W. ENOCH.

Wood-Turning Lathe.

No. 215,594. Patented May 20, 1879.

Fig. 1.

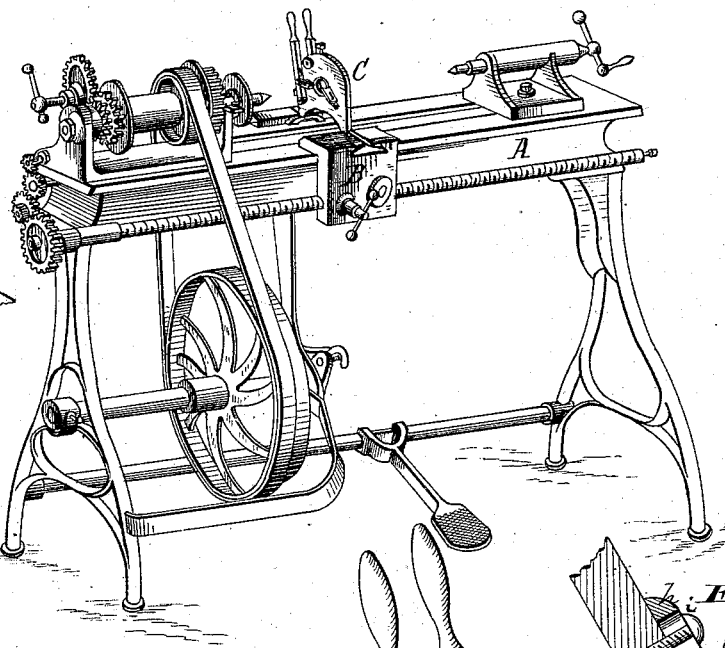


Fig. 5.

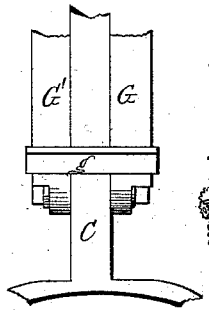


Fig. 4.

Fig. 3.

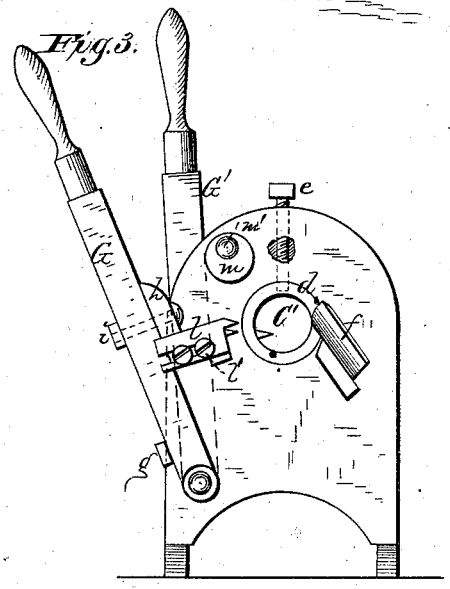
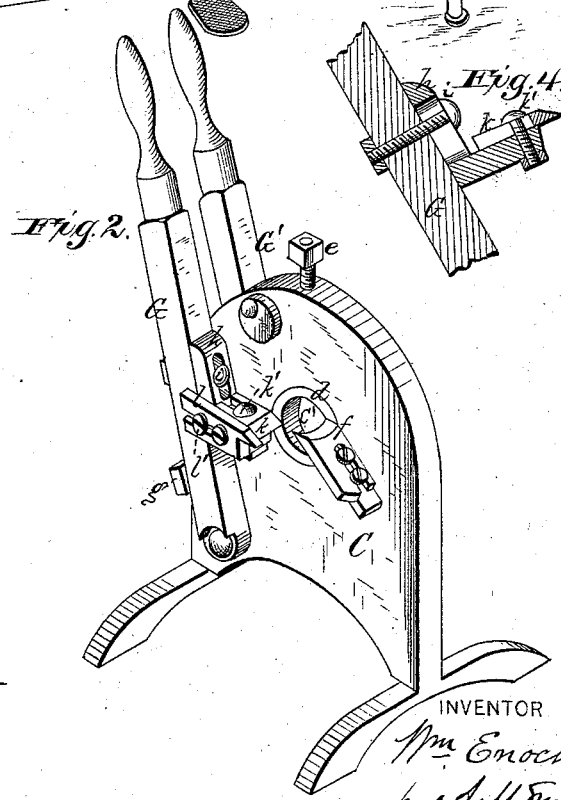


Fig. 2.



WITNESSES

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WILLIAM ENOCH, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN WOOD-TURNING LATHES.

Specification forming part of Letters Patent No. **215,594**, dated May 20, 1879; application filed March 19, 1879.

To all whom it may concern:

Be it known that I, WILLIAM ENOCH, of Springfield, county of Clarke, State of Ohio, have invented certain new and useful Improvements in Wood-Turning Lathes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of a lathe embracing my improvements. Fig. 2 is a perspective view, enlarged, of the upright plate or "steady-frame" to which my improvements are applied. Fig. 3 is a side elevation of the same. Fig. 4 is a section through one of the adjustable cutters and a portion of its adjusting-lever, and Fig. 5 is a rear elevation of the upright plate and cutter-levers.

Similar letters of reference denote corresponding parts wherever used.

The invention relates to that class of lathes known as "wood-turning lathes," and more especially to what is known as "gage-lathes," in which the article to be turned is fixed upon centers, while the cutting bit or chisel is connected with an upright plate or frame on the moving carriage, and the form and size of the piece to be turned are governed by a fixed pattern or templet, which controls the movement of the carriage, and with it the chisel, thereby making the piece being turned conform to the pattern. This class of wood-turning lathes is used largely in turning fork and hoe handles, whiffletrees, neck-yokes, and other articles, such as require a band, ferrule, or hook upon the end, and for which a tenon is necessary. This tenon is ordinarily cut by hand, or the piece is finished in another machine, requiring extra handling and labor.

The object of my improvement is to remedy this difficulty, and to enable the attendant to readily cut the tenon and finish the piece before removing it from the machine.

In the drawings, A represents a lathe, and B the traveling carriage, carrying the bit or cutters, said parts being of any usual or preferred construction and arrangement. C is an upright plate or "steady-rest," attached to the movable carriage B, and having a central perforation at C′, with a removable ring or rings, *d*, fitting therein, and secured in place by a set-screw, *e*, for diminishing or increasing the size of the perforation C′, according to the diameter of the piece operated upon and passing through said perforation. An adjustable bit, *f*, or cutter, is secured to the side of plate C, and made adjustable thereon by slot and set-screws, as shown, or in any usual or preferred manner.

Near the bottom of the plate C are pivoted two levers, G G′, one on either side or face, as shown, and which, when thrown back out of use, rest against a cross-bar or stop, *g*. (See Fig. 5.) The levers G are provided, about in the plane of the opening C′, each with an angular bracket or cutter-head, *h*, longitudinally slotted in its upright arm to permit its vertical adjustment, and secured to the inner face of the lever by a through-bolt or set-screw, *i*. The horizontal arm of bracket *h* has a bit or chisel, *k*, secured to its upper face by a bolt or set-screw at *k′*, the shank of the bit being slotted to permit its adjustment in and out, as desired. A second bit or chisel, *l*, is secured upon the outer vertical side or face of each bracket *h*, the shanks of said bits or chisels being also longitudinally slotted and secured to the brackets by one or more set-screws, *l′*, which permit their adjustment in and out, and also serve to hold them at any desired angle.

The chisels *k* and *l* may be of any desired form adapting them to cut tenons of the shape required, whether square-shouldered and straight or tapering, and the narrow bits *l* may be set either in planes parallel with the bits *k* or at any required angle thereto, according to the nature of the work to be done.

The chisels are moved up to their work by means of the levers G, the inward throw of which is limited by eccentric stops *m*, which may be turned toward or away from the levers, as required, and which, when properly adjusted to the tenon to be cut, are held by a through-bolt, *m′*, serving to give a uniform throw to the chisels, and thus to cut the tenons of uniform size, when required.

Other devices—such as set-screws, for example—may be substituted for the eccentrics, if preferred.

The lathe, with its traveling carriage and chisel or chisels *f*, may be similar to those in common use, and may operate in the usual

manner for turning the desired forms, my improvements above described being brought into action only for cutting the tenons thereon, when required, as above described.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The levers G G′, carrying the adjustable cutter-heads *h* and the bits or cutters adjustable thereon, arranged and operating substantially as described, in combination with the moving carriage of a wood-turning lathe, substantially as and for the purpose set forth.

2. The eccentric stops *m*, for the purpose specified, in combination with the levers G G′, carrying the cutters, as described.

3. The combination of the levers G G′, bits or chisels *k* and *l*, stops *m*, and rests *g*, all arranged and operating substantially as described.

WILLIAM ENOCH.

Witnesses:
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