H. E. WHEELER.

MECHANISM FOR DRAWING WIRE.

APPLICATION FILED DEC. 31, 1910.

1,026,840. **Patented May 21, 1912.**

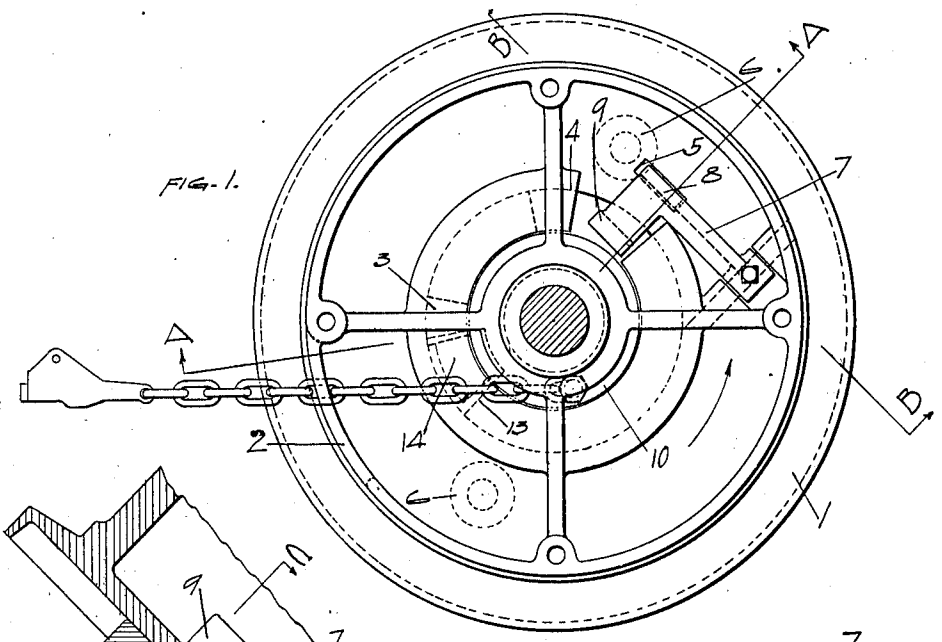

FIG. 1.

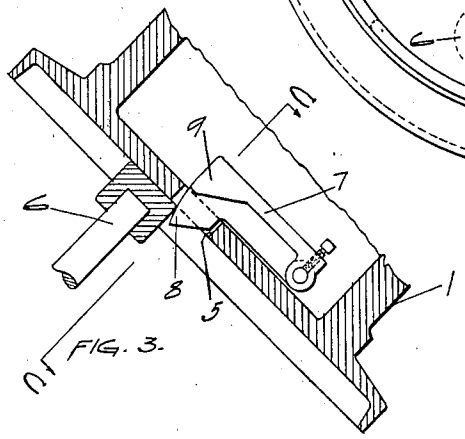

FIG. 3.

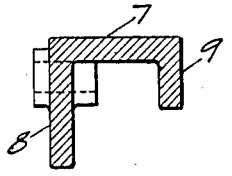

FIG. 4.

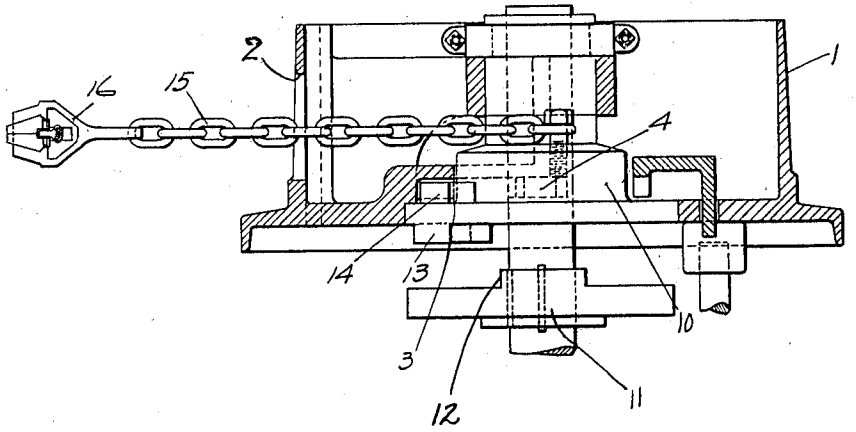

FIG. 2.

WITNESSES:

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MECHANISM FOR DRAWING WIRE.

1,026,840. Specification of Letters Patent. Patented May 21, 1912.

Application filed December 31, 1910. Serial No. 600,271.

To all whom it may concern:

Be it known that I, HARRY E. WHEELER, a citizen of the United States, and a resident of Cuyahoga Falls, county of Summit, and State of Ohio, have invented a new and useful Improvement in Mechanism for Drawing Wire, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to wire drawing mechanism.

The general object of the invention is the provision of a machine in the use of which the wire to be drawn need be gripped but once, and by which the wire will thereafter be wound upon a drum without interference of the gripping means.

To the accomplishment of these and related ends, said invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims.

The annexed drawings and the following description set forth in detail certain mechanism embodying my invention, such disclosed means constituting, however, but one of the various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:—Figure 1 is a plan view of my improved machine; Fig. 2 is a vertical section on the line A—A in Fig. 1 with certain parts shown in elevation; Fig. 3 is a section on the line B—B in Fig. 1; Fig. 4 is a section of a catch on the line C—C in Fig. 3.

The machine comprises a hollow rotatable drum 1 provided in its peripheral wall with an opening 2 and on which the wire is to be coiled as the drum, by its rotation, draws it through the die. On the bottom of the drum 1, downwardly extending lugs 3 and 4 are provided, while in its bottom is a hole 5. Two or more lifter pins 6 are disposed below the drum and are stationary relatively to the drum. A catch 7 is pivoted to the upper side of the bottom of the drum and is formed with two laterally spaced downwardly extending projections 8 and 9, the projection 8 being longer than the projection 9 and being adapted in the starting position of the drum to extend through the hole 5 and to engage one of the lifter pins 6. The projection 9 lies closer to the axial center of the drum than does the projection 8.

Within the drum 1 is a member 10 which is rotatable independently of the drum 1, but which bears a lug 14 adapted to engage the lug 4 on the drum and thereby rotate the drum. The member 10 may be conveniently driven by a primary driver 11 which bears lugs 12 which engage lugs 13 on the under side of the member 10. A flexible member 15, preferably formed of chain, is secured at its inner end to the rotatable member 10 and extends outwardly through the opening 2 in the wall of the drum, while to the outer end of the chain 15 is secured a gripper 16.

The machine operates in the following described manner. In the starting position, the lug 14 on the rotatable member 10 abuts in front and against the lug 3 on the drum, and the drum itself is so positioned that the long projection of the catch extends through the hole in the bottom of the drum and engages one of the lifter pins. The gripper is secured to the end of the wire to be drawn, and the rotatable member and the drum supported on it are dropped so that the rotatable member engages the primary driver which then rotates the rotatable member in the direction of the arrow in Fig. 1. Obviously, as the rotatable member rotates, the chain will be wound thereon and will draw in the starting end of the wire. During this time, however, the drum is positively retained from rotation by engagement of the catch with the lifter pin. As the lug 14 on the rotatable member passes under the projection 9 on the catch, it lifts the catch and thereby releases the long projection on the catch from engagement with the lifter pin and thereby renders the drum free to rotate. After the lug 14 passes under the projection 9 on the catch, and while the catch is still lifted free of the lifter pin, the lug 14 then engages the lug 4 on the drum. The different lugs and the catch will be so disposed that at the time the catch is lifted and the lug 4 engages the lug 14, the chain, the gripper and the first end of the wire will be drawn inside of the drum, and it is contemplated that this will be approximately three-quarters of a revolution of the rotatable member. When the gripper has

been drawn within the drum and the lugs 4 and 14 are in engagement, the drum will obviously be rotated with the rotatable member, and the wire will, therefore, be wound upon the outer surface of the drum which is the finally desired result.

In the normal position of parts of the gripper the two blocks are in contact along their central meeting line in what may be termed "closed position." When it is desired to initially grip the wire, or when at any time it is desired to open the gripper, it may be quickly done by merely pressing backwardly and downwardly on the thumb piece of the lever and by means of the slot and pin connection of the lever with the blocks, they will be pulled backwardly in the ways of the frame, and consequently the blocks will separate at the central line and a wire may be inserted or removed. Releasing the pressure on the thumb piece allows the tension of the spring to thrust the lever and the blocks forwardly again to closed position.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:—

1. In a device of the character described the combination of a rotatable drum, an independently rotatable member, means for bringing said rotatable member into driving relation with said drum, means for positively retaining said drum from rotation, and means operable by said member for releasing said retaining means.

2. In a device of the character described, the combination of a rotatable drum, a stationary member, locking means mounted on said drum and adapted to engage said member, a member rotatable independently of said drum, means for bringing said rotatable member into driving relation with said drum, and means for releasing said locking means from engagement with said stationary member.

3. In a device of the character described, the combination of a rotatable drum, a stationary member, a catch secured to said drum and adapted to engage said member, a member rotatable independently of said drum, means for bringing said rotatable member into driving relation with said drum, and means for releasing said catch from engagement with said stationary member.

4. In a device of the character described, the combination of a rotatable drum, a stationary member, a catch secured to said drum and adapted to engage said member, a member rotatable independently of said drum, means for bringing said rotatable member into driving relation with said drum, and means operable by said rotatable member for releasing said catch from engagement with said stationary member.

5. In a device of the class described, the combination of a hollow rotatable drum, a stationary member, a catch secured to the interior of said drum and adapted to engage said member, a member within said drum and rotatable independently thereof, means for bringing said rotatable member into driving relation with said drum, and means operable by said rotatable member for releasing said catch from engagement with said stationary member.

6. In a device of the character described, the combination of a hollow rotatable drum, a stationary member, a catch pivoted to the interior of said drum and adapted at its free end to engage said member, a member within the drum and rotatable independently thereof, a projection on said rotatable member adapted to lift said catch from engagement with said stationary member, and a projection on said drum adapted to engage the projection on the rotatable member while said catch is lifted.

7. In a device of the character described, the combination of a hollow rotatable drum provided with an opening in its peripheral wall, a stationary member, a catch pivoted to the interior of said drum and adapted at its free end to engage said member, a member within said drum and rotatable independently thereof, a flexible member secured at one end to said rotatable member and extending outwardly through said opening, gripping means secured to the outer end of said flexible member, a projection on said rotatable member adapted to lift said catch from engagement with said stationary member, and a projection on said drum adapted to engage the projection on the rotatable member while said catch is lifted.

Signed by me this 22d day of December, 1910.

HARRY E. WHEELER.

Attested by—
F. C. TREAT,
C. W. VAUGHN.