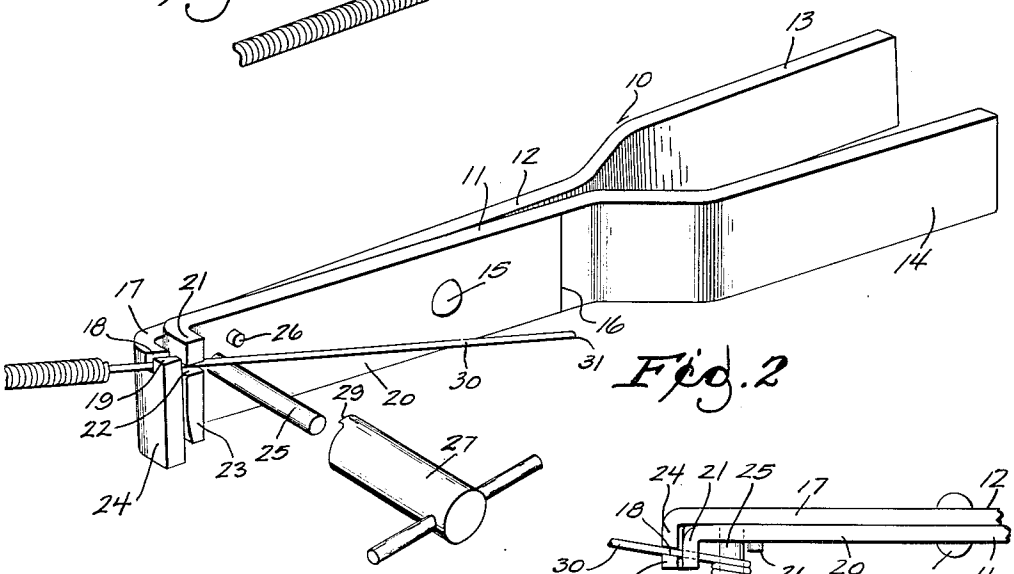


Fig. 4

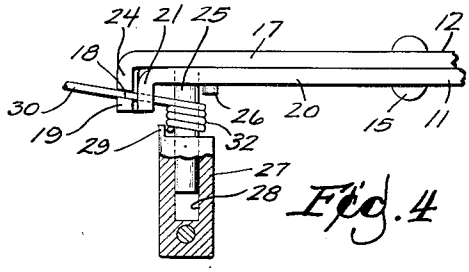


Fig. 3

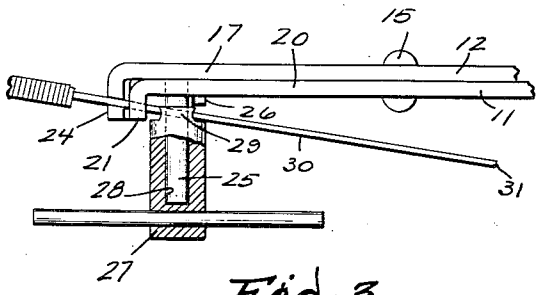


Fig. 5

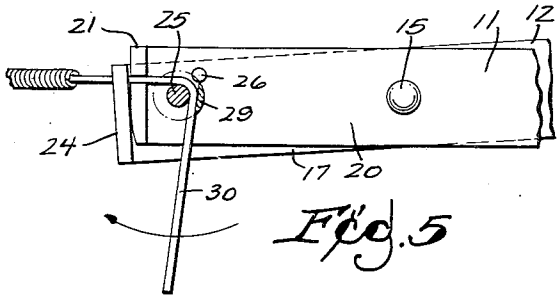
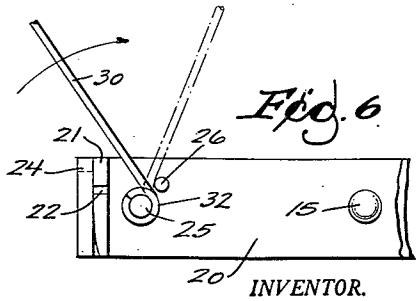


Fig. 6



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TOOLS FOR FORMING TERMINAL COILS

Earl Kirkwood, Milwaukee, Wis.

Application April 28, 1955, Serial No. 504,496

2 Claims. (Cl. 140—124)

This invention relates to improvements in tools for forming terminal coils in control wires, and more particularly of a novel tool of the plier type.

An object of the invention is to provide a device of the pliers type which in combination with a key will wind a terminal coil on the end of a control wire as used in the automotive field.

Another object of the invention is to provide a device of the type which will permit accurately uniform terminal coil winding on the ends of control wires.

Other and further objects of the invention will appear as the description proceeds, reference being had to the accompanying drawing, in which:

Fig. 1 is a fragmentary view in perspective of an automotive control wire with a terminal coil winding.

Fig. 2 is a view in perspective of a tool for winding terminal coils in control wires.

Fig. 3 is fragmentary view partly in section and partly in elevation of the tool and key preparatory to the winding operation.

Fig. 4 is a similar view at the close of a winding operation.

Fig. 5 is a similar view at the beginning of the winding operation.

Fig. 6 illustrates the method of squaring the terminal coil with the body of the wire.

Referring more particularly to the drawings, the numeral **10** refers to the device generally comprising a pair of pivoted bars **11** and **12**. The bars are bent to provide spaced handle members **13** and **14**. Between the handle members **13** and **14** and the pivot point **15** is a grooved marking **16** as a measuring point to determine the wire length suitable for a coil of proper size. The short arms **17** and **20** are of unequal length. Arm **17** has a short jaw at right angles thereto provided with an oblique slot at **18** in a side edge **19** thereof. Arm **20** has a similar short jaw at right angles thereto, **21**, which has a slot at **22** in the top edge **23** thereof. The jaw **21** is just inside the jaw **24** of arm **17**.

Arm **20** is provided with a post **25** and a small stud **26** adjacent thereto. A key **27** has longitudinal bore at **28** for the greater portion of its length which is adapted to receive the post **25**. The key **27** also has a small lug at **29** for bending the wire **30** as the key is turned.

In use, the wire **30** is placed in the slots **18** and **23** and the end **31** is cut off even with the mark **16**. The handles **13** and **14** are gripped by the operator to maintain a firm hold on the wire **30**. The key is placed over the post **25** and is then turned to the right whereupon the lug **29** will bear against the wire to turn it into an ascending spiral coil. The terminal coil **32** will thus be properly formed. As shown in Fig. 6, the wire **30** may then be bent against the small stud **26** to square the wire with the coil **32**.

It will be understood that the device is capable of many modifications in structure and design, without departing from the spirit of the invention, within the scope of the appended claims.

Having thus described the invention, what is claimed and desired to be secured by Letters Patent of the United States is:

1. A coil winder comprising a pair of flat pivoted members, handle portions on one end thereof, parallel jaw members on the opposite end thereof integral with and disposed at right angles to said pivoted members and having registrable slots therein for mutually retaining a wire to be coiled, a post projecting from one face of the shorter member adjoining its jaw portion, a key turnable on said post, and a lug on the lower end of said key to catch said wire and turn it about said post to form a coil as said key is turned.

2. A coil winder comprising a pair of flat elongated pivoted members, outwardly offset handle portions on one end thereof, parallel jaw members on the opposite end thereof integral with and disposed at right angles to said pivoted members and having slots therein for mutually retaining a wire to be coiled, a post on one face of the shorter member adjoining the innermost jaw, a hollow key turnable on said post, a lug projecting downwardly from the end of said key to catch the wire and bend it about said post to form a coil when said key is turned, and a stud adjoining said post as a fulcrum to bend said wire into squared position relative to said coil.

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