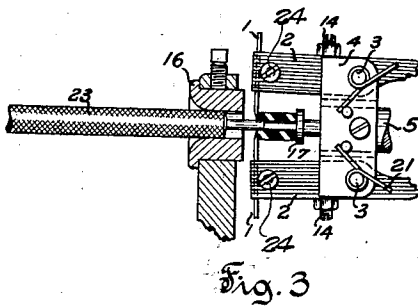
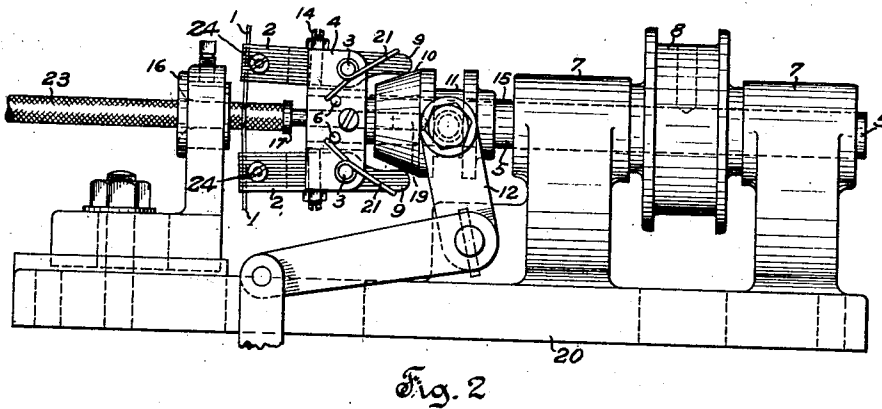
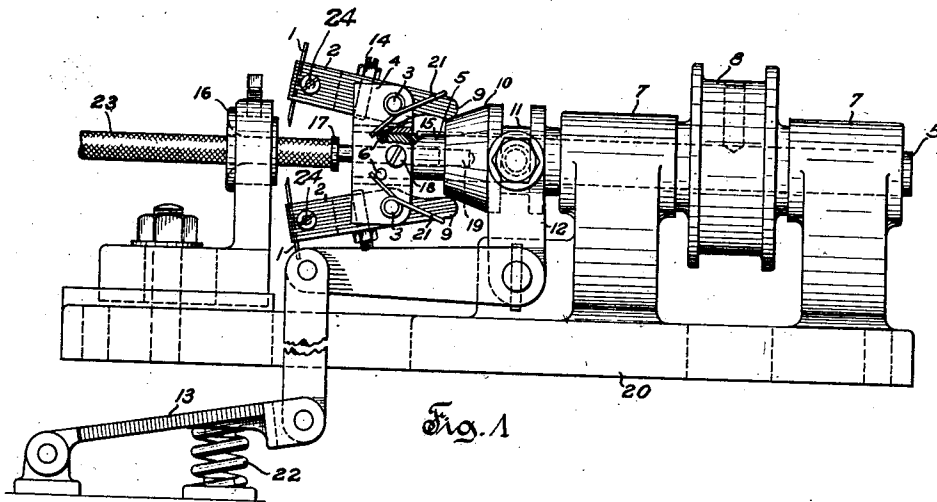


C. J. WERSEL.
WIRE STRIPPING MACHINE.
APPLICATION FILED JAN. 27, 1919.

1,433,320.

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UNITED STATES PATENT OFFICE.

CHARLES JOHN WERSEL, OF NORWOOD, OHIO, ASSIGNOR TO ALLIS-CHALMERS MANUFACTURING COMPANY, OF MILWAUKEE, WISCONSIN, A CORPORATION OF DELAWARE.

WIRE-STRIPPING MACHINE.

Application filed January 27, 1919. Serial No. 273,908.

To all whom it may concern:

Be it known that CHARLES J. WERSEL, a citizen of the United States, residing at Norwood, in the county of Hamilton and State of Ohio, has invented a certain new and useful Improvement in Wire-Stripping Machines, of which the following is a specification.

This invention relates to devices for stripping the covering or insulation from wires or electrical conductors.

In many forms of electrical apparatus as put upon the market, connectors are provided, usually more or less short, whereby the apparatus may be connected to electrical circuits or other apparatus. It is necessary that portions of the insulation at the ends of these connectors be stripped off so that the electrical conductor will be exposed and connection may be made. To do this by hand is a tedious process and furthermore cannot be efficiently and reliably done. Hand processes frequently score the electrical conductor so that subsequent bending may break the same. It is one of the objects of this invention to avoid the above and other difficulties by providing a machine whereby the stripping process can be rapidly accomplished in an efficient and reliable manner.

Another object of the invention is the provision of a machine for the attaining of the above desired results which is simple and inexpensive.

Other objects will appear hereinafter as the description of the invention proceeds.

The novel features of the invention will appear from this specification and the accompanying drawings which form a part thereof and disclose one embodiment of said invention and all these novel features are intended to be particularly pointed out in the claims.

In the drawings Fig. 1 shows a front elevation of a wire stripping machine embodying the features of the invention, portions of the machine being broken away for the sake of clearness, and a section of insulated wire, a portion of the insulation of which is to be stripped off, being shown in place in the machine.

Fig. 2 is a view similar to Fig. 1, the parts

being shown in the position which they assume after the machine has performed its cutting action and the insulation is about to be stripped.

Fig. 3 is a fragmentary view showing the relative position of the cutting elements and the insulated wire, the stripping process being almost complete.

The device is provided with knives or cutting elements 1 adjustably carried by the arms 2 and clamped thereto by screws 24 which may be pivotally mounted on pins 3 in the carrying member 4. The carrying member 4 is rotatably mounted, being keyed to shaft 5 as by means of pins 6. The shaft 5 may be mounted to rotate in bearings 7 carried by any suitable base 20, and may be driven by the pulley 8.

The arms 2 are shown as provided with rearward extensions 9 adapted to coact with a conical collar 10, a spline 15 coacting with said collar so that the same may feather upon the shaft. The collar is also provided with a groove 11 with which a projection or projections on the operating lever 12 may coact for the purpose of sliding the conical collar back and forth along the shaft. Power may be transmitted to the operating lever 12 by any suitable means and a pedal 13 may be provided for operating the same.

The arms 2 are biased to the position shown in Fig. 1 by means of suitable springs 21 and the motion of the forward end of said members toward the axis of the shaft is limited by means of screws 14.

A guide member 16 in the form of a bushing is provided so that the insulated wire may be properly centered when it is desired to strip a section of the insulation therefrom, as most clearly shown in Fig. 3. The bushing 16 is interchangeable with other bushings having different openings therein to accommodate different sizes of wires. When it is desired to strip a wire differing in size from one previously stripped, it becomes necessary to adjust either the position of the knives 1 or the screws 14. Generally speaking, an adjustment of the knives is preferable if there is a wide difference in the size of the conductors, so that the knives may assume a substantially vertical position when the parts are as in Fig. 2. It is how-

ever obvious that adjustment may also be secured by simply setting the screws 14 in a different position. The knives 1, may be adjusted by loosening screws 24, sliding the
 5 knives to the desired position and then re-tightening screws 24.

The operation of the device is as follows: After the shaft 5 has been set in rotation and the cutting elements are as in Fig. 1, an insulated wire 3 is inserted into the guide until it reaches the stop 17, which may be adjust-
 10 ably set, by the screw 18, in the hole 19 in the shaft. The pedal 13 or other means is then operated against its spring 22 or other restraining means whereby the conical collar 10 forces the forward ends of the arms 2 toward each other and consequently the cutting elements against the insulation, and producing, by reason of the rotation of said
 20 cutting elements, a substantially annular groove in said insulation. While the cutting elements are still being held in the position shown in Fig. 2 the wire is withdrawn from the guide and, inasmuch as the cutting elements hold the section of the insulation to be stripped from moving along with the conductor, the same is stripped therefrom and dropped out of the machine. Upon releasing the pedal 13 the machine is again ready
 30 for stripping another conductor. It is clear that this stripping operation may be carried on with great rapidity and that the cutting elements may be set so that the insulation is substantially cut through clear to the surface of the conductor but without scoring said conductor, thereby making the removal of the insulation very easy.

It should be understood that it is not desired to be limited to the exact details of construction herein shown and described, for obvious modifications may occur to a person skilled in the art.

It is claimed and desired to secure by Letters Patent:

1. In a device for stripping insulation from wires, rotatably mounted cutting elements, adapted to approach each other adjustable means for limiting the degree of approach and means other than said approach-limiting means for adjusting the cutting elements.

2. In a device for stripping insulation from wires, a rotatable member, a pair of oppositely disposed cutting elements driven by said member and mounted for movement in a direction transverse to the axis of rotation of said rotatable member, means adapted to guide an insulated wire to a position between said cutting elements, and adjustable stop for said wire, and means whereby movement of said cutting elements in said direction may be caused at will when said member is at rest or in rotation.

3. In a device for stripping insulation from wires, a rotatable member, a pair of

oppositely disposed cutting elements pivotally mounted on said member, a guide-element adapted to guide an insulated wire to a position between said cutting elements, a stop on said rotatable member for limiting the position of said wire, a collar movable axially with respect to said rotatable member for causing said cutting elements to approach each other, and means for moving said collar.

4. In a device for stripping insulation from wires, continuously rotatable means, and means associated with said rotatable means for cutting an annular groove through the insulation only of various sized wires to be stripped.

5. In a device for stripping insulation from wires, continuously rotatable means, cutting means associated with said rotatable means, and means for moving said cutting means so as to cut an annular groove through the insulation only of various sized wires to be stripped.

6. In a device for stripping insulation from wires, rotatably mounted cutting elements, means for causing said cutting elements to approach each other, means for limiting the degree of approach, and means other than said approach limiting means for adjusting the cutting elements.

7. In a device for stripping insulation from wires, rotatably mounted cutting elements, adjustable means for causing said cutting elements to approach each other, means for limiting the degree of approach, and means other than said approach limiting means for adjusting the cutting elements.

8. In a device for stripping insulation from wires, rotatably mounted cutting elements adapted to approach each other, means for limiting the degree of approach, means adapted to guide an insulated wire into cutting position, and means other than said approach limiting means for adjusting the cutting elements.

9. In a device for stripping insulation from wires, rotatably mounted elements adapted to approach each other, means adapted to guide an insulated wire into cutting position, means for limiting the degree of approach and means other than said approach limiting means for adjusting the cutting elements.

10. In a device for stripping insulation from wires, rotatably mounted cutting elements, means adapted to guide an insulated wire into cutting position, means for causing said cutting elements to approach each other, means for limiting the degree of approach, and means other than said approach limiting means for adjusting the cutting elements.

11. In a device for stripping insulation from wires, rotatably mounted cutting ele-

ments, means adapted to guide an insulated wire into cutting position, means for causing said cutting elements to approach each other, adjustable means for limiting the degree of approach, and means other than said approach limiting means for adjusting the cutting elements.

12. In a device for stripping insulation from wires, rotatably mounted cutting elements adapted to approach each other, means for limiting the degree of approach, means adapted to guide an insulated wire into cutting position, means other than said approach limiting means for adjusting the cutting elements, and adjustable means for limiting the position of said wire.

13. In a device for stripping insulation from wires, means adapted for continuous rotation, cutting means rotatable with said first means, means adapted to guide an insulated wire into cutting position, means for operating said cutting means in a direction substantially transverse to the axis of rotation while said cutting means is in rotation, and adjustable means for limiting the position of said wire.

14. In a device for stripping insulation from wires, cutting elements, continuously rotatable means for rotating said cutting elements, means adapted to guide an insulated wire into cutting position, means for mounting said cutting elements for movement in a direction substantially transverse to the axis of rotation, means for moving said cutting elements in said direction while the same are in rotation, and adjustable means for limiting the position of said wire.

15. In a device for stripping insulation from wires, cutting elements, continuously rotatable means for rotating said cutting elements, means adapted to guide an insulated wire into cutting position, means for mounting said cutting elements for movement in a direction substantially transverse to the axis of rotation, means whereby said elements may be adjusted relatively to said mounting means and fastened thereto, and adjustable means for limiting the position of said wire.

16. In a device for stripping insulation from wires, rotatably mounted cutting elements adapted to approach each other, means adapted to guide an insulated wire into cutting position, means for limiting the degree of approach, means other than said approach limiting means for adjusting the cutting elements, and adjustable means for limiting the position of said wire.

17. In a device for stripping insulation from wires, rotatably mounted cutting elements, means adapted to guide an insulated wire into cutting position, means for causing said cutting elements to approach each other, means for limiting the degree of approach, means other than said approach

limiting means for adjusting the cutting elements, and adjustable means for limiting the position of said wire.

18. In a device for stripping insulation from wires, rotatably mounted cutting elements, means adapted to guide an insulated wire into cutting position, means for causing said cutting elements to approach each other, adjustable means for limiting the degree of approach, means other than said approach limiting means for adjusting the cutting elements, and adjustable means for limiting the position of said wire.

19. In a device for stripping insulation from wires, a rotatable member, a pair of oppositely disposed cutting elements pivotally mounted on said member, a guide element adapted to guide an insulated wire to a position between said cutting elements, a collar rotatable with and movable axially with respect to said rotatable member for causing said cutting elements to approach each other, and means for moving said collar.

20. In a device for stripping insulation from wires, a rotatable member, a pair of oppositely disposed cutting elements pivotally mounted on said member, a collar rotatable with and movable axially with respect to said rotatable member for causing said cutting elements to approach each other and means for moving said collar.

21. In a device for stripping insulation from wires, a rotatable member, a pair of oppositely disposed cutting elements pivotally mounted on said member, means rotatable with and movable axially with respect to said rotatable member for causing said cutting elements to approach each other and means for moving said axially movable means.

22. In a device for stripping insulation from wires, a rotatable means, a pair of oppositely disposed cutting elements pivotally mounted on said means, a guide element adapted to guide an insulated wire to a position between said cutting elements, a stop on said rotatable means for limiting the position of said wire, means movable axially with respect to said rotatable means for causing said cutting elements to approach each other, and means for moving said means movable.

23. In a device for stripping insulation from wires, cutting elements, continuously rotatable means for rotating said cutting elements, means for guiding an insulated wire between said cutting elements so that the axis of the wire will substantially coincide with the axis of said rotatable means, adjustable means for limiting the position of said wire, means for mounting said cutting elements for movement in a direction substantially transverse to the axis of rotation and means for moving said cutting ele-

ments in said direction while the same are in rotation.

24. In a device for stripping insulation from wires, a rotatable member, a pair of oppositely disposed cutting elements, a pivotal mounting for said elements on said member, a guide element adapted to guide an insulated wire to a position between said cutting elements, a collar rotatable with and movable axially with respect to said rotatable member into engagement with said pivotal mounting for causing said elements to approach each other, and means for moving said collar.

25. In a device for stripping insulation from wires, a rotatable member, a pair of oppositely disposed cutting elements, a pivotal mounting for said elements on said member, a guide element adapted to guide an insulated wire to a position between said cutting elements, said elements being biased away from said wire, a collar rotatable with and movable axially with respect to said rotatable member into engagement with said pivotal mounting for overcoming said bias and causing said elements to approach each other, and means for moving said collar.

26. In a device for stripping insulation from wires, a rotatable member, a pair of oppositely disposed cutting elements, a pivotal mounting for said elements on said member, a guide element adapted to guide an insulated wire to a position between said

cutting elements, means rotatable with and movable axially with respect to said rotatable member into engagement with said pivotal mounting for causing said elements to approach each other, and means for moving said axially movable means.

27. In a device for stripping insulation from wires, a rotatable member, a pair of oppositely disposed cutting elements, a pivotal mounting for said elements on said member, a guide element adapted to guide an insulated wire to a position between said cutting elements, a collar rotatable with and movable axially with respect to said rotatable member into engagement with said pivotal mounting for causing said elements to approach each other, and a lever operatively related to said collar for moving the same axially.

28. In a device for stripping insulation from wires having different diameters of insulation and of wire, a rotatable member, a pair of oppositely disposed cutting elements, means for causing said elements to approach each other a predetermined amount depending on the diameter of the wire, and interchangeable guide means for guiding insulated wires of different selected outside diameters to a central position between said element.

In testimony whereof, the signature of the inventor is affixed hereto.

CHARLES JOHN WERSEL.