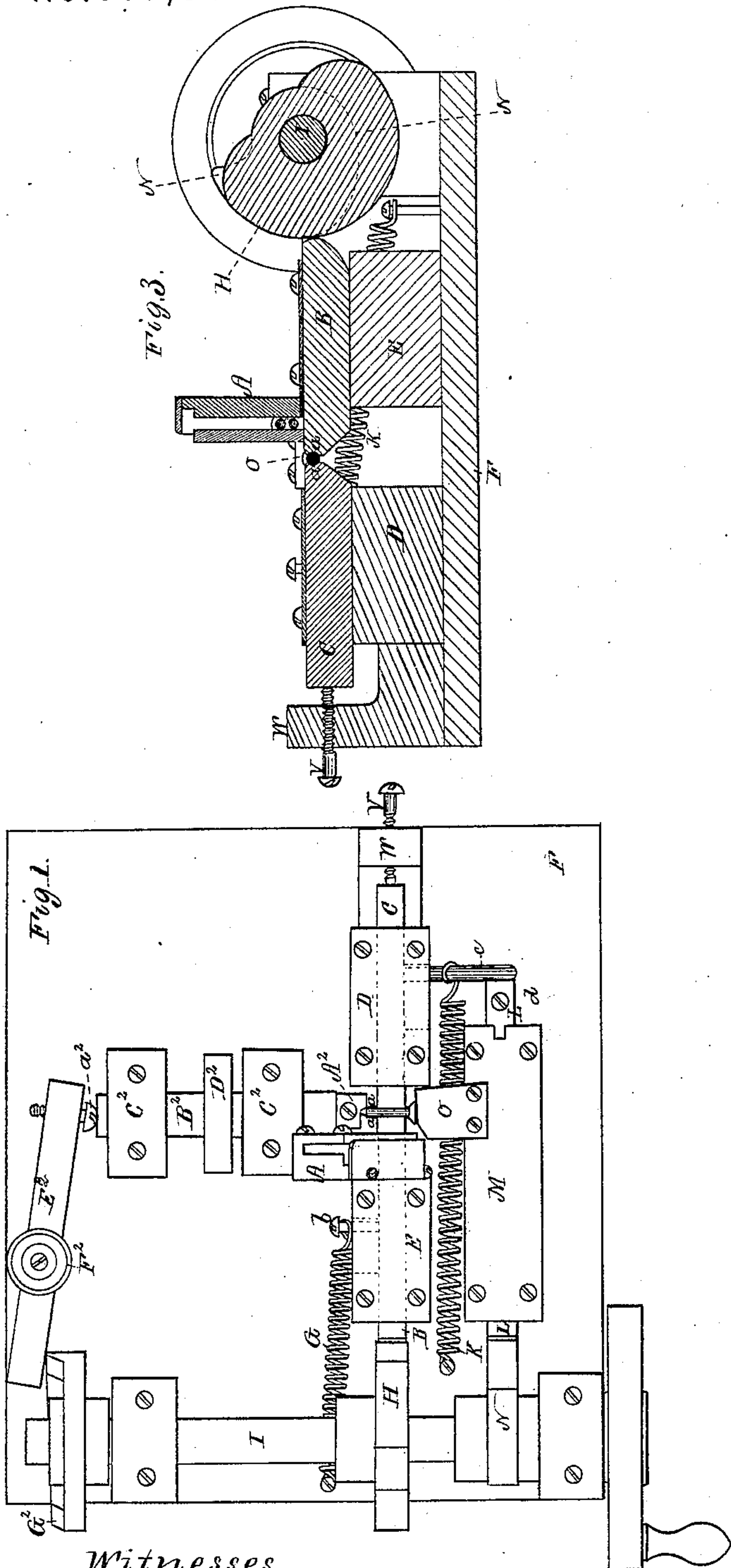


W. AIKEN.

Machines for Pointing Blanks for Wood Screws.

No. 149,966.

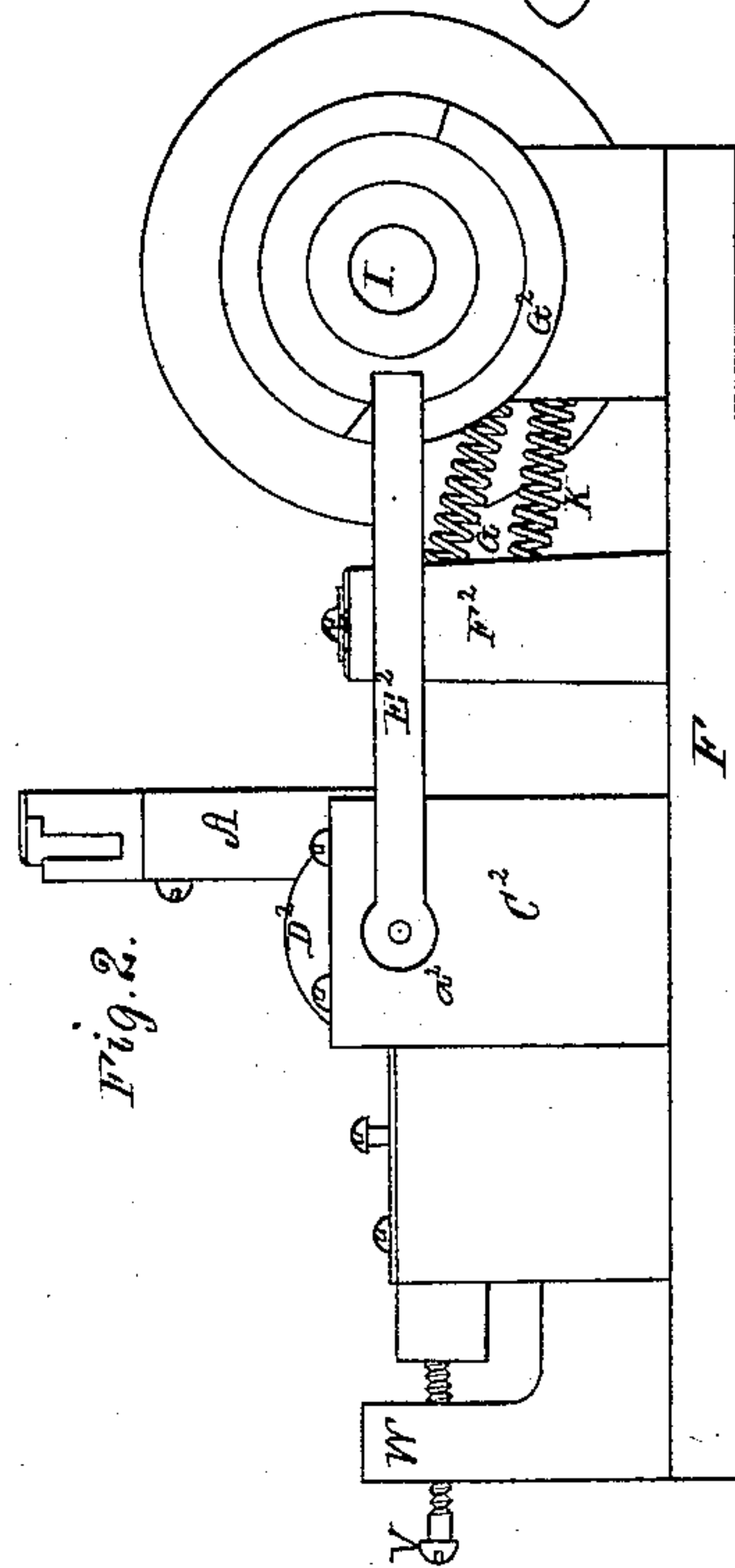
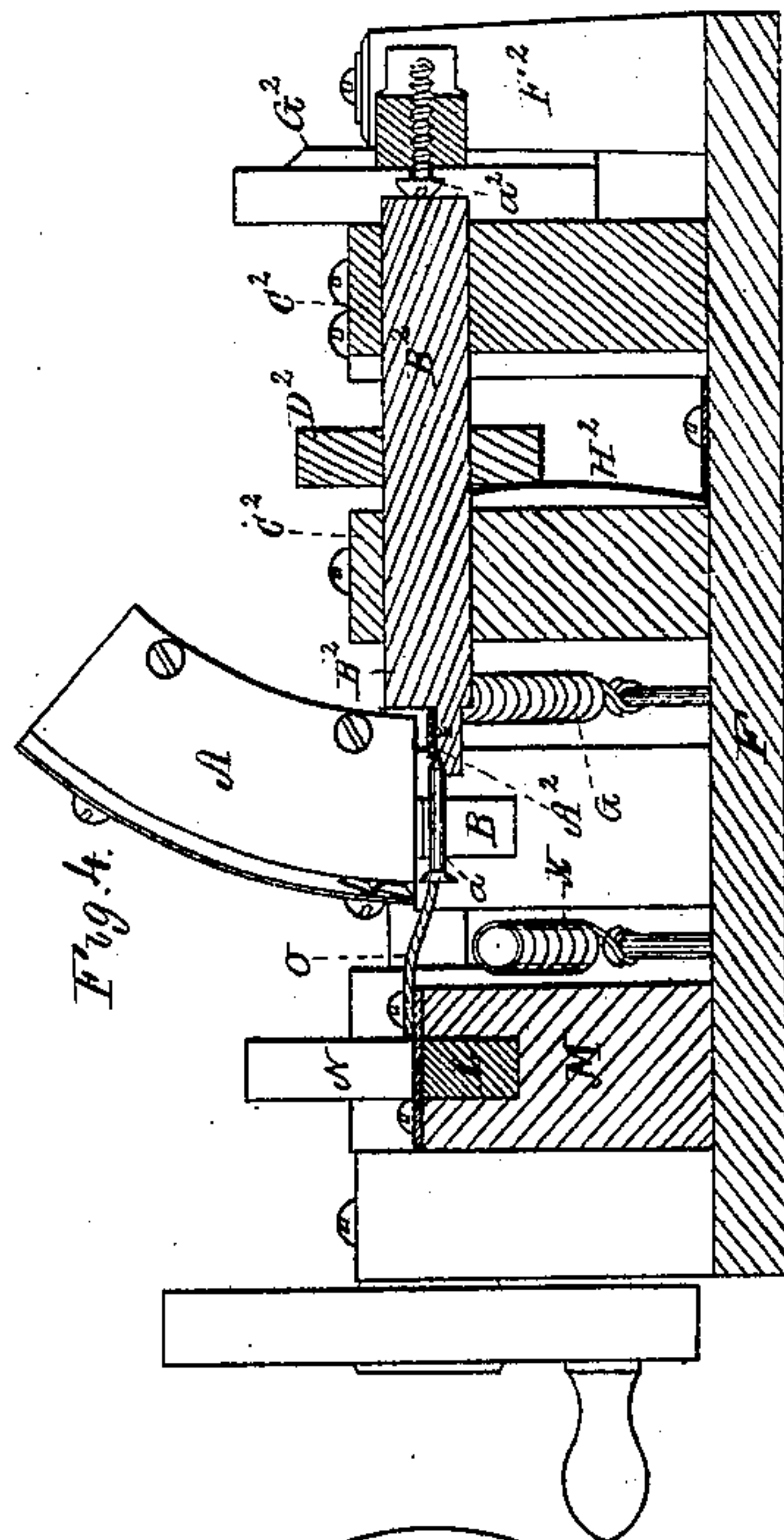
Patented April 21, 1874.



Witnesses.

S. N. Piper.

L. N. Koller.



Walter Aiken.

by his attorney.

R. H. Eddy

UNITED STATES PATENT OFFICE.

WALTER AIKEN, OF FRANKLIN, NEW HAMPSHIRE.

IMPROVEMENT IN MACHINES FOR POINTING BLANKS FOR WOOD-SCREWS.

Specification forming part of Letters Patent No. **149,966**, dated April 21, 1874; application filed April 1, 1874.

CASE No. 5.

To all whom it may concern:

Be it known that I, WALTER AIKEN, of Franklin, of the county of Merrimack and State of New Hampshire, have invented a new and useful Machine for Pointing Screw-Blanks; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, in which—

Figure 1 is a top view, Fig. 2 a front elevation, Fig. 3 a longitudinal section, and Fig. 4 a transverse section, of it. The plane of section in Fig. 3 is in line with the feeding slide-bar, the plane of section of Fig. 4 being in line with the axis of the arbor of the pointing-tool.

The nature of my invention consists mainly in the combination of a pointing-tool and its rotary arbor, as hereinafter described, with a blank-receiver and mechanism for taking the screw-blanks successively therefrom and supporting each for and while being pointed, and finally discharging it, all substantially as hereinafter explained.

In the drawings, A^2 denotes the pointing-tool fixed upon a rotary arbor or shaft, B^2 , at or near one end thereof, such arbor being supported on bearings or standards $C^2 C^2$, and provided with a band-pulley, D^2 , for revolving it. A screw, a^2 , screwed through one arm of a lever- E^2 , bears against the outer end of the arbor B^2 . This lever, pivoted on the top of a post, F^2 , has its other arm resting against a cam, G^2 , fixed upon the driving-shaft of the machine. A spring, H^2 , fixed to the base-plate of the machine, and acting against the side of the pulley D^2 , serves to effect a rearward movement longitudinally of the arbor B^2 , its forward movement, to enable it to advance the cutter upon the screw-blank, being effected by the cam G^2 and lever E^2 . The bearing-screw a^2 serves to regulate the extent of forward movement of the arbor, as occasion may require. Near the arbor, or arranged with it, as shown, is a reservoir, A , for receiving the screw-blanks and successively supplying them to the mechanism for holding each of them while being pointed. The said receiver A is stationary, and has arranged below it, as shown, two slide-bars, $B C$, which, disposed in range with each other, have their inner ends notched, as seen at $a a$, to receive and hold a screw-blank by its shank.

These bars $B C$ slide rectilinearly in two standards, $D E$, erected on a base, F . A helical spring, G , attached at one end to the base F and at the other to a projection, b , from the bar B , serves to retract such bar, a cam, H , fixed on a driving-shaft, I , being employed to advance the bar, or, in fact, both of said bars $B C$, simultaneously. Another such spring, K , is fastened at one end to the base F , and at the other to an arm, c , extended from the slide C . The arm is projected in front of the end of a third slide-bar, L , arranged in another standard, M , and provided with a stop, d , to limit its rearward movement in the standard. A cam, N , fixed on the driving-shaft I , serves to advance the slide and also to retain it stationary for a short period of time, for the purpose of causing it to hold the slide at rest, in order that the bar B may be retracted from it to enable a screw-blank, after having been pointed, to fall from between the two bars B and C . A cam, O , fixed on the top of the standard M , and extended toward the reservoir A , and formed and arranged therewith, as shown, serves, while a blank is being moved into line with the pointing-tool arbor B^2 , to advance the said blank or crowd it longitudinally forward between the two bars $B C$, and also to hold it from sliding backward while the pointing-tool may be in operation on it. Furthermore, there is a screw, V , which screws through a post, W , erected on the base in advance of the slide C . The screw is to limit and regulate the advance of the said slide, which brings up against the inner end of the screw.

The cam H should be so made as to allow the bar B , after the bar C may have fallen back to its rearmost position, to move a short distance away from such bar C , or far enough for a screw-blank to fall from the receiver into the notches $a a$. This having taken place, the cam, continuing to revolve, will advance the bar C up to the blank, so as to hold it against the said bar B and simultaneously advance both bars and the blank. While the blank may be thus moved its head will be forced against the inner edge of the stationary cam O , whereby the blank, as soon as it may have advanced beyond the receiver, will be moved longitudinally toward the pointing-tool. On

the blank having attained or nearly attained its proper position for being pointed, the pointing-tool arbor will be advanced, and, being put in revolution by a belt going about the pulley on said arbor, it will point or reduce to a cone or conic frustum the end of the shank of the blank. In the meantime the stop-bar L will have been advanced up to the arm *c*, in order to hold the bar C stationary for a short period during the retreat of the bar B, or long enough for the screw-blank to be released from the grasp of the two bars and to fall away from them. On this having taken place, the cam N will allow the stop-bar to be drawn backward with the slide C by the retractive spring of the latter.

What I claim as my invention is as follows:

The combination of the blank-receiver A and the pointing-tool A², provided with mechanism, as specified, for operating it as described, with the mechanism, as explained, for feeding or successively removing the screw-blanks from the said receiver, and supporting each blank while being pointed, and finally discharging it from the machine or upon the base thereof, such consisting of the notched slide-bars B C, retractive springs G K, cams H, O, and N, and the stop-bar L, all applied and arranged essentially as explained and represented.

WALTER AIKEN.

Witnesses:

R. H. EDDY,
J. R. SNOW.