

H. L. THOMPSON.
WIRE DRAWING MACHINE.
APPLICATION FILED DEC. 10, 1908.

935,336.

Patented Sept. 28, 1909.
2 SHEETS—SHEET 1.

Fig. 1.

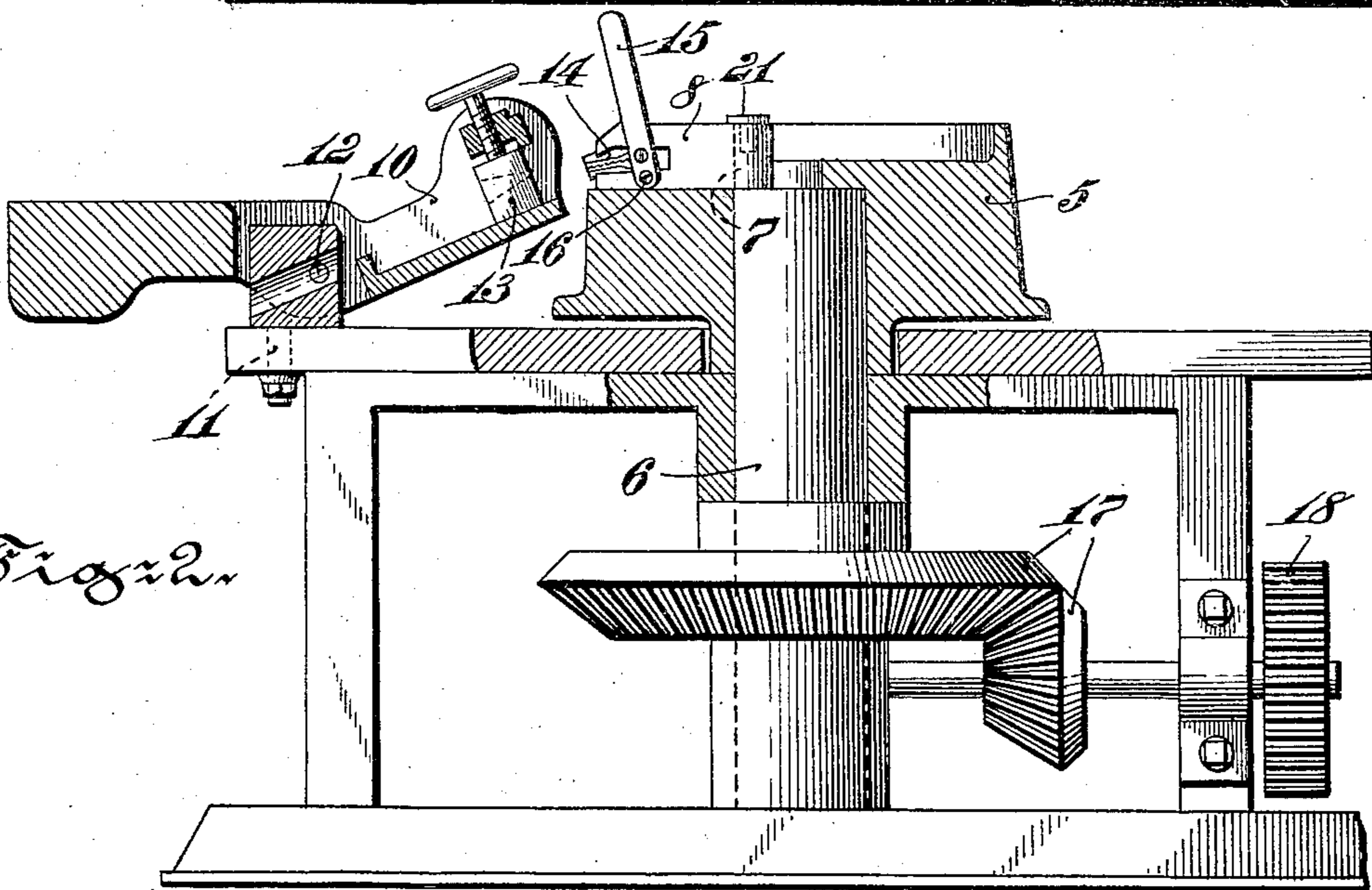
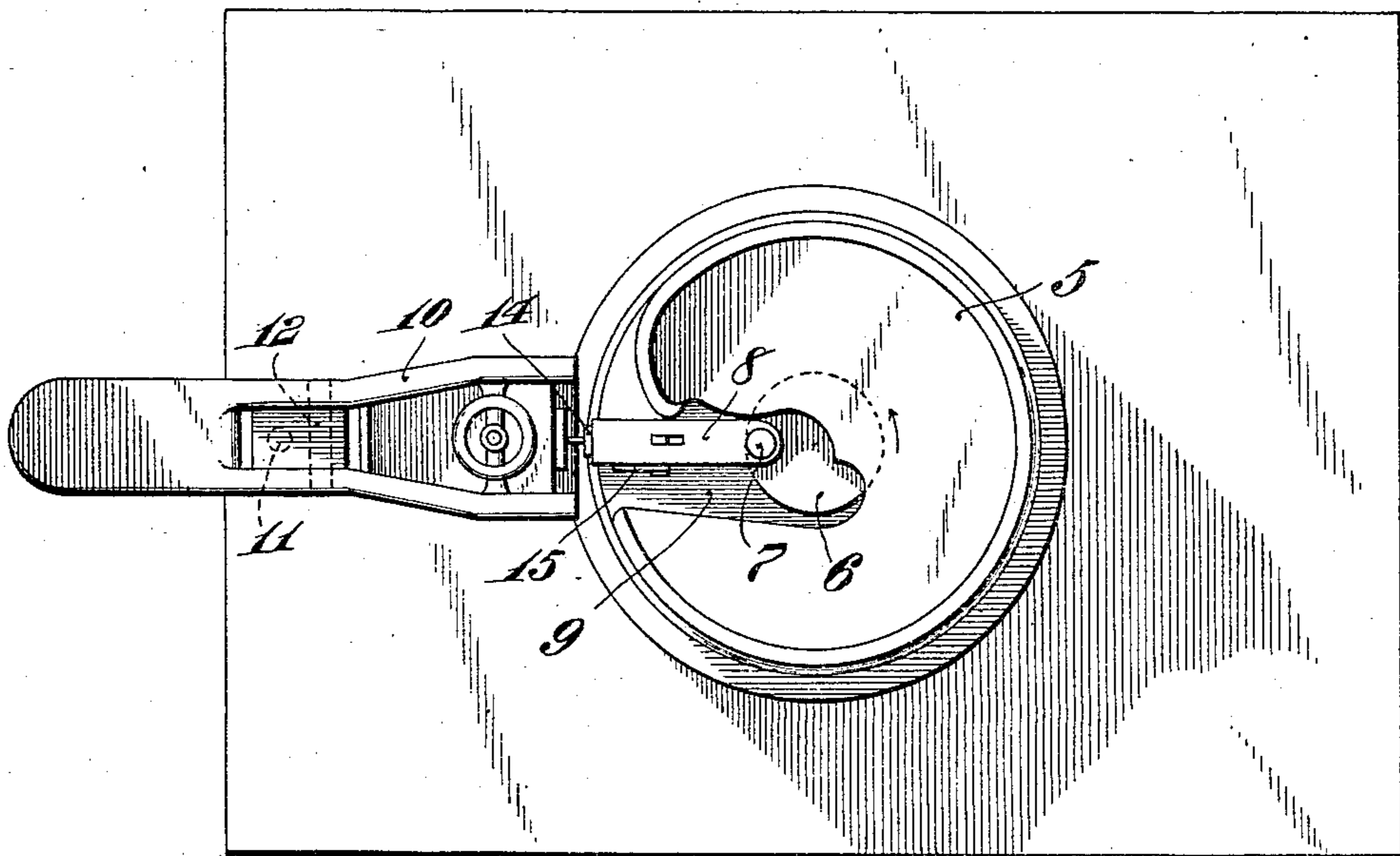


Fig. 2.

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Fig. 3.

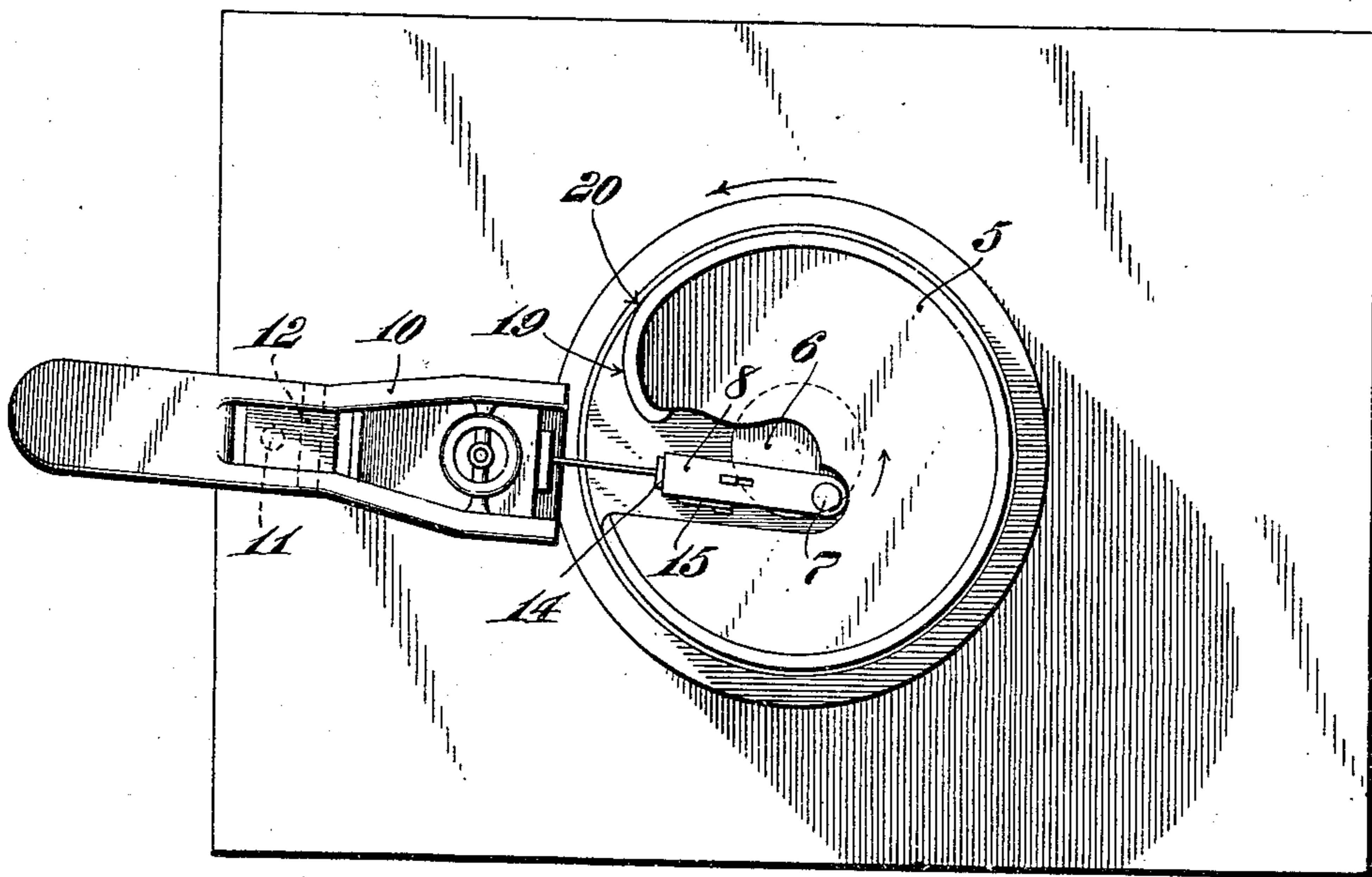
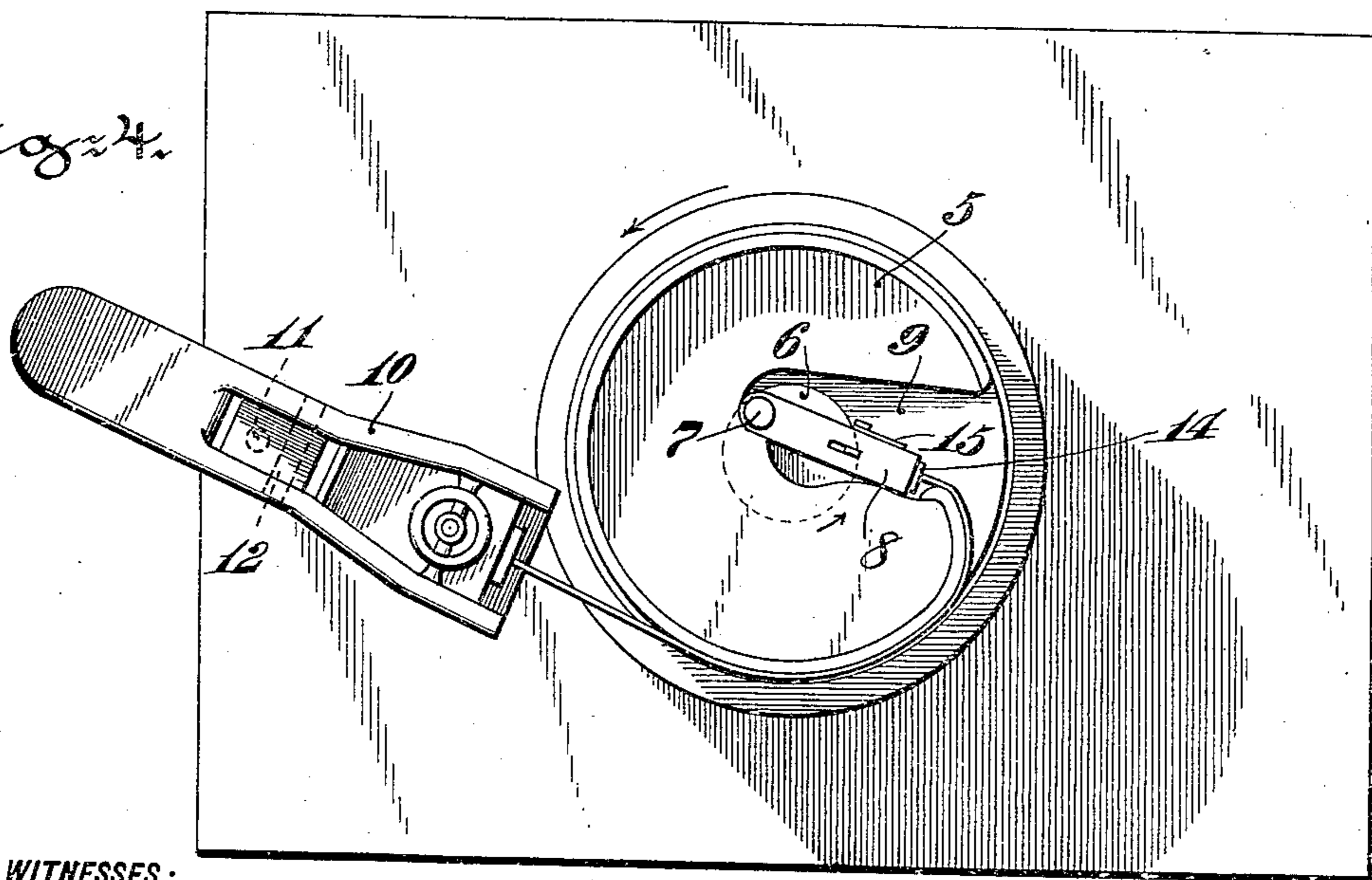


Fig. 4.



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UNITED STATES PATENT OFFICE.

HUGH L. THOMPSON, OF WATERBURY, CONNECTICUT.

WIRE-DRAWING MACHINE.

935,336.

Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed December 10, 1906. Serial No. 347,059.

To all whom it may concern:

Be it known that I, HUGH L. THOMPSON, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Wire-Drawing Machine, of which the following is a specification.

My invention relates to improvements in wire drawing machines.

My object is to provide improved means for securing the wire and providing for a gradual drawing-out operation before laying the same on the periphery of the block, whereby the rotation of the block may be begun at substantially maximum speed without danger of snapping the wire by the sudden starting of the drawing operation.

Referring to the drawings:—Figure 1 is a plan view of my device in the preliminary or starting position. Fig. 2 is a vertical section. Fig. 3 is a plan view with the block still in the initial position and after the gripper has made its preliminary movement before coming into engagement with the block. Fig. 4 is a plan view showing the relative position of the parts after the block has made a half revolution.

Similar numerals refer to similar parts throughout the several views.

The block 5 is loosely mounted on the spindle 6. On the top of spindle 6 is provided the crank pin 7 on which is journaled the gripper member 8 and is secured in position by the screw 21. The block 5 is recessed as at 9 to receive said crank pin and gripper member and to permit a limited rotative movement of the shaft and crank pin independent of the block. The die holder 10 is of the usual form having a vertical journal bearing as at 11 and a horizontal journal bearing as at 12 to provide for the universal movement of said die holder. The die is indicated at 13. The gripper member is provided with the jaws 14 sliding in convergent ways in said die holder and operated by the hand lever 15 pivoted to the gripper member 8 at 16. The spindle 6 is driven through gears 17 and pinion 18 from any suitable source of power.

The operation of my device is as follows: The wire is secured by the gripper jaws when the block 5, gripper member 8 and die holder 10 are in the position shown in Fig. 1, that is, the die holder and gripper member are in a line with the radius of the shaft 6. Upon the preliminary rotation of shaft 6 in

the direction of the arrow the crank pin 7 moves from the position shown in Fig. 1 to the position shown in Fig. 3, whereupon the crank pin and surrounding portion of the gripper member 8 have reached the limit of the recess 9 and engages with the margin thereof. By this movement of the shaft, crank pin and gripper member the wire is given a very gradual drawing movement through the die. When the gripper member engages with the block in the position shown in Fig. 3 the further movement of the shaft causes the rotation of the block and the gradual drawing operation of the wire continues until the block has reached the position in which the wire engages the spiral portion 19 of the block's periphery. The maximum speed of wire drawing begins when the full periphery of the block is reached at the point 20, see Fig. 3, and the wire drawing then continues at maximum speed until the operation is completed.

An important feature of the construction shown, is that the axis of the actuating shaft or spindle and the axis of the pivotal movement of the gripper member, may be as close together as desired irrespective of the relative dimensions of said shaft and of the crank pin or pivot connection of the gripper.

What I claim is:—

1. In a wire drawing machine, the combination of a block, a spindle loosely seated therein, a crank pin on the spindle, a gripper journaled on the crank pin, and means for establishing operative relationship between the spindle and the block after certain preliminary movement of the spindle and consequent preliminary movement of the gripper.

2. In a wire drawing machine, the combination of a rotatable block having a radially extending recess, a shaft loosely journaled in the block, a crank pin projecting from the top of the shaft into the recess, a gripper member journaled to the crank pin and lying in the recess of the block, the walls of the recess adapted to engage with the gripper when the shaft rotates, the parts being so proportioned and arranged as to permit of a free preliminary movement of the gripper in the recess upon the movement of the shaft and before the establishment of operative relationship between the shaft and the block.

3. In a wire drawing machine, the combination of a rotatable block having a radially extending recess, a shaft loosely journaled

in the block, a crank pin projecting from the top of the shaft into the recess, a gripper member journaled to the crank pin and lying in the recess of the block, the parts being so
5 proportioned and arranged that the gripper shall extend beyond the periphery of the block in the preliminary position and shall

then be withdrawn within the periphery of the block by a preliminary movement of the shaft.

HUGH L. THOMPSON.

Witnesses:

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