

N. W. YOUNG.
WIRE TWISTING APPARATUS.
APPLICATION FILED NOV. 14, 1910.

1,009,006.

Patented Nov. 14, 1911.

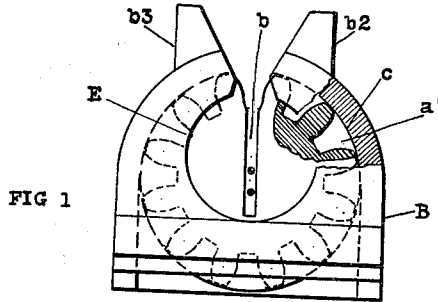


FIG 1

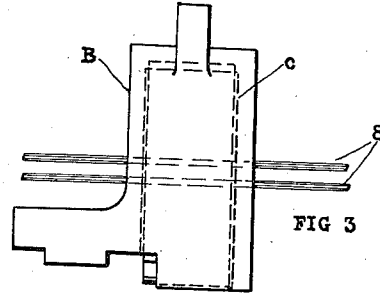


FIG 3

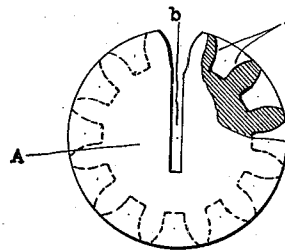


FIG 2

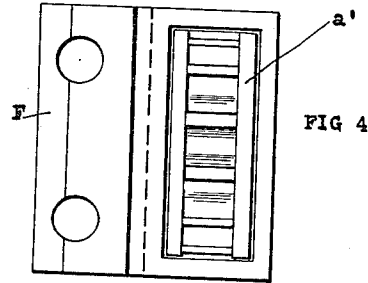


FIG 4

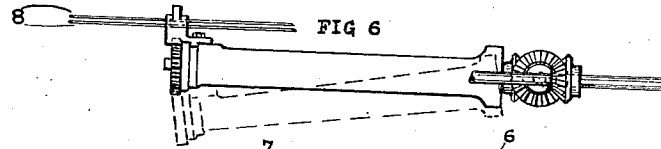


FIG 6

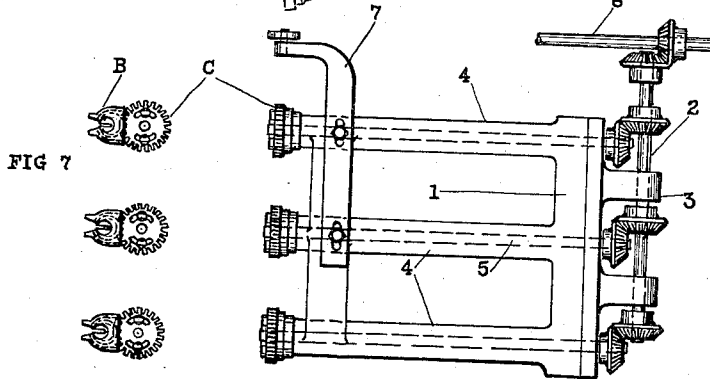


FIG 5

WITNESSES

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WIRE-TWISTING APPARATUS.

1,009,006.

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Application filed November 14, 1910. Serial No. 592,287.

To all whom it may concern:

Be it known that I, NORRIS W. YOUNG, a citizen of the United States, residing at Wilsonville, in the county of Clackamas and State of Oregon, have invented certain new and useful Improvements in Wire-Twisting Apparatus, of which the following is a specification.

This invention relates to improvements in wire twisting apparatus; and has for its object to provide a twister having mechanism for adjusting the wire toward its axial center, and other novel features. I accomplish this object by the mechanism illustrated in the accompanying drawing, in which—

Figure 1 represents the twister wheel mounted inside a housing which constitutes its bearing. Fig. 2 shows the twister wheel partly in section. Fig. 3 is an end view of the housing shown in Fig. 1. Fig. 4 is a projection from Fig. 3, showing teeth and shrouding of the twister wheel. Fig. 5 shows a side elevation of the twisters mounted in a carrying frame, with operative mechanism. Fig. 6 is a top view of same. Fig. 7 is an end elevation of Fig. 5, in part.

Similar characters of reference indicate similar parts throughout the several views.

In the drawing A indicates the twister wheel provided with the teeth *a* about its periphery, and formed between the flanged edges or shrouding *a'*. Between two of the teeth of said wheel is formed a slot *b*, which extends to and beyond the center of the wheel. The flanges *a'* form a bearing for the wheel, which revolves in the correspondingly formed bearing or seat *c* of the casing or housing, B, as shown in dotted lines in Figs. 1 and 3. One end of the casing is provided with an opening, to expose the teeth of the twister wheel, whereby the teeth of the pinion C are permitted to be placed in engagement with them, to cause said wheel to revolve in its bearing. The casing is provided at the opposite end, with the projections *b*² and *b*³, to form a guide-way for directing the wires into the slot of the wheel. This guide-way converges to a small opening at the periphery of the twister wheel, after which it expands into a circle having its center between said guide-way and the center of said wheel and its radius of such length that, as the said wheel, carrying wires in its slot, revolves, the wires will bear against the periphery E of the said circle which, owing

to its eccentric position with reference to the wheel, will exert a cam-like action on the wire causing it to move toward the axial center of the wheel. The twisting of the wires will take place at the center of rotation, and will not be made to describe a circle, causing unnecessary strain of the wires and consequent breakage.

Should the wires fail to catch in the slot, for any reason, there is no danger of their becoming entangled in the teeth of the wheel, as it revolves, as the shrouding *a'* renders this impossible.

The operative mechanism consists of the frame 1 mounted on the shaft 2, by means of the hangers 3. To each of the cross bars 4 is secured a shaft 5 provided at its end with a bevel gearing, which is operated by the correspondingly beveled gearing of the shaft 2. At the opposite ends of the shafts 5 are secured the pinions C, which are made to operate in the open ends of the casings B and to mesh with their respective twister wheels A.

In assembling the parts, the wheel is placed into the casing at the open end thereof, and the casing is then secured upon a bar 4, by means of bolts through the projection F, of the base.

In its normal position the frame 1 stands away from the wires as shown in dotted lines Fig. 6, the gearing not being in operation, and the twisters also, here, will be inoperative. At a desired moment, by means of a force applied through the arm 7, the frame is caused to swing into operative position, as shown in full lines in Fig. 6. There the gearing will be connected up and the shafts 5 set in motion, and then stopped after a given number of revolutions. The wires 8 are supported in such position that, as the frame is thus swung forward, they will pass into the guide-way and into the slot of the twister wheel A. As these twister wheels are operated through the shafts 5, the wires will be quickly twisted together, when the frame will be swung back into normal and inoperative position, and the wires released. This operation may be repeated as frequently as the work in hand requires, suitable mechanism for swinging the frame being arranged accordingly.

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

1. In a wire twisting device, a toothed

wheel having peripheral bearing flanges and a transverse slot from a point at the periphery to a point beyond the center, mounted to revolve in a casing, which is provided with a transverse circular opening having its center forward of the center of said wheel, said casing being open at one end, whereby external communication may be had with the teeth of the wheel,—and a guide-way at the opposite end of the casing communicating with the central opening thereof.

2. In a wire twisting device, a plurality of toothed wheels each having peripheral bearing flanges and a transverse slot extending from its edge to a point beyond its center, and mounted to revolve in a casing, which is provided with a transverse circular opening having its center forward of the center of said wheel, said casing being open at one end so as to expose the teeth of the wheel and having a guide-way at the opposite end communicating with said central opening,—and a gearing mechanism engaging the teeth of said wheel, for operating it.

3. In a wire twisting device, the combination of a reciprocating carrying frame, with a plurality of toothed wheels, each having peripheral bearing flanges and a transverse slot extending from its edge to a point beyond its center and mounted to revolve in a casing, which is provided with

a transverse circular opening having its center forward of the center of said wheel, said casing being open at one end so as to expose the teeth of the wheel and having a guide-way at the opposite end communicating with said central opening,—and gearing mechanism for operating said wheels and carrying frame.

4. In a wire twisting device, the combination of a carrying frame, hinged at one side and having a mechanism for operating it, with a plurality of toothed wheels, each having peripheral bearing flanges and a transverse slot extending from its edge to its center and mounted to revolve in a casing which is provided with a transverse circular opening having its center forward of the center of said wheel and a radius of a length which permits the center of the wheel to remain just within said circle at its nearest point to the periphery thereof, said casing being open at one end so as to expose the teeth of the wheel and having a guide-way at the opposite end communicating with said central opening,—and a gearing mechanism for operating the wheels and carrying frame.

In testimony whereof I affix my signature in presence of two witnesses.

NORRIS W. YOUNG.

Witnesses:

JOHN H. MORTON,
WILLIAM D. ORDWAY.