H. L. THOMPSON.

WIRE DRAWING MACHINE.

APPLICATION FILED OCT. 31, 1906.

935,335.

Patented Sept. 28, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

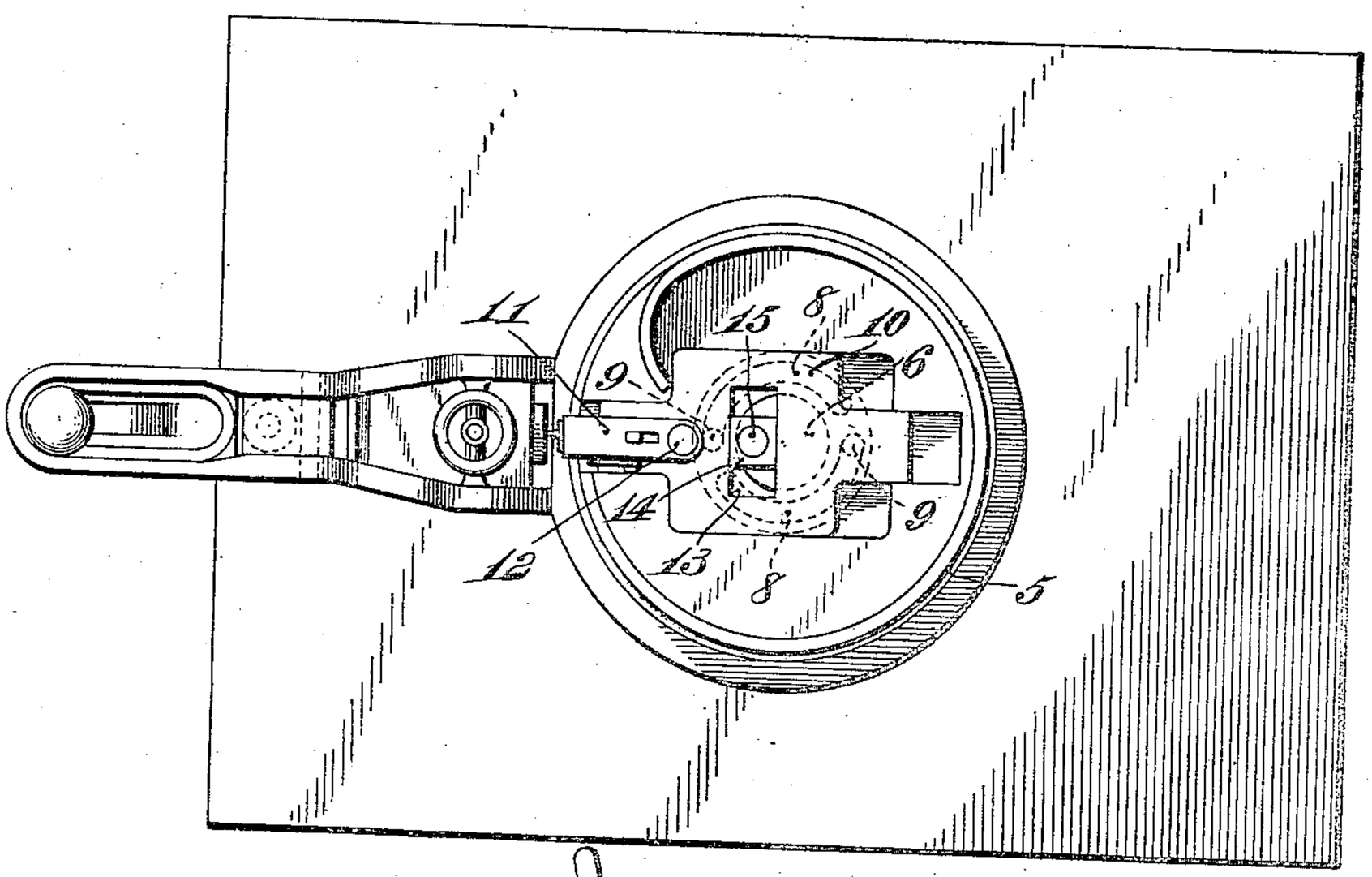
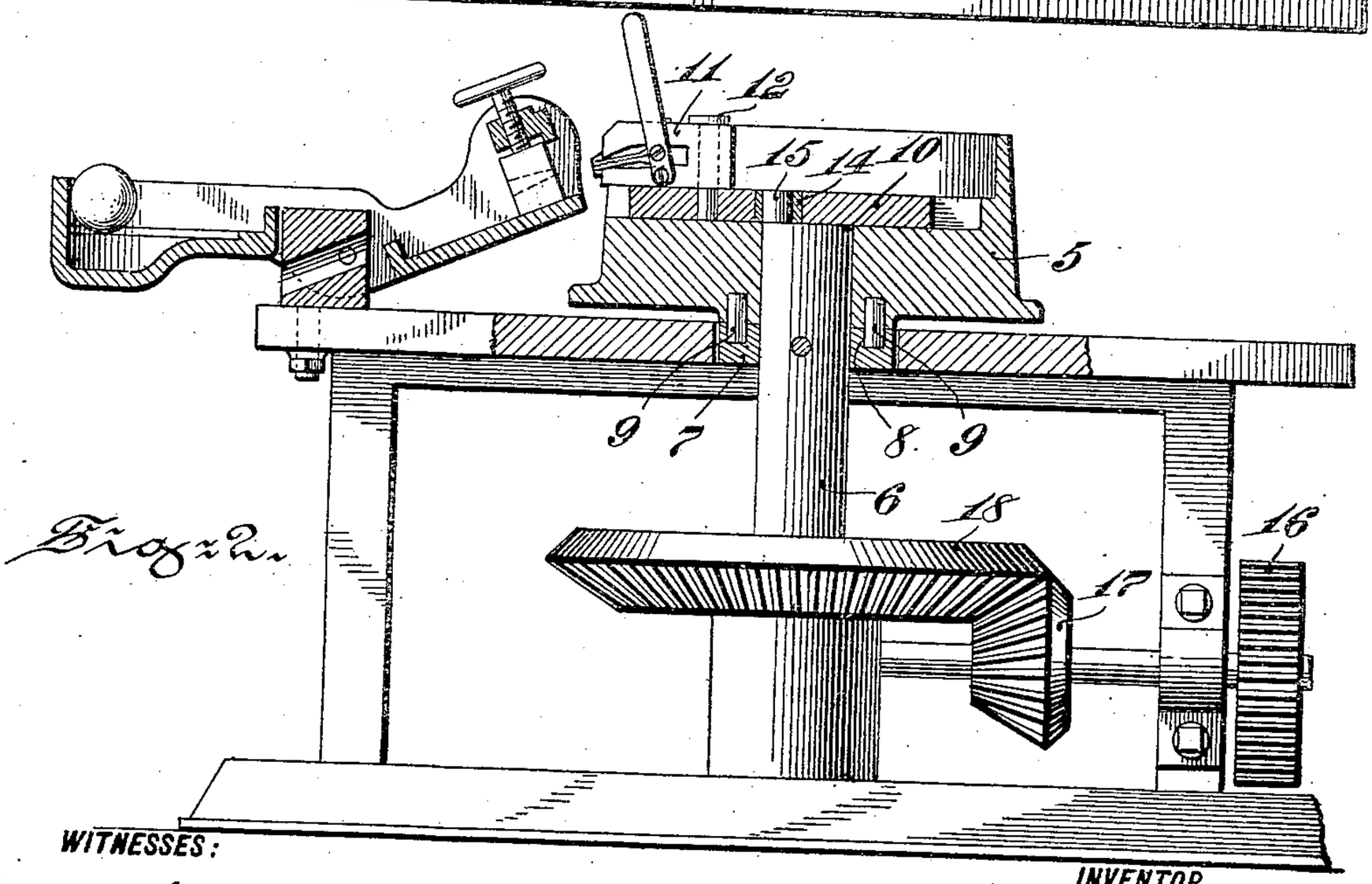


Fig. 2.



WITNESSES:

Jas. C. Wobensmith

Mae Hofmann

INVENTOR

Hugh L. Thompson,

BY

Geo. Coasdale

ATTORNEY.

H. L. THOMPSON

WIRE DRAWING MACHINE.

APPLICATION FILED OCT. 31, 1906.

935,335.

Patented Sept. 28, 1909.

2 SHEETS—SHEET 2.

Fig. 3.

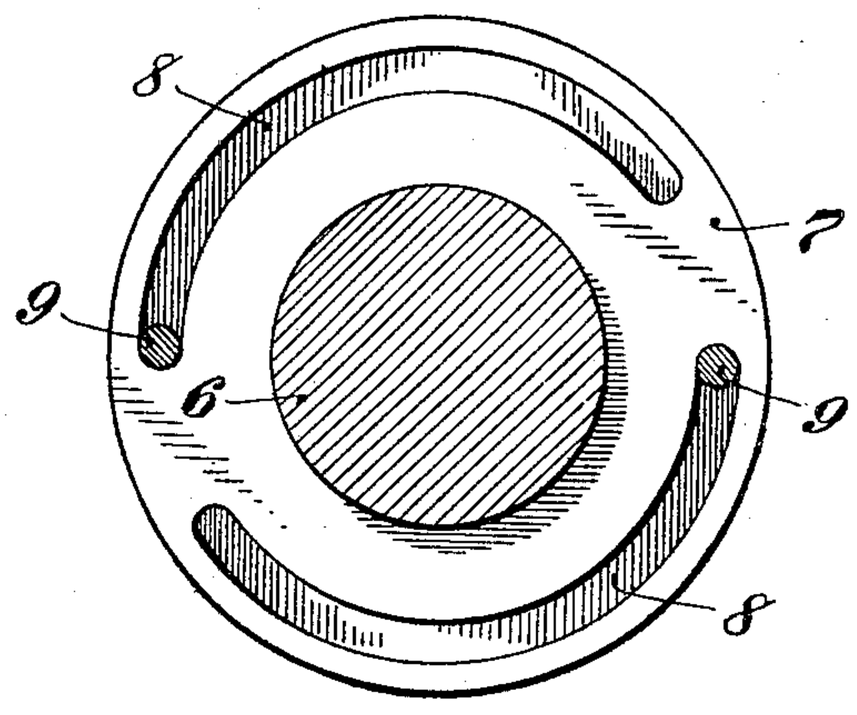
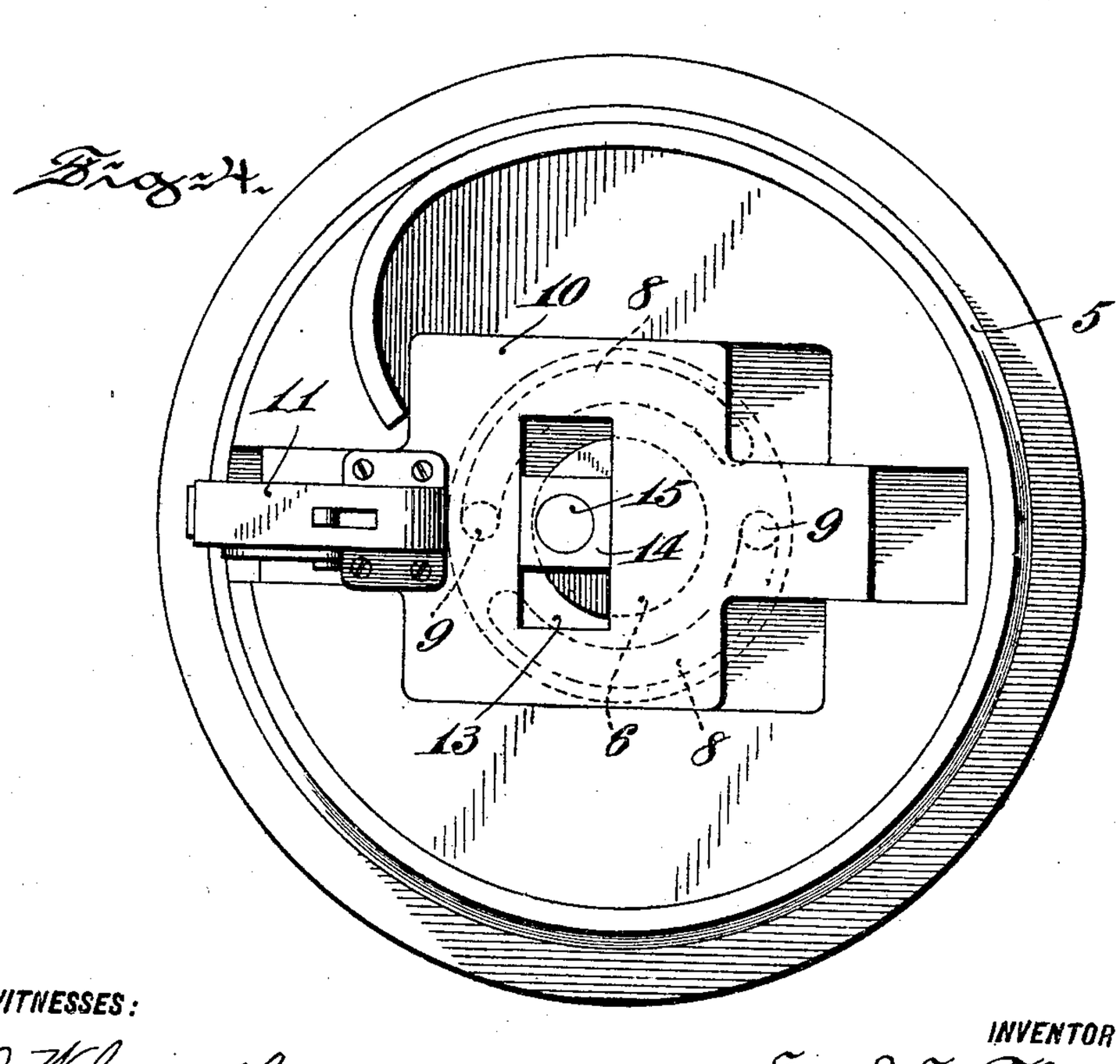


Fig. 4.



WITNESSES:

Jas. C. Wobensmith.

Mae Hofmann

INVENTOR

Hugh L. Thompson;

BY

G. H. Goodale

ATTORNEY.

UNITED STATES PATENT OFFICE.

HUGH L. THOMPSON, OF WATERBURY, CONNECTICUT.

WIRE-DRAWING MACHINE.

935,335. Specification of Letters Patent. Patented Sept. 28, 1909.

Application filed October 31, 1906. Serial No. 341,384.

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 blocks.

The primary object of my invention is to provide means for increasing the speed of drawing the wire.

My invention also provides means for dispensing with the preliminary draw-out operation.

My invention comprises means for securing a radial start of the wire drawing operation which shall finally be transmitted into a tangential drawing, at maximum speed of the block, so that the first operation of the device is to cause a comparatively slow preliminary movement of the wire through the die, sufficient to start the flow of the metal, after which the wire is laid upon the periphery of the block and the full speed of drawing then proceeds. In this way a higher speed of drawing is made possible, than would be the case were the drawing operation begun tangentially with respect to the block since the sudden start of the drawing would cause the breaking of the wire.

Referring to the drawings:—Figure 1 is a plan view. Fig. 2 is a vertical cross section on line 2, 2 of Fig. 1. Fig. 3 is a detail of the channeled hub for coöperating with the pins in the block to form a clutch. Fig. 4 is a detail of my device showing a modified method of securing the gripper to the sliding member.

Similar numerals refer to similar parts throughout the several views.

The block 5 is mounted on the vertical shaft or spindle 6 and is adapted to have a certain limited independent movement thereon. The hub 7 is keyed to the spindle or shaft 6, and is provided with the nearly semi-circular channels 8 in the upper side thereof. The underside of the block is provided with the pins 9 adapted to reside in said channels 8. By this means a preliminary movement of the shaft is permitted until the pins 9 reach the ends of their respective channels when the shaft and block become locked and rotate together.

In the upper face of the drum is provided a reciprocating member 10, to which the usual form of gripper or vise 11 is secured by the pin 12. This reciprocating member 10 is provided with a transverse recess or way 13, in which fits the sliding box 14, engaging the crank pin 15, on the top of shaft 6. It will thus be seen that, starting in the initial position as shown in Fig. 1, the shaft begins to rotate in the direction of the arrow. The crank pin 15, in sliding box 14, moves the reciprocating member 10 in the direction from left to right, to withdraw the gripper member within the periphery of the block, to cause the preliminary slow drawing of the wire. During the operation of the crank pin 15 and reciprocating member 10, the hub 7 has rotated until the pins 9 have reached the opposite ends of channels 8 thereby locking the hub with the block and causing the rotation of the same together, whereupon the wire is laid on the periphery of the block and the drawing continues now at maximum speed. To make this structure most efficient a swiveled die holder is used having a free movement both in the vertical and horizontal plane so that it may follow the direction from the radial to the tangential position and also may follow the course of the wire as it is wound downwardly to the rim of the block.

The gripper member or vise 11 is of the usual form and needs no specific description here and as above stated it is shown in Figs. 1 and 2 as pivoted to the reciprocating member 10, so that when member 10 has assumed the withdrawn position the gripper may turn in the recess provided in the block to facilitate in laying the wire without too sharp a bend upon the periphery of the block. This gripper or vise may however be rigidly secured to sliding member 10 as shown in Fig. 4 without departing from the spirit of my invention.

The spindle or shaft 6 is shown as driven through the gears 17 and 18, by a pinion 16 from any suitable source of power, but it is obvious that any of the usual forms of driving mechanism may be applied.

What I claim is:—

1. In a wire drawing machine the combination of a rotatable block, a vise-supporting member slidably mounted in the block, a vise pivotally connected with said member, and means for causing the preliminary movement

of said member in a direction radial with respect to the block before the movement of the block.

2. In a wire drawing machine, a rotatable block, a spindle journaled in the block, and means for rotating the same, a hub keyed to the spindle and provided with a curved recess and a pin projecting from the block into said recess so as to permit of a preliminary rotation of the spindle independently of the block, a crank pin on said spindle, a reciprocating member in the upper face of the block, a vise connected therewith, and sliding box means operated by the crank pin and coöperating with the reciprocating member for operating the reciprocating member.

3. In a wire drawing machine, the combination of a rotatable block, a vise, a radially movable member for supporting the vise, a shaft loosely journaled in the block, a clutch for locking the shaft with the block after preliminary movement of the shaft, a crank pin on the shaft and a coöperating sliding box connected with the vise supporting member for actuating said member prior to the rotation of the block.

HUGH L. THOMPSON.

Witnesses:
WILLIS M. HALL,
C. WALTER CHILDS.