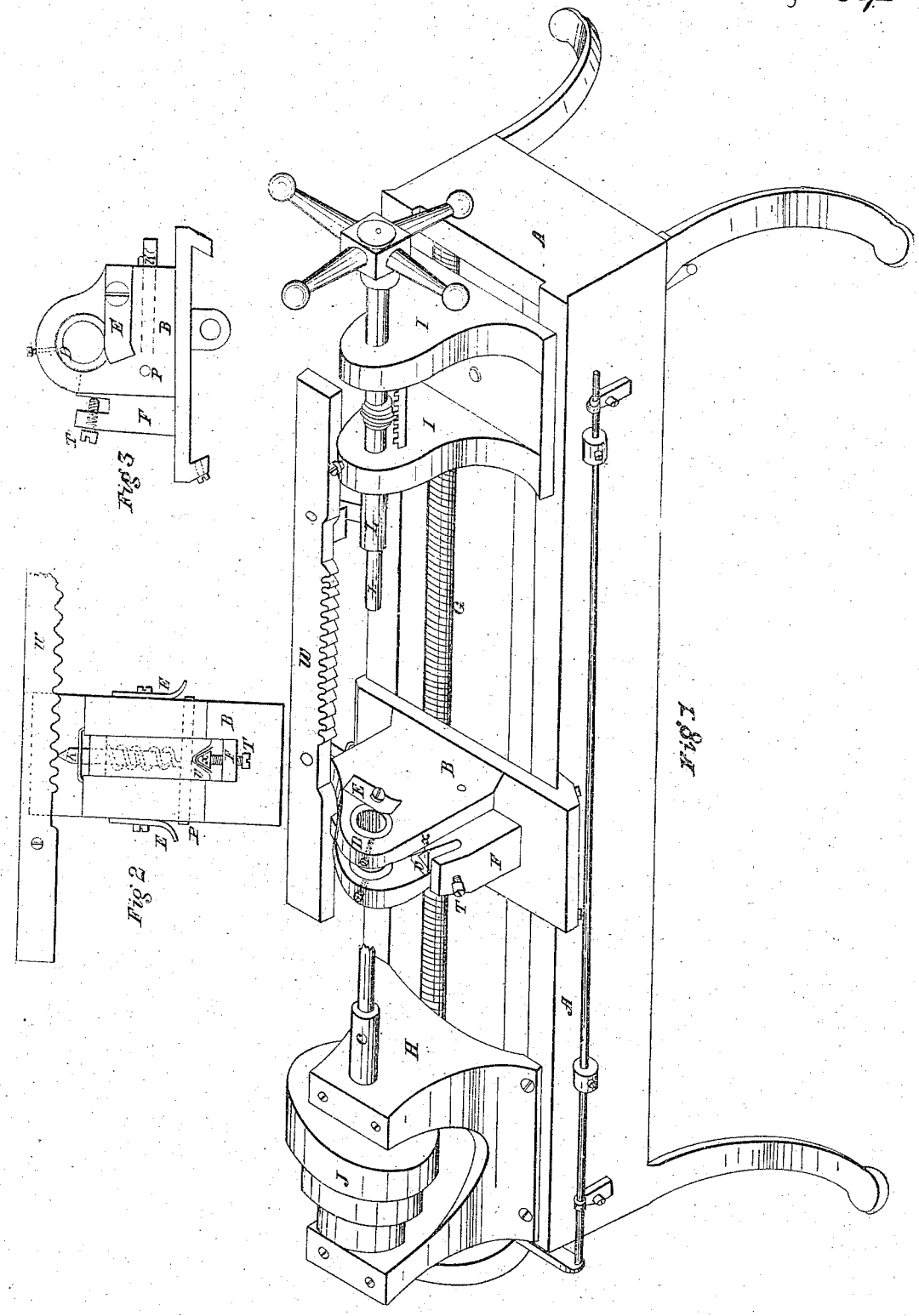
H. O. Clark,

Gage Lathe.

No. 11,037. Patented June 6, 1854.



UNITED STATES PATENT OFFICE.

HARRISON O. CLARK, OF WORCESTER, MASSACHUSETTS.

LATHE.

Specification of Letters Patent No. 11,037, dated June 6, 1854.

To all whom it may concern:

Be it known that I, H. O. CLARK, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Lathes for Turning Figured Work; and I hereby declare the following to be a full and clear description of the same, reference being had to the drawings herewith presented, which drawings constitute a part of said description.

My improvement consists of two systems of cutters or knives acting in different directions at one and the same time, one forming a perfect cylinder and the other beading it out or forming any desired figure or molding thereon, according to a pattern designed, and these acting in combination with certain rests adapted by differently sized bushings to suit the various diameters required. See the drawing.

Figure 1 is an isometrical view of the lathe complete.

(AA) is the frame or bed.

(B) is the rest or carriage which moves lengthwise of the lathe.

(C) is the head center; (H), the headstock; (L), the foot center.

(E) is the knife or chisel on the carriage (B) which reduces the stick to a perfect cylinder.

(F) is a cross slide or tool-carrier moving in the carriage (B), but having a motion at right angles to that of (B). It carries the V-shaped knife, seen at Fig. 2, which is a top view of the carriage. F will be distinguished by a shade of red. The knife (V) is held in place by the triangular wedge (X) tightened by the screw (T). This knife is moved in a direction perpendicular to the line of the centers by a pattern (W), which is indented to correspond to the beads required. This is fixed in the proper position and an arm (K) projecting from the back of the slide (F) presses against the indentations forced up by a spring in the interior of slide (F) and indicated by the dotted lines in Fig. 2.

It will be seen that when the carriage moves to the right or left the arm (K) projecting from the back of (F) being pressed by the spring against the pattern (W) will be moved alternately back and forward, cutting a regular bead, and instead of this bead a figure of any proportions may be produced by adopting a suitable designed pattern in place of (W). In Fig. 3, which is a side view of carriage (B), may be seen the knife (E) and the bushing (D). The bushing is the annular metallic lining inserted in and lining the orifice of the carriage B. It is delineated and may be seen as aforesaid at Fig. 3. The knives (E) are set exactly to cut the stick to fit the bushing of the rest, so that when the knife (V) comes in contact it shall cut steadily without any shake and finish as it goes. It may be seen that the center (C) projects out from the headstock (H) far enough to reach through the rest or carriage and the center (L) also, and the stick can be removed and another put in its place before the carriage returns. Now there is a knife (E) on each side of the carriage to reduce the stick to a cylinder that may enter the rest either way and the V-shaped knife following either way finishes the beads, hereby saving much time that must otherwise be wasted in moving back the carriage.

My improvements are applicable alike to all kinds of slide lathes. Therefore it will not be deemed necessary to give any particular or minute description of parts common to them.

I do not claim the sliding rest or the V-shaped knife or the side cutters singly or the bushings except when used in combination as herein described for the purpose above mentioned or substantially the same.

What I claim as my improvement and desire to secure by Letters Patent is—

1. I claim the knife (V) in combination with the slide (F) operating in a straight line to and from the center or nearly so.

2. I also claim the movable bushings (D) adapted to all the different sized cylinders required.

In testimony whereof I hereto subscribe my name in presence of two witnesses.

H. O. CLARK.

Witnesses:

JOHN C. BROWN,

JAS. G. ARNOLD.