

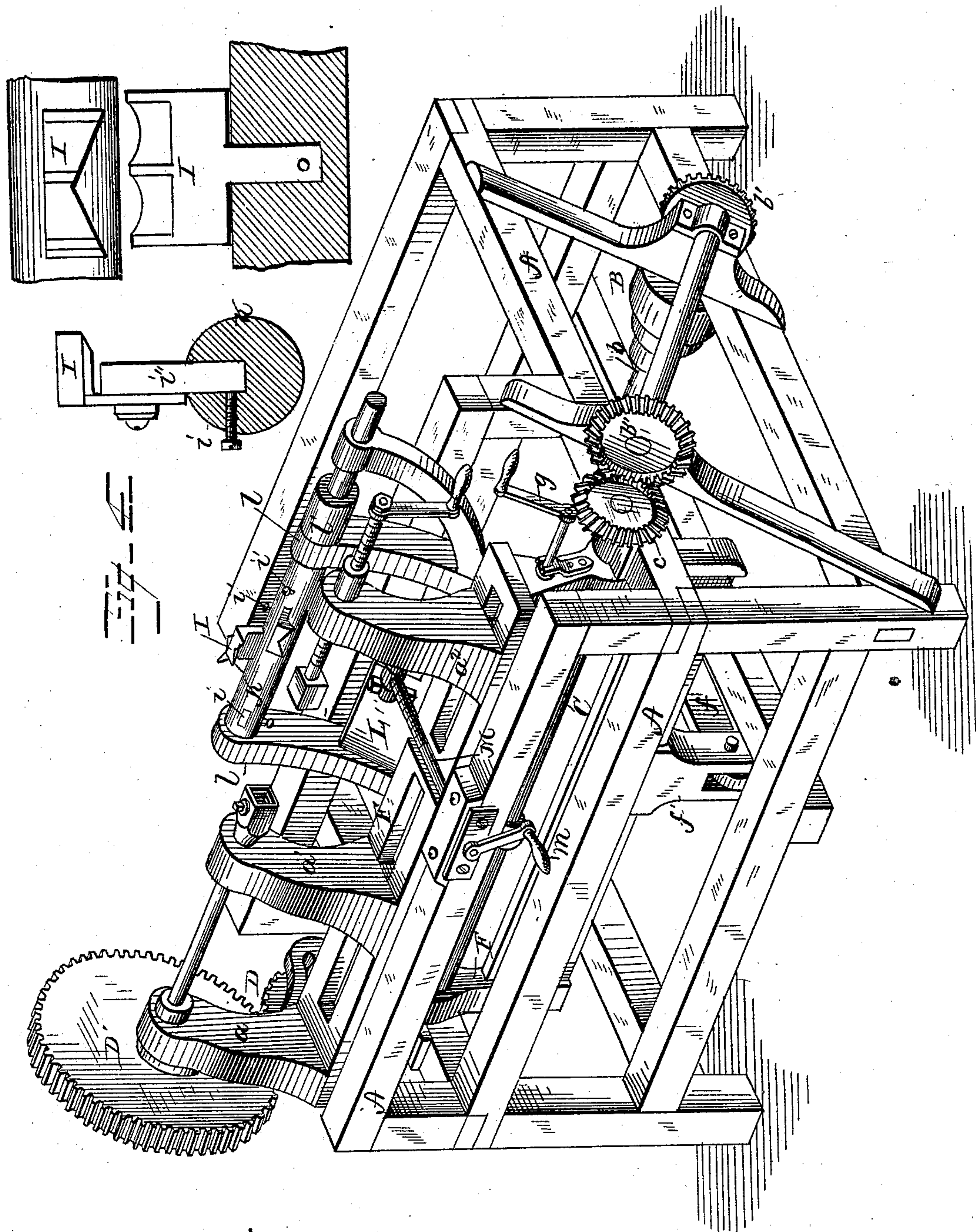
(No Model.)

3 Sheets—Sheet 1.

F. HANSON.  
TURNING LATHE.

No. 286,811.

Patented Oct. 16, 1883.



WITNESSES  
F. L. Ouraud  
J. A. Garner

INVENTOR  
Freeman Hanson  
per L. Deane,  
his Attorney



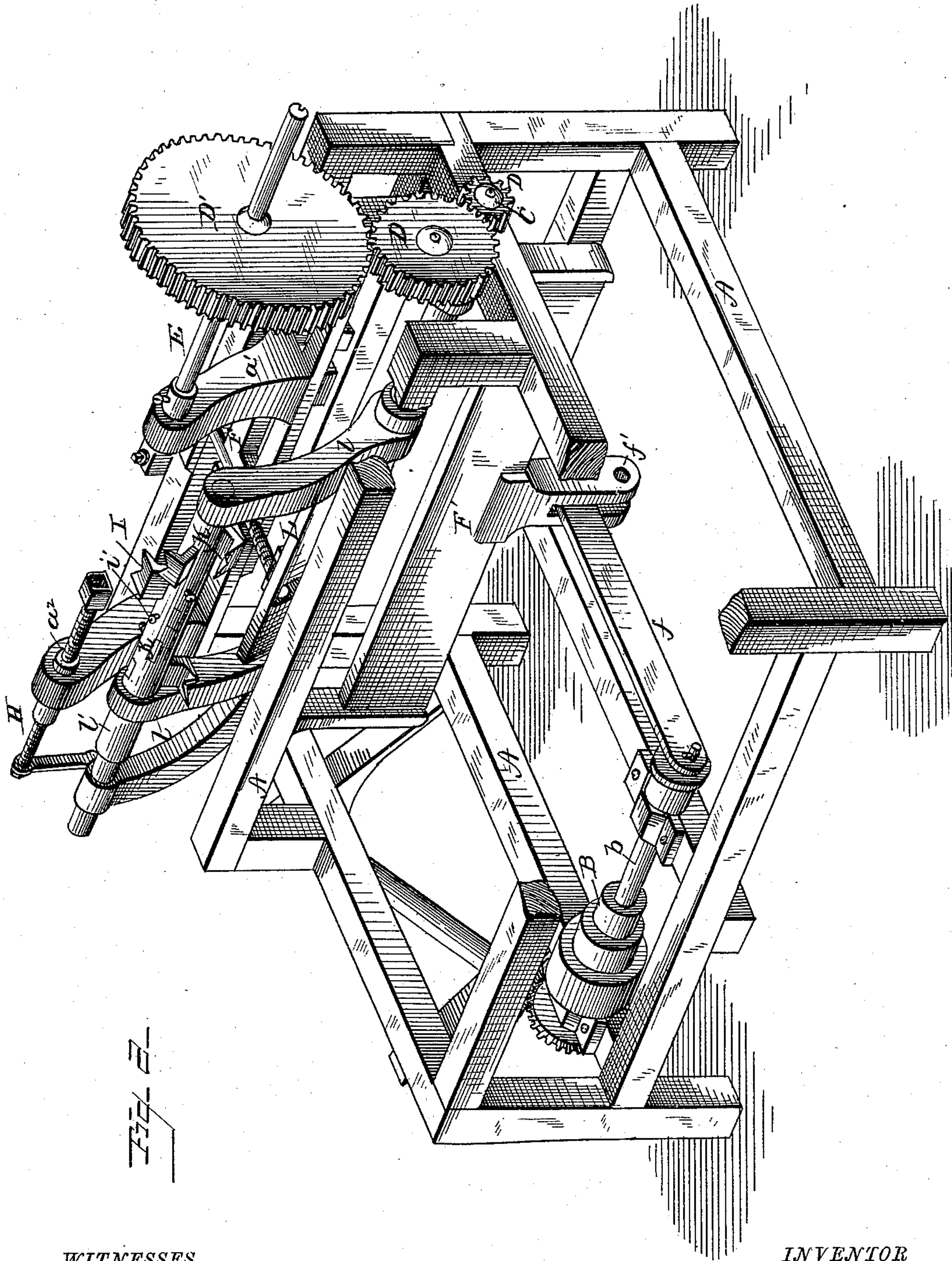
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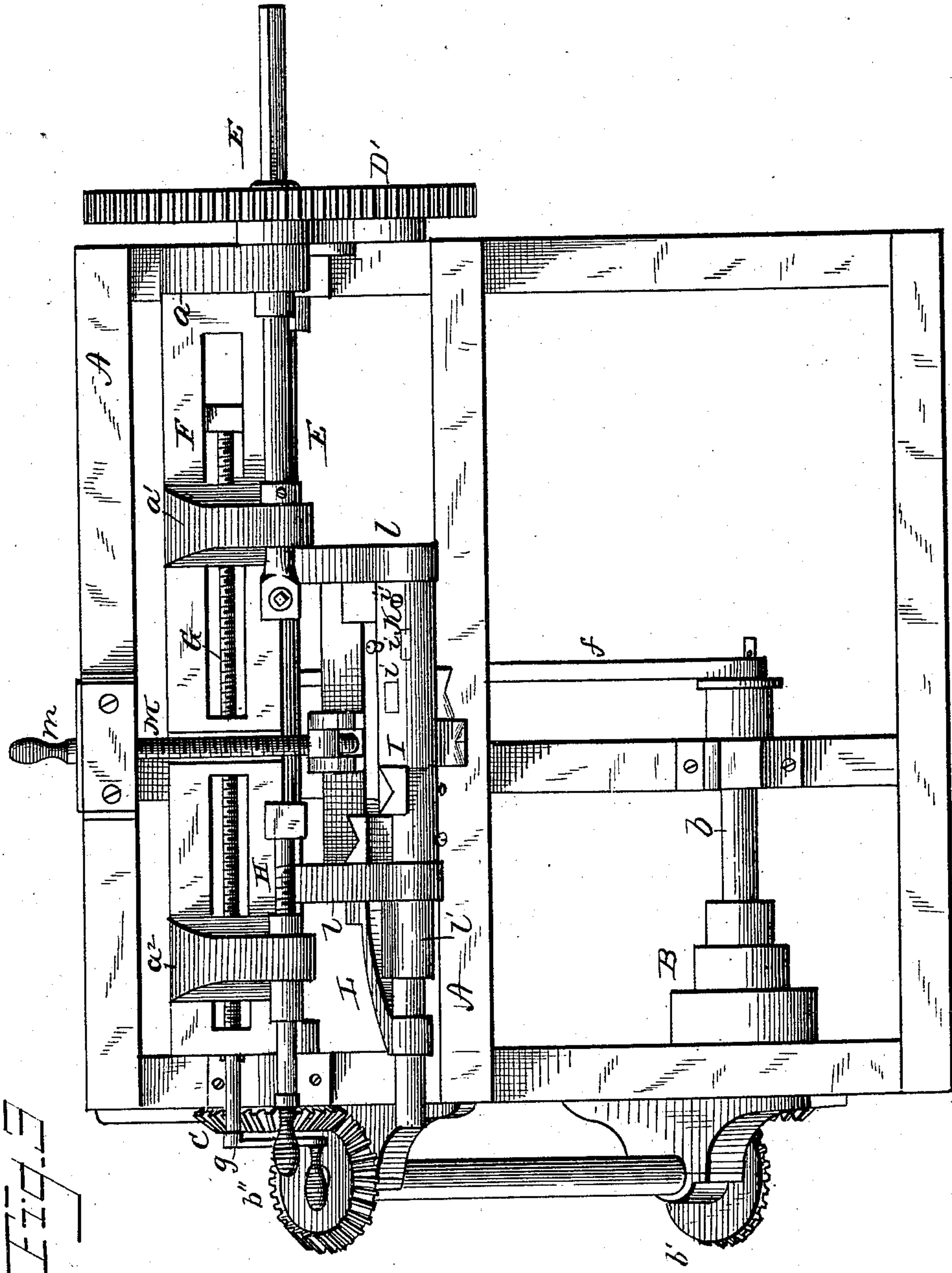
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# UNITED STATES PATENT OFFICE.

FREEMAN HANSON, OF HOLLIS, ASSIGNOR OF ONE-HALF TO JAMES G. McFARLAND AND DENNIS A. MEAHER, BOTH OF PORTLAND, MAINE.

## TURNING-LATHE.

SPECIFICATION forming part of Letters Patent No. 286,811, dated October 16, 1883.

Application filed February 21, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, FREEMAN HANSON, a citizen of the United States, residing at Hollis, in the county of York and State of Maine, have  
5 invented certain new and useful Improvements in Turning-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable  
10 others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view from the front.  
15 Fig. 2 is a perspective view from the rear. Fig. 3 is a top plan; Fig. 4, details showing how each cutter is made and fixed in position on their shaft.

This invention relates to that class of devices  
20 designed for cutting or carving wood or metal; and the novelty consists in the special details of the construction and the combination of the several parts, all as will now be more fully set out and explained.

25 In the accompanying drawings, A denotes any suitable frame, in which the several parts of the machine are properly placed. Power is communicated in any desired manner, now indicated as by means of pulley B, shaft *b*, and  
30 bevel-gear *b' b''*, which last meshes with gear *c* on shaft C. On the outside, preferably, of frame A are placed the train of gear-wheels D D', the lower one on the shaft C. These gears are to be varied in size and number, as  
35 may be required to vary the speed of the shaft E, which passes through the upper gear, D'. This shaft is splined in gear D' and supported in bearings *a a'*—the latter movable horizontally on the track F, in the upper and front  
40 part of the machine, by means of the screw G, which runs lengthwise just below the track F, and passes through the lower end of *a'*, and has at its outer end a handle, *g*. This screw also works in like manner the moving bearing  
45 *a''*, which has in its upper end a screw, H. The wood to be turned is placed between the ends of the shaft E and screw H, the bearings *a' a''* having been suitably set and the screws G and H having been properly adjusted, so as  
50 to fix the wood firmly in position. By this

means the wood can also be readily moved back and forth, so as to offer it to one or another of the cutters I. The track F constitutes the upper part of the frame F', which swings on shaft C by means of the pitman *f*,  
55 which has one end adjustably pivoted on the lug *f'* of the frame, and at the other is eccentrically connected to the end of shaft *b*. Thus the frame F' can be moved back and forth, as desired, by merely setting the pitman *f* up or  
60 down in the lug *f'*. By this means the wood to be cut can be offered as may be desired to the cutters, to insure such varied cutting as may be wanted.

The cutters I are spirally fixed on the shaft  
65 K, which is supported in bearings *l* on the swinging frame L, and are revolved by the pulley *l'*, over which a band from the driving-shaft passes. The cutters have each a shank,  
70 *i*, which fits into a socket in the shaft K, and is there fastened by the set-screw *i'*. Each cutter has an angled face, which is concave on the under side, and by this peculiar shape, and by the peculiar adjustment of the cutters on  
75 the shaft K and the movement of the wood to and fro and back and forth in front of the cutters, the most desirable results can be attained, as a very wide range of style of cutting can be made. While I have shown cutters of this  
80 peculiar shape, it is evident that I may use cutters of any shape.

The frame L, which swings on the shaft C, can be moved back and forth by the handled  
85 screw M *m*, and thus the cutters can be moved to the work as may be desired.

The cutters may be made in one piece with  
90 their shank, by which they are applied to and fixed in the shaft; but the knife part may be adjustably fixed to the shank, if desired, as is now illustrated in Fig. 3.

Having thus described my invention, what I consider new, and desire to secure by Letters Patent, is—

1. In a wood-working machine, the movable and adjustable supports for the wood, whereby  
95 both of the bearings which carry the parts that clamp the wood can be moved back and forth before the cutters, and likewise clamping parts which can be so moved, all combined and operating substantially as described.  
100

2. The combination of the splined shaft E, passing centrally through and operated by the gear-wheel D', the fixed bearing *a*, supporting said shaft, the movable bearings *a'* *a''*, for holding the wood to be cut, the track F, and the screw G, by which said bearings are moved in said track, substantially as described.

3. The combination of the bearings *a'* *a''*, movable on the track F by means of screw G, all as described, with the shaft K, provided with cutters I and swinging on frame L, substantially as described.

4. In a wood-working machine, the combina-

tion of two movable bearings, by which the wood to be cut is held and moved from either end before the cutters, and mechanism whereby the wood can be also moved between the said bearings, and all placed on a swinging frame, combined with rotary cutters also mounted on a swinging frame, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

FREEMAN HANSON.

Witnesses:

THOMAS F. KEATING,

JOS. K. MEAHER.