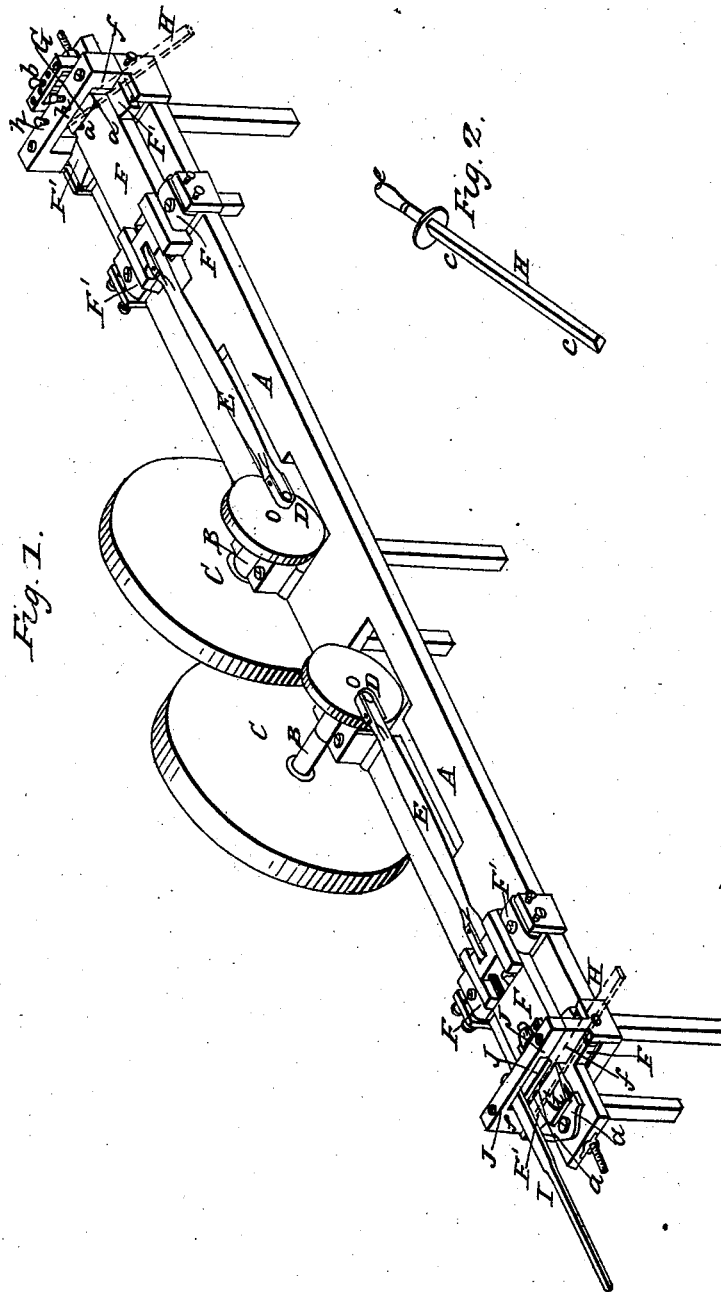


E. K. ROOT.
Making Axes.

No. 5,731.

Patented Aug. 22, 1848.



UNITED STATES PATENT OFFICE.

ELISHA K. ROOT, OF COLLINSVILLE, CONNECTICUT, ASSIGNOR TO COLLINS CO.

MACHINERY FOR DRESSING AXES.

Specification of Letters Patent No. 5,731, dated August 22, 1848.

To all whom it may concern:

Be it known that I, ELISHA K. ROOT, of Collinsville, in the county of Hartford and State of Connecticut, have invented a new and useful machine for the purpose of dressing or shaving the faces or sides of axes and rendering them smooth and even, which dressing or equalizing of the surface has heretofore been effected by the operation of grinding; and I do hereby declare that the following is a full and exact description thereof.

Upon a strong stationary bad of cast iron, standing horizontally, I place a vibrating, or sliding, bed, which is made to move back and forth between suitable guide pieces bearing against its edges. Motion is given to this sliding bed by means of a crank connected with it by a shackle bar. Upon this sliding bed the ax to be dressed is to be laid, and it is to be held in place while operated upon by check pins bearing against its edges, and a set screw bearing against its edges or sides or by any analogous means. On each side of the sliding bed there rises from the stationary bed, one, or any other preferred number of strong pins, or bolts, which are to sustain the pressure of the back of the knife used for dressing or shaving the axes; this knife is made somewhat in the form of a drawing knife, and is governed by hand. When the machine is in operation a lever is made to bear on the upper side of the knife with a degree of force which may be regulated by a treadle or by hand.

In the accompanying drawing A, A, is the stationary bed, at the center of which there are two shafts B, B which may be made to revolve by means of a band on the whirls C, driven by any adequate motive power.

D, is a crank and E, a shackle bar proceeding from each shaft B to the sliding bed F, that represent two modifications of the same machine and each of which moves back and forth between the cheeks F' F'. Upon this sliding bed the ax G, is laid, and it may be kept in place by means of pins or by a block a, and a set screw b, bearing against it. Toward the thin end, or edge, of the ax, two short pins a a may rise from the sliding bed to support it in that part, and prevent its rocking upon its convex face, (the place of them is shown on the

right hand machine) or if preferred, a hollow or excavation may be made in the sliding bed, to admit the convex face of the ax.

H, H, is the knife drawn in red lines in Figure 1, and shown separately, and on a larger scale, in Fig. 2.

The blue line c c is the cutting part. This may be a bar, or cutter, of steel, independent of the machine, so as to admit of it being readily removed and sharpened.

One, or more stout standards or pins f, f, rise vertically from the stationary frame, or bed, for the purpose of supporting the back of the knife which is held against them, and which may be passed between them, either straight, or obliquely, and managed by its handle e, or in any other convenient way, as, for example, by allowing one end of the knife to be held by a hook, &c., and having a handle at the other.

To enable the operator to force the knife against the face of the ax, and to cut a proper shaving therefrom, a lever I, is made to bear upon it with any required degree of force, which force may be regulated by the hand or foot in the following manner. J, J, is a rectangular frame of iron, into the slot J', of which the lever I, is fastened; this frame is attached to the standards f, f. The end of the lever I, may be attached to a frame constituting a treadle upon which the foot of the operator may be made to bear as may be desired, and not represented or it can be pressed down by hand, or the screws h, h, may be substituted for the lever in some cases. By this arrangement as the sliding frame is drawn back the knife may be made to shave, or dress the face of the ax in a very perfect manner, the hand of the operator adapting it to the whole surface successively, and leaving it in a state in which it will rarely require any other dressing excepting that which is given to it by the polisher after it has been hardened and tempered; if necessary, however, the cutting edge may be touched upon the grindstone.

Having thus fully described the nature of my machine for dressing, or shaving, the faces of axes, in lieu of the ordinary process of grinding, what I claim therein as new, and desire to secure by Letters Patent, is—

The manner in which I have combined and arranged the respective parts thereof as herein described, consisting of a knife, or

cutter, held and guided by the hand of the operator and sustained against suitable pins, or bearings, and borne down upon the face of the ax by the action of the screw lever, or pressing bar or other analogous device, in combination with the sliding bed on which the ax is made to traverse backward and

forward, under the knife, and the whole structure and operation being substantially the same with that herein made known.

ELISHA K. ROOT.

Witnesses:

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