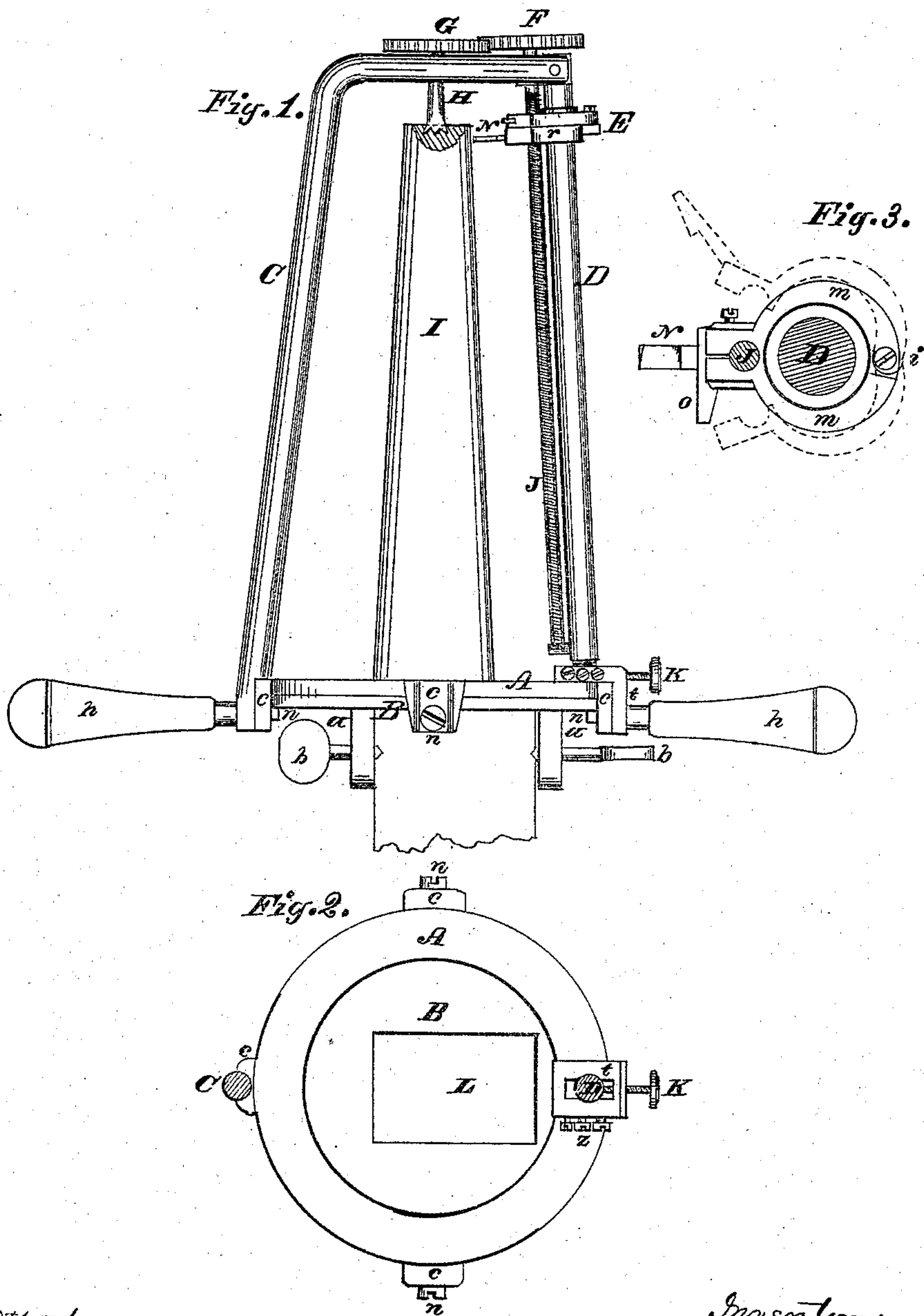


A. F. MOORE.

Machines for Turning Axles.

No. 137,316.

Patented April 1, 1873.



Attest:
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 by his atty
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UNITED STATES PATENT OFFICE

ARTHUR F. MOORE, OF FLORENCE, INDIANA.

IMPROVEMENT IN MACHINES FOR TURNING AXLES.

Specification forming part of Letters Patent No. **137,316**, dated April 1, 1873; application filed September 12, 1872.

To all whom it may concern:

Be it known that I, ARTHUR F. MOORE, of Florence, in the county of Switzerland and State of Indiana, have invented certain Improvements in Machines for Turning Axles of Wood, of which the following is a specification:

This invention is designed as an improvement on a "machine for turning spindles of wooden axles," patented by me on the 28th day of March, 1871, and numbered 113,078. The object of my invention is to obtain a greater amount of leverage for operating the cutting mechanism, to firmly brace the cutter while it is at work, and to supply a ready and accurate adjustment of the cutter-guide to the desired slope.

In the drawing, Figure 1 is a side elevation of my machine. Fig. 2 is a plan of the same. Fig. 3 is an enlarged detached view of the cutter-head.

Description.

Let A represent the circular base of the machine, and B a circular plate, mortised at L for the reception of the axle, and furnished with jaws *a a* and set-screws *b b*, to secure said axle in place while the spindle is being cut. The plate A is furnished with lugs *c c* and screws *n n*, by which it is attached to the plate B, the former turning smoothly upon the latter. Handles *h h* are attached to the plate A. An L-shaped bar, C, and the cutter-guide D hinged thereto, form a pyramidal frame that revolves on the center H as an axis. A left-hand feed-screw, J, is journaled in bearings which form a part of the cutter-guide D, and its axis lies parallel to the said guide. On the upper ends of the center H and the screw J are secured pinions F and G, which mesh with each other, and are in the present instance of the same diameter. The relative diameters of the pinions will of course depend on the pitch of the feed-screw. The lower end of the cutter-guide D is squared, and engages with a slot in the plate *t*. Turning the screw K causes the bar to traverse

the slot, and thus regulate the angle of the taper to be cut. The set-screws *z* serve to secure the guide in its proper position. In Fig. 3 is shown an enlarged view of the cutter-head. D is the cutter-guide, J the feed-screw, N the cutter, and *r* the cutter-bearer. (See Fig. 1.) The cutter N is held in the bearer *r* by a set-screw. Jaws *m m* are hinged at *i*, and together form the nut for traversing the feed-screw. When clamped on the screw, they are held together by the catch *o*. The dotted lines show the jaws thrown open.

The operation is as follows: The spindle of the axle is "roughed-out," and the proper taper given to the lower side. It is then "lined," and the axle fixed in a vise. The jaws *a a* and set-screws *b b* are clamped in the square portion of the axle, below the spindle, and the center H properly fixed, all as indicated in the elevation, Fig. 1. The cutter N is set to the proper taper by means of the screw K, and the cutter-guide fixed by the screws *z*. The cutter-head E is slipped up to the upper end, and engaged with the feed-screw, and the cutter N set to the proper depth. By turning the machine around by the handles *h h* in the manner of an auger, the cutter is fed along by the screw, and removes the wood.

Having thus described my invention, I especially disclaim any features claimed in my patent numbered 113,078; but

What I claim as new, and desire to secure by Letters Patent, is—

The cutter-guide D, feed-screw J, plate *t*, set-screws *z*, and screw K, in a machine for turning axle-spindles, when arranged to operate, in connection with the plates A and B and pinions F and G, substantially in the manner shown, and for the purposes specified.

Witness my hand this 30th day of August, 1872.

ARTHUR F. MOORE.

Witnesses:

H. CONNELL,
J. S. MOORE.