Feb. 22, 1927. 1,618,734

F SMITAK

WIRE CUTTING AND STRIPPING DEVICE

Filed April 14, 1925

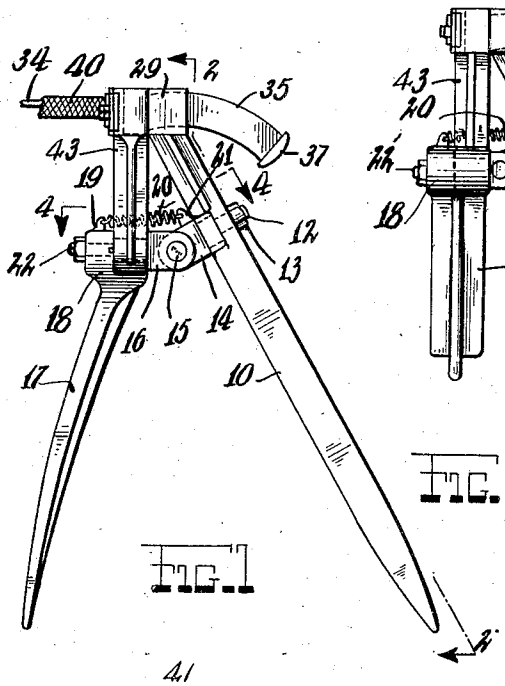


FIG. 1

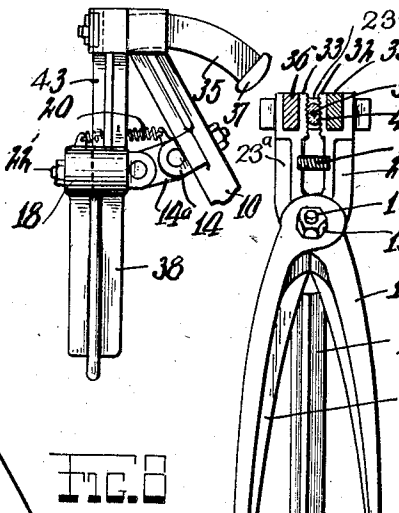


FIG. 8

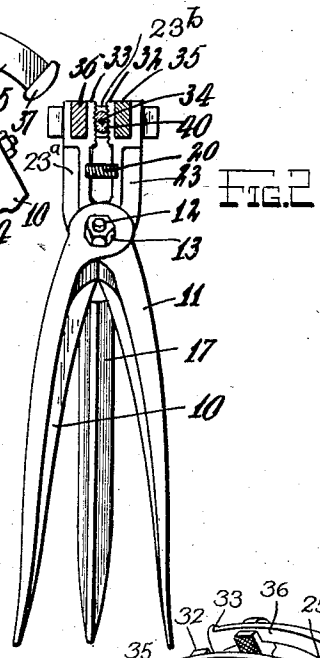


FIG. 2

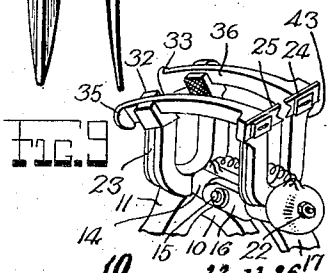


FIG. 9

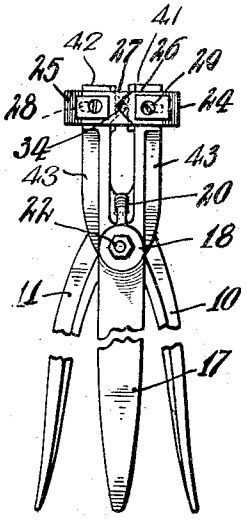


FIG. 3

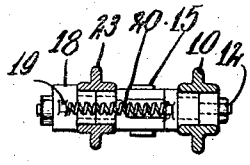


FIG. 4

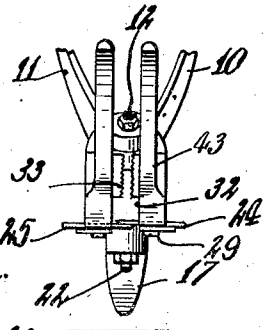


FIG. 5

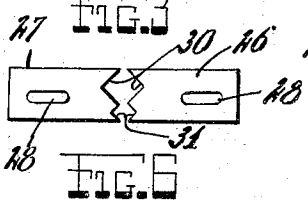


FIG. 6

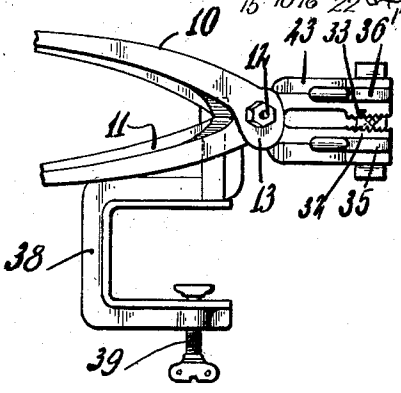


FIG. 7

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UNITED STATES PATENT OFFICE.

FRANK SMITAK, OF NEW YORK, N. Y.

WIRE CUTTING AND STRIPPING DEVICE.

Application filed April 14, 1925. Serial No. 22,932.

This invention relates to improvements in wire stripping devices, particularly pliers for skinning or stripping insulated wires and it is the principal object of the invention to provide a device of this kind that can either be operated at a stationary workbench or carried on the person of a workman, as occasion requires.

Another object of the invention is to provide a device of this character, which is durable, simple and efficient to perform its work.

A further object of this invention is the provision of a tool for stripping insulated wires equipped with knife-blades adapted for the cutting of the insulation from wires of varying diameters.

A still further object of the invention is the provision of a pair of pliers having their operating handles pivotally and resiliently connected by means limiting their movements at a predetermined ratio.

These and other objects and advantages of my invention will become more fully known, as the description thereof proceeds, and will then be specifically pointed out in the appended claims.

In the accompanying drawing forming a material part of this disclosure:

Fig. 1 is a side elevation of a wire cutting and scraping device constructed according to the present invention.

Fig. 2 is a front elevation thereof, partly in section on line 2—2 of Fig. 1.

Fig. 3 is a rear elevation of the novel and improved pliers.

Fig. 4 is a cross section on line 4—4 of Fig. 1.

Fig. 5 is a top plan view of my device.

Fig. 6 is a detail plan view of the cutting knives.

Fig. 7 is a front elevation of a modified form of my device.

Fig. 8 is a fragmentary side elevation thereof.

Fig. 9 is a perspective view of the jaw assembly of the device in open position.

The device comprises a gripping element in the form of a pair of pliers having handles 10 and 11, a pivot 12 and lock nut 13 and arms 23 and 23^a; the said arms having knurled jaws 23^b at the extremities thereof for the purpose of gripping the insulated wire. The extremities of the said jaws are slotted to receive the arc bars 35 and 36 which are adapted to slide therein and are provided with end stops as shown at 37. These arc bars are integral with the jaws 41 and 42 of the U clamp 43, the said clamp being jointed on the pin 22 and adapted to open and close in conjunction with the jaws of the plier element; being actuated by the arc bars above described.

The U clamp is provided with blades 26 and 27 which have V cuts 30 and 31 for varying sizes of wire. This clamp is supported by member 17 hingedly connected intermediate the bottom end of the supporting member 17 and the top end of the clamp to the plier element by means of the pivot 15 and the studs 14 and 16. The stud 16 extends through the clamp joint and projects outwards therefrom and provides means for the attachment of the member 17 which is secured by a nut on the said stud. This member 17 may be removed and a bench clamp as shown at 38 put on in its place.

The blades 26 and 27 are adjustably secured to the jaws of the U clamp by means of the screws as shown at 29 and the slots as shown at 28, and are further held by the serrations shown at 24 and 25.

A coil spring 20 secured at 19 and 21 serves as a retractable means for the principle elements of the device.

In operation: a wire 34 with insulation 40 is gripped between the jaws of the plier element, which at the same time closes the jaws of the U clamp by means of the arc bars, thus causing the cutting blades to sever the insulation down to the surface of the enclosed wire. The said wire now being firmly held and the insulation cut; the handles of the plier element are swung in toward the member 17; or the bench clamp, if used instead; thus moving the gripping element away from the U clamp and stripping off the desired amount of the insulating material.

It is to be understood that while the drawing represents the preferred form of my device, changes may be made as fall within the scope of the appended claims without departure from the spirit of my invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A device of the class described, comprising a pair of pivoted members substantiating a plier, a U-shaped member having its arms pivoted at their lower extremities,

a member supporting said U-shaped member, said supporting member hingedly connected intermediate the bottom end of the supporting member and the top end of said U-shaped member to said plier members, means on said U-shaped frame for cutting transversely the insulation of wires of varying diameters, the opposite inner faces of said plier members being formed with serrated cheeks to grip the previously cut insulated wire, whereby upon moving the lower ends of the plier member towards said U-shaped supporting member, the upper end of said plier member will be moved away from said U-shaped member.

2. In combination with a plier element having slotted jaws, a U-clamp, jointed at its lower extremity, and in hinged connection with the said plier element, are bars depending from said U-clamp, and passing through the slotted jaws of the said plier element, cutting blades secured to the jaws of the said U-clamp, and means to support the said U-clamp to co-act with the said handles of the plier element.

3. In combination with a plier element having slotted jaws, a jointed U-clamp hingedly connected to the said plier element and having depending arc bars in slidable relation to the jaws of the said plier element, cutting blades adjustably mounted on the jaws of the said U-clamp, and means to support said plier element in operative position, substantially as shown and described.

In testimony whereof I have affixed my signature.

FRANK SMITAK.