

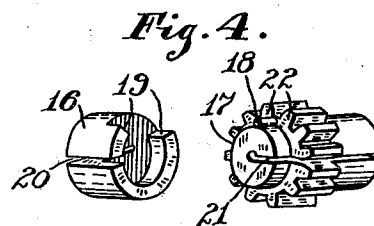
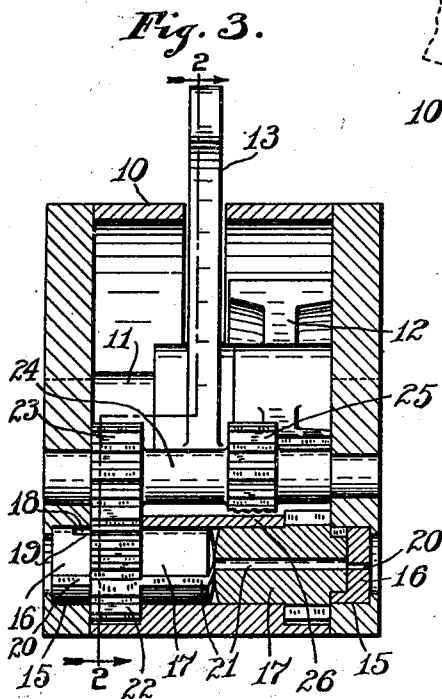
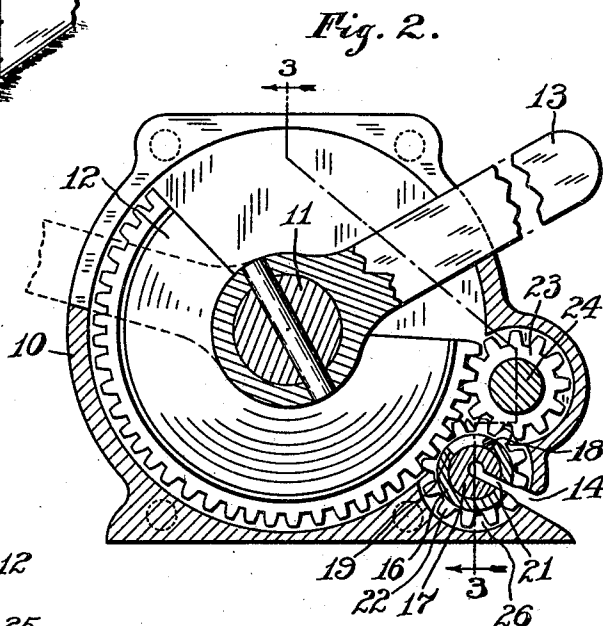
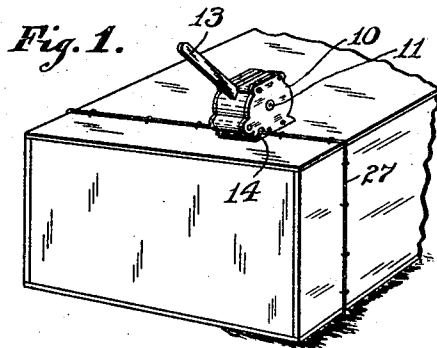
June 24, 1924.

J. H. GREENSTREET

1,499,012

WIRE TWISTER

Filed Dec. 11, 1922



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UNITED STATES PATENT OFFICE.

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WIRE TWISTER.

Application filed December 11, 1922. Serial No. 606,095.

To all whom it may concern:

Be it known that I, JASON H. GREENSTREET, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Wire Twister, of which the following is a specification.

The object of my invention is to produce an efficient device by means of which two ends of wire may be twisted together in substantial parallelism. The device is primarily designed for use in connecting the two ends of a binding wire forming part of a wire-bound box.

The accompanying drawings illustrate my invention: Fig. 1 is a perspective view of a wire-bound box with my device in position for use; Fig. 2, a vertical section of my improved device, on line 2—2 of Fig. 3; Fig. 3, a section on line 3—3 of Fig. 2, and Fig. 4, a perspective view of the two members of one of the locking and twisting elements.

In the drawings, 10 indicates a casing in which is journaled a rock-shaft 11 carrying a gear 12 and an operating lever 13 projected through the casing. Casing 10 is provided with a flat under face adapted to rest upon the surface over which the wire-ends, to be twisted together, lie.

Leading into casing 10 along one of its lower corners, is a slot 14 having a width equal to at least twice the diameter of the wires to be twisted, and at the inner end of this slot, in each side wall of the casing is formed a bearing 15.

Journaled in each bearing 15 is one end of a twisting member 16, the inner end of which is rotatively nested in a locking member 17, one of the members having a pin 18 and the other a pair of cooperating shoulders 19, 19 which permit a limited relative angular movement for a purpose which will appear.

The twisting member 16 is provided with a radial slot 20 having at its inner end a width greater than one and less than two wire diameters while the member 17 is provided with a similar radial slot 21, registering with slot 20 when pin 18 lies against one of the shoulders 19, and, at its inner end, having a width slightly greater than two wire diameters.

Member 17 is provided with a series of gear teeth 22. At one side of the casing the

teeth 22 of the adjacent member 17 mesh with gear 12 while at the other side the teeth of that member 17 mesh with a pinion 23 on an idler shaft 24 having a pinion 25 which meshes with gear 12, the arrangement being such that gear 12 will serve to simultaneously and equally rotate the two members 17 in opposite directions. The inner ends of the hubs of the two members 17 are journaled in a portion 26 of casing 10.

The operation is as follows:—

The ends of the wire 27 of the package are laid alongside of each other, the overlap being preferably substantially the width of casing 10 or thereabouts, and the casing is slipped into position with the overlapped ends lying in the slots of elements 16—17.

The first movement of lever 13 advances the elements 17—17, without advancement of elements 16—16 and without any twisting of the wires until slots 21—21 are swung out of registry with their companion slots 20, 20, thereby locking the wires in the twister elements. Further advancement of lever 13 rotates the twister elements 16—16, through the medium of pins 18, 18 and the forward shoulders 19, 19 and the ends of the wire are firmly twisted together.

When lever 13 is shifted to the limit of its forward movement the slots will be in registry with slot 14 while slots 21, 21 will be slightly in advance and out of registry. A slight return movement of lever 13 brings slots 21, 21 back into registry with slots 20, 21 and 14, without disturbing elements 16, 16 or the twisted portions of the wire, whereupon the casing 10 and its contained parts may be withdrawn.

I claim as my invention:—

1. A twister comprising a main body having a transverse bore near one corner with an inclined passageway leading from the adjacent corner into said bore, a pair of rotatable laterally slotted aligned twister elements, rotatably mounted in said bore, a rotatable, laterally slotted locking element aligned with each of the twister elements also mounted in said bore, interengaging parts between each locking element and its twister element permitting limited rotative movement of the locking element relative to its twister element and subsequent concurrent rotative movement, the slot of each twister element being throughout less than two wire-diameters wide and the slots of

each locking element being at least two wire-diameters wide, and means journaled in the main body for simultaneously rotating the locking elements and twisting elements in opposite directions.

2. A twister comprising a pair of rotatable radially slotted alined twister elements, a rotatable radially slotted locking element alined with each of the twister elements, interengaging parts between each locking element and its twister element permitting limited rotative movement of the locking element relative to its twisting element and subsequent concurrent rotative movement, the slot of each twister element being throughout less than two wire-diameters wide and the slots of each locking element being at least two wire-diameters wide, and

means for simultaneously rotating the locking elements in opposite directions.

3. In a wire twisting device, a rotative twister element having throughout a radial slot having a width less than two wire diameters, an alined rotative locking element having a radial slot having a width of at least two wire-diameters, interengaging parts on said two members permitting only limited relative rotation, and means by which a rotative driving force may be applied to the locking element.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 9th day of December, A. D. one thousand nine hundred and twenty-two.

JASON H. GREENSTREET.