S. G. WOOD.

WIRE STRIPPING DEVICE.

APPLICATION FILED DEC. 4, 1915.

1,196,322.

Patented Aug. 29, 1916.

2 SHEETS—SHEET 1.

Fig. 1

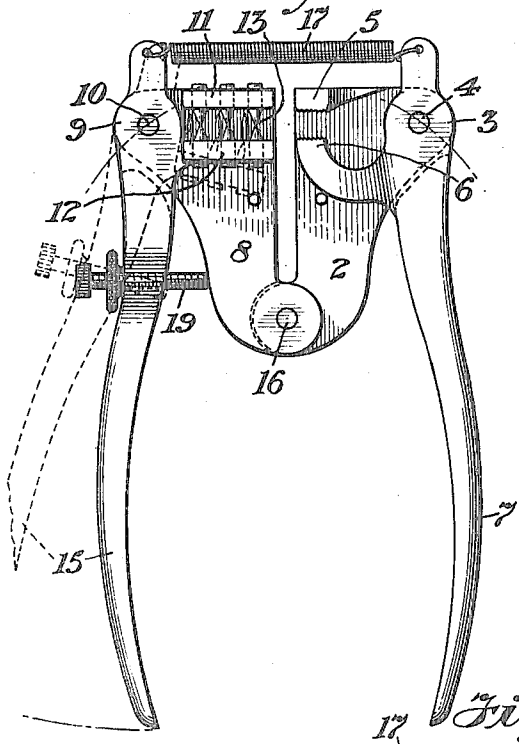


Fig. 2

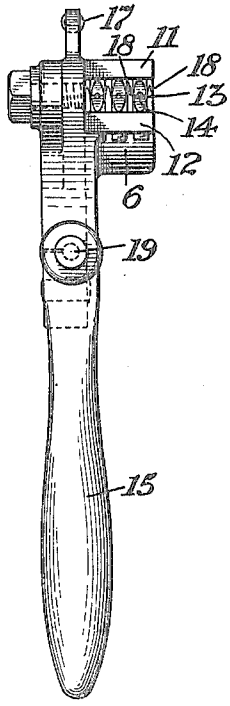
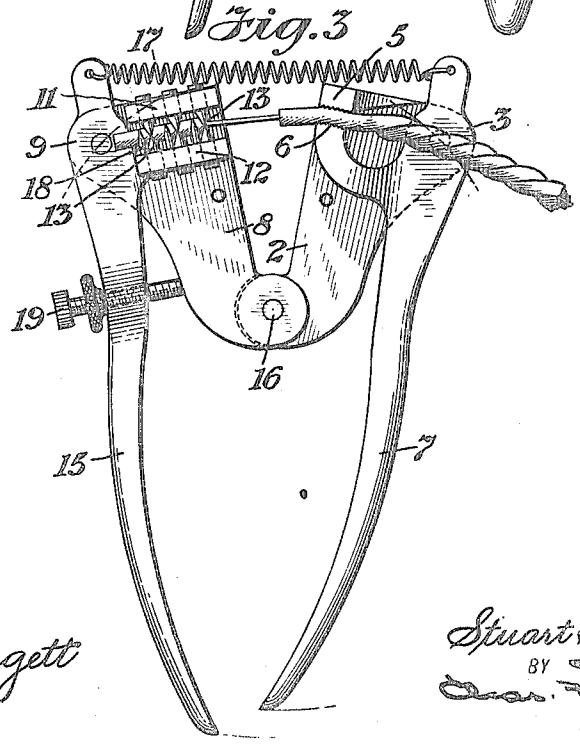


Fig. 3



WITNESS

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2 SHEETS—SHEET 2.

Fig. 4

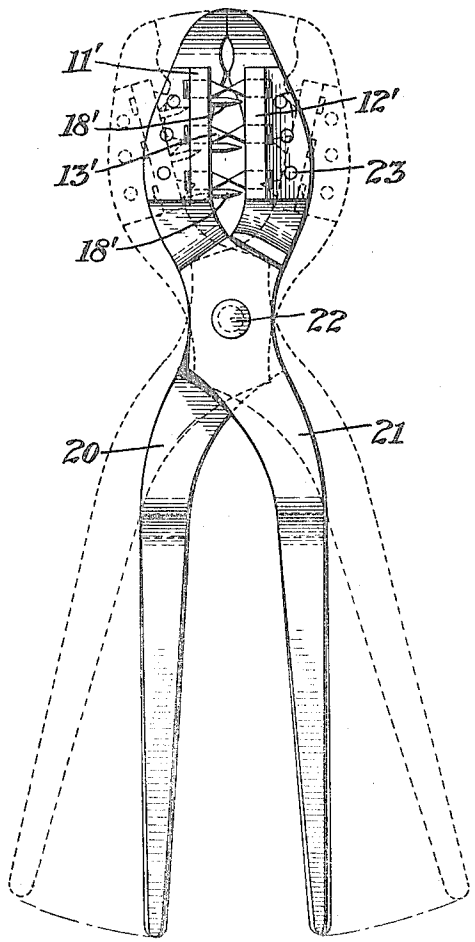


Fig. 5

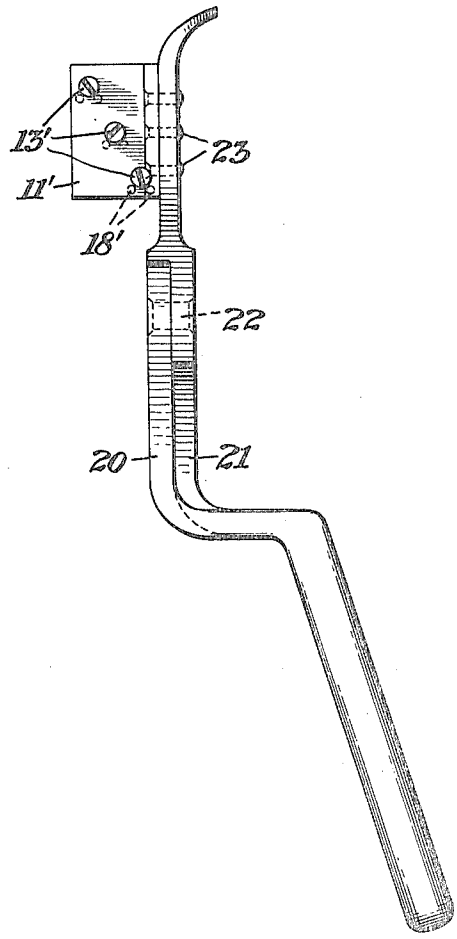


Fig. 6

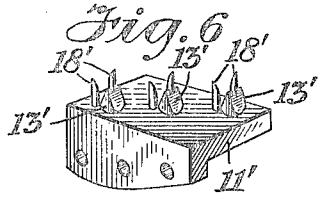
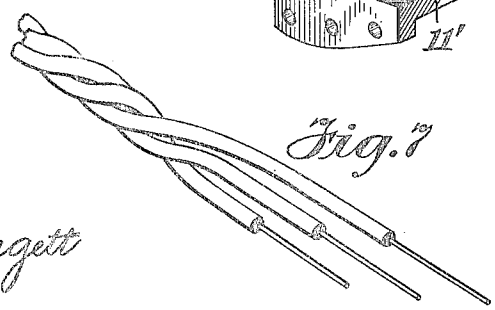


Fig. 7



WITNESS

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STUART G. WOOD, OF BROOKLYN, NEW YORK.

WIRE-STRIPPING DEVICE.

1,196,322. Specification of Letters Patent. Patented Aug. 29, 1916.

Application filed December 4, 1915. Serial No. 65,055.

To all whom it may concern:

Be it known that I, STUART G. WOOD, a citizen of the United States, and resident of the borough of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Wire-Stripping Devices, of which the following is a specification.

My invention relates to that class of devices adapted for stripping the insulation from insulated wire, such, for example, as that disclosed in my prior Patent No. 1,151,319, issued to me August 24, 1915, and has more special reference to the stripping of multiple-strand wire. In the use of this type of wire or electrical conductor, it frequently happens that the terminals to which the strands of the wire are adapted to be connected are arranged at different points in the length of the wire, whereby it becomes necessary to separately strip each strand at the desired point in the length of the wire for making proper connection of the same with its terminal. This operation, separately performed for each strand, is more or less troublesome and occupies considerable time. Because of this, it has been the object of my present invention to provide a device or tool adapted for stripping, at one operation, the several strands of a multiple-strand wire at the desired points in the length of the wire. This object I accomplish by means of the novel construction, arrangement and combination of parts as hereafter set forth in detail and more particularly pointed out in the appended claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a front elevation of a device embodying one form of my invention. Fig. 2 is an edge view of the same. Fig. 3 is a view corresponding to Fig. 1, but showing the device engaging a piece of multiple-strand wire and in position at the end of a wire stripping operation. Fig. 4 is a front elevation of a modified form of device embodying my invention. Fig. 5 is an edge view of the same. Fig. 6 is a perspective view of a stripping jaw removed from the device shown in Figs. 4 and 5, and Fig. 7 is a view showing a piece of multiple-strand wire having its end stripped of insulation by means of my improved device.

Similar reference characters indicate like parts in the several views.

My invention may be embodied in various forms. As shown in Figs. 1 to 3 inclusive, it is embodied in a tool having a wire clamping device, a plurality of stripping devices arranged for acting on the strands at different points in the length of the wire, and actuating means for said devices which is operative, first, to cause the clamping device to clamp the wire and the stripping devices to cut the insulation about the wire, and second, to cause a relative movement between the clamping device and the stripping devices in a direction lengthwise of the wire to effect a stripping of the cut insulation from said wire.

The wire clamping means of this tool comprises two members, 2 and 3, pivoted together at 4, and provided respectively with coöperating clamping jaws 5 and 6; these jaws projecting laterally forward from the face side of the tool a sufficient distance to permit of the ready insertion of a wire or wires therebetween and the member 3 having a lever handle 7 as a means for moving the jaw 6 to and from clamping position relative to the jaw 5.

The wire stripping means also comprises two members, 8 and 9,—corresponding to the members 2 and 3 of the clamping device—which are pivoted together at 10, and provided respectively with coöperating jaws 11 and 12 having a series of stripping devices 13 arranged in a manner to act upon the strands of the wire at different points in the length of said wire. These stripping devices may be formed and mounted in any desired manner. In the present case, they are in the form of cutters having their cutting edges arranged transversely of the members 11 and 12, and are threaded into said members in order to permit of their ready removal and replacement for the purpose of sharpening or otherwise. In order that these cutters may effect a complete severance of the insulation without cutting the wire core, they are formed with oppositely located notches 14 to receive the wire, as shown in Fig. 2. These notches 14 also constitute a means for locating or positioning the strands between the cutters preliminary to and during the stripping operation. These described wire clamping means and wire stripping means are associated for coöperation by pivotally connecting the members 2 and 8 of each, as at 16, with the jaws of each arranged in substantial alinement at one side of the tool, here shown as

the face side. The tool thus formed is adapted to be used or operated in the following manner: The strands at the end of the wire to be stripped are first untwisted and straightened out to parallel positions, after which they are placed between the clamping and stripping jaws, this being readily permitted by reason of the lower jaw members being held in normal open position under the action of a spring 17 connecting at its opposite ends with extension of the jaw-carrying members 3 and 9. After the wire strands have been thus located between the several jaws, the lever handles 7 and 15 are drawn or pressed toward each other, thereby causing the same to swing on their pivots, 4 and 10 respectively, until the lower clamping jaw 6 carried by the lever handle 7 is moved sufficiently close to the jaw 5 to firmly clamp the interposed wire, and the stripping cutters of the jaw 12 carried by the lever handle 15 are moved sufficiently close to the cutters of the jaw 11 to sever the insulation of the strands or wires interposed between them, after which a continued drawing together of the lever handles causes both pairs of jaw-carrying members to swing about the pivot 16 in a direction away from each other and thereby effect a stripping of the severed insulation from the wire ends, in the manner shown in Figs. 3 and 7.

The two jaw-carrying members, 2 and 8, are preferably held in a normal closed position adjacent to each other, as shown in Fig. 1, by some suitable means permitting of their opening and closing movements. As here shown, this is accomplished by the spring 17.

As a means for more readily locating the wire strands between the stripping cutters and subsequently maintaining the same in such position during the cutting and stripping operation, I have provided suitable guides, here shown in the form of a pair of pins 18, 18, located adjacent the opposite sides of each cutter on the lower jaw.

For adapting the tool to operate upon different sizes of wire, cutters of one size may be substituted for those of a different size. Also, a certain range of adjustment may be provided by the use of an adjusting screw, such as 19, for varying the coöperating position of the cutters on the lower jaw relative to those on the opposite or upper jaw.

The tool illustrated in Figs. 1 to 3 inclusive, is specially adapted for use in stripping loose wires, as it holds the wire against the pulling action caused by the stripping of the insulation from the wire. In those instances, however, where the wire to be stripped is firmly held in connection with some support, the wire stripping means only may be required. Therefore, for such use, I have provided a tool, such as illustrated in Figs. 4, 5 and 6, in which the clamping means has been omitted. The tool shown in these figures, comprises a pair of lever members 20 and 21, connected together at a point between their ends by a pivot 22, the upper arms of which members carry stripping devices and the lower arms of which constitute operating handles.

The stripping devices of this tool substantially correspond in construction, arrangement and operation with those of the first described tool. They comprise cooperating jaws 11′ and 12′, shown as detachably connected to the lever members by fastening screws 23, and each having a plurality of coöperating stripping cutters 13′ and adjacent guides 18′, the stripping cutters being arranged lengthwise of their supporting members in order to act on the several strands at different points in the length of the wire, and also being arranged diagonally of said members in order to permit of the parallel positioning of the strands. In the use of this tool, the strands will be placed between the jaws of the same in the manner described in connection with the first described tool, after which the jaws will be forced together to sever the insulation and then drawn lengthwise of the wire to strip the severed insulation therefrom.

While I have used the term "multiple-strand wire" to denote the type of wire on which my improved tool is adapted to operate, it will be understood that such term is intended to cover a plurality of wires or strands whether twisted together or otherwise.

What I claim is:—

1. A device for stripping multiple-strand insulated wire, comprising a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws, said strippers having cutting edges arranged transversely of the jaws, and means for operating said jaws.

2. A device for stripping multiple-strand insulated wire, comprising a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws, said strippers having notched cutting edges arranged transversely of the jaws, and means for operating said jaws.

3. A device for stripping multiple-strand insulated wire, comprising a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws, means for positioning the strands relative to the strippers, and means for operating said jaws.

4. A device for stripping multiple-strand insulated wire, comprising a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws, said strippers having cutting edges ar-

ranged transversely of the jaws, guides adjacent the opposite ends of said strippers for positioning the strands relative thereto, and means for operating said jaws.

5. A device for stripping multiple-strand insulated wire, comprising a pair of pivoted jaws carrying a plurality of stripping devices arranged diagonally of the same for acting on parallel strands at different points in the length of the wire, and operating handles for said jaws.

6. A device for stripping multiple-strand insulated wire, comprising a pair of pivoted jaws carrying a plurality of stripping cutters arranged diagonally of the same for acting on parallel strands at different points in the length of the wire, and also carrying guides for positioning the strands relative to the cutters, and operating handles for said jaws.

7. A device for stripping multiple-strand insulated wire, comprising a wire-clamping device, a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws for acting on the strands at different points in the length of the wire, and means for effecting relative movement between said clamping device and the stripping devices in a direction lengthwise of the wire.

8. A device for stripping multiple-strand insulated wire, comprising a pair of wire-clamping jaws, a pair of jaws having a plurality of strippers disposed in staggered relation lengthwise of the jaws for acting on the strands at different points in the length of the wire, and means for effecting relative movement between the clamping jaws and the cutter-carrying jaws in a direction lengthwise of the wire.

9. A device of the character described, comprising two pairs of pivoted members, one member of each pair being pivotally connected together and the other member being provided with an operating handle and each pair being provided with coöperating wire engaging jaws operative through the medium of said handles and arranged with the wire-receiving openings between the same in substantially the same line.

10. A device of the character described, comprising two pairs of pivoted members, one member of each pair being pivotally connected together and the other member being provided with an operating handle and each pair being provided with coöperating wire engaging jaws operative through the medium of said handles and arranged with wire receiving openings between the same in substantially the same line, and a spring yieldingly holding the two pairs of jaw-carrying members in normal position relative to each other.

11. A device of the character described, comprising two pairs of pivoted members, one pair being provided with wire clamping jaws and the other with wire stripping jaws and the two pairs being pivotally connected for permitting movement of one pair relative to the other, means yieldingly holding the two pairs of jaw-carrying members in normal position relative to each other and also yieldingly holding the two pairs of jaws in normal open position, and operating means for moving one pair of said jaw-carrying members relative to the other.

Signed at New York, in the county of New York, and State of New York, this 1st day of December, A. D. 1915.

STUART G. WOOD.

Witnesses:
CHAS. F. DANE,
C. J. BUTLER.