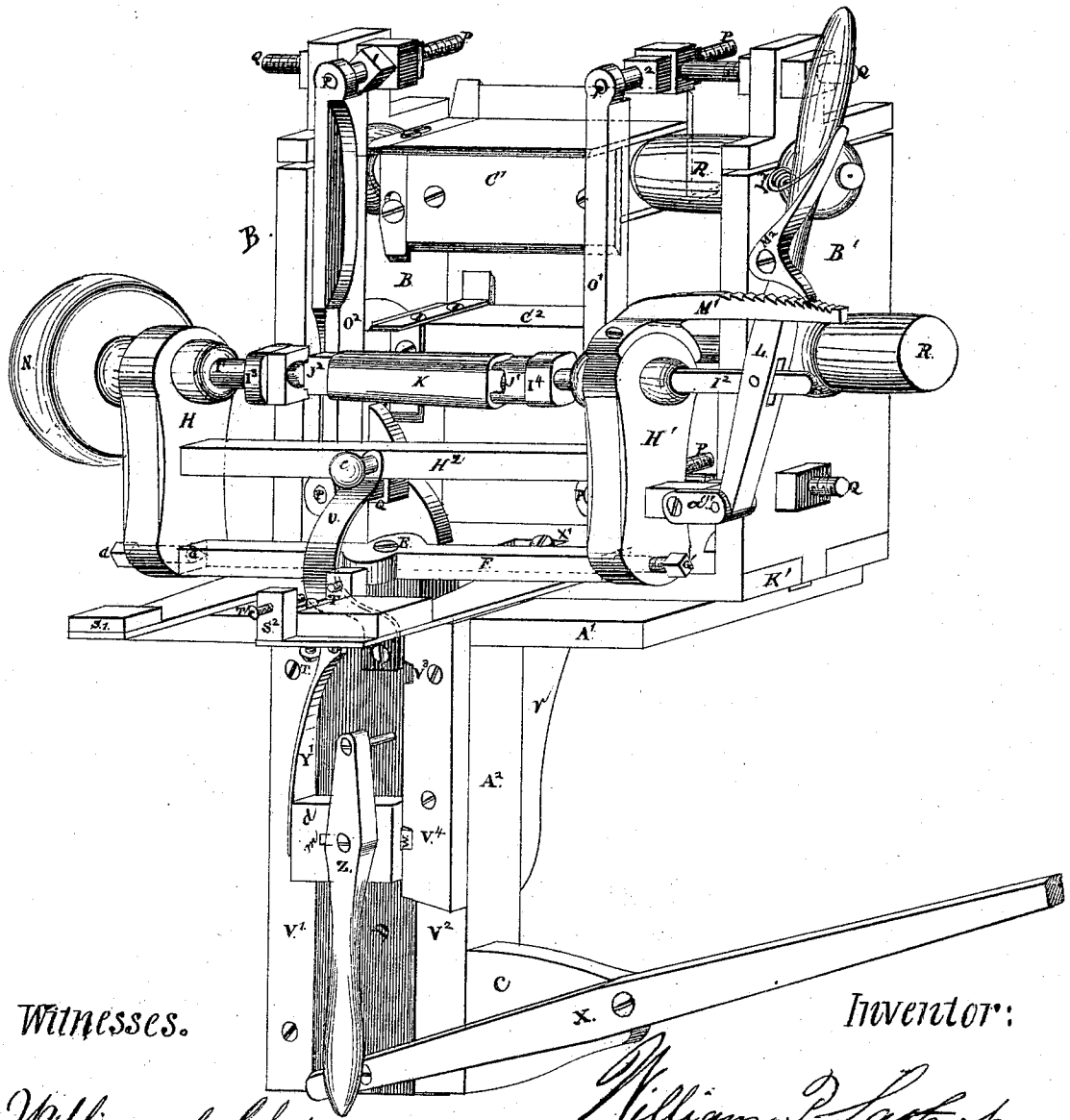
W. P. LATHROP.

Improvement in Lathes for Turning Irregular Forms.

No. 130,725. Patented Aug. 20, 1872.

Fig. 1.



Witnesses.

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AM. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

WILLIAM P. LATHROP, OF WEST WINSTED, CONNECTICUT.

IMPROVEMENT IN LATHES FOR TURNING IRREGULAR FORMS.

Specification forming part of Letters Patent No. **130,725**, dated August 20, 1872.

To all whom it may concern:

Be it known that I, WM. P. LATHROP, of West Winsted, county of Litchfield and State of Connecticut, have invented an Improvement in Lathes for Turning Irregular Forms; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and the figures and letters marked thereon.

This invention consists in a machine that presents the entire length of surface of blank for a handle to highly-speeded revolving plane-irons or smooth cutting-knives. Said blank is so placed and held to or passed perpendicularly by front center or centers of said revolving cutter or cutters that by one fastening and substantially one operation a perfect handle is produced of any desired shape or size and with rapid execution, as will hereafter appear. This machine is adapted to making all kinds of handles ordinarily made by feeding the blank longitudinally by a small revolving tool, or by speeding the blank to a small hand-tool or chisel, and is especially adapted to and designed for making handles for table and butchers' cutlery, and scarfing the same for bolsters or ferrules at one operation.

To enable those skilled in the art to which my invention particularly appertains to make and use the same, I will now proceed to describe fully its construction and operation, to wit:

Figure 1 is a drawing that represents the entire machine in perspective, with all its essential details.

A^1 A^2 represents the bed-plate, upon which rests the operating devices—A^1 lying horizontally upon a bench or table and A^2 projecting perpendicularly down from front edge of A^1. B B^1 are uprights upon bed-plate A^1, and are supplied with laterally-adjustable bearings. C^1 C^2 are cutters revolving toward the front in said bearings in said uprights. D is an upright placed in perpendicular ways in bed-plate A^2, upon which rest the devices that hold and present the handle-blank to said revolving cutters. E is an oscillating center placed upon the top of said upright D. F is a base-bar placed upon said oscillating center. G G′ are points at either end of said base-bar. H H^1 are uprights of a frame swinging upon said points. H^2 is a cross-bar connecting said uprights at their middle. I^1 is a revolving spindle. I^2 is a sliding spindle. I^3 is a former attached to said revolving spindle I^1. I^4 is a former attached to said sliding spindle I^2. J^1 is a spur dog attached, by a point through its center, to said sliding spindle. J^2 is a plug and spur-dog attached to said revolving spindle I^1. The plug of said dog entering a tang-socket previously made in the handle-blank acts as a center for the tip-end of the handle. K is a handle cut and scarfed as held in position by end pressure of said dogs. L is a lever that works the sliding spindle and presses said dogs firmly against either end of said handle. M^1 is a ratchet attached to swinging frame. M^2 is a pawl that catches in the ratchets and holds said lever in position against the end pressure of the handle while being cut. N is a handle that turns said revolving spindle and handle-blank to said revolving cutters. O^1 is a plain-faced stop-bar. O^2 is a double-faced stop-bar, the upper face stopping against the oval part of the former and shaping the handle, the lower face stopping against the flat part of the same former for scarfing the same handle for a bolster, both operations being made with one fastening. P P P P are adjusting-screws for moving stop-bars forward and back for larger or smaller handles. Q Q Q Q are adjustable screws for moving stop-bars to the right and left for different lengths of handles. R R are driven pulleys that carry said revolving cutters. S^1 S^2 are rest-plates attached to base-bar of said swinging frame, upon which said frame is laid when turned down to take out and put in work. T T T are adjusting-screws in rest-plate S^2 for holding the butt end of handle-blank in a proper position for the holding-dog to strike its center. U is a steel spring attached to sliding upright D, and when turned up, as it appears in Fig. 1, it has a bearing upon the front center of cross-bar H^2, and holds the handle-frame up to said stop-bars and revolving cutters, so as to allow said formers to oscillate said frame and handle between said spring and said cutters in such manner as to give all the motions necessary for any shapes contained in said formers. Said spring is hung at its lower end by a screw, which allows it to turn aside when the swinging frame is turned down. V^1 V^2 are ways in bed-plate A^2. V^3 V^4 are catch-slots in way V^2, and so placed as to catch and hold said sliding frame so as to present

the handle-blank in said frame to front centers of said revolving cutters. W is a catch on upright of sliding frame and fitted to enter said catch-slots. X is a lever attached to bed-plate A^2, and said sliding upright in a proper manner to carry the handle-frame in the ways up to and by front centers of revolving cutters. Y^1 is a steel spring attached to said sliding upright, and having a bearing against the back of catch W to throw it into said catch-slots. Y^2 is a steel spring attached to lever L, and has a bearing against the back of the pawl M^2 and throws it into ratchets M^1. Z is a lever attached to sliding upright D and catch W, so as to throw said catch out of said catch-slots V^3 V^4.

If the operator of my machine wishes to make an oval handle with a flat side scarf for a bolster like handle K in Fig. 1, he will so adjust revolving spindle I^1 as to carry the tip of handle onto cutters projected for edge scarfing in revolving cutters C^1 equal to edge scarfing desired. He will then turn said spindle by its handle N one revolution against the edges of revolving cutters C^1, which shapes the handle and scarfs the edge of the same for a bolster. In said position the oval part of former I^3 has a bearing upon the upper face of stop-bar O^2. To make the flat side scarf the operator will carry the sliding frame and handle down past the front center of the revolving cutter C^2, which scarfs one side. In said passing down the oval part of former I^3 passes clear of the upper face of the stop-bar O^2 at its right inclination, and the flat part of said former obtains a bearing on the lower face of said stop-bar. The handle is then turned half over, and the other side is scarfed in passing up by cutter C^2, and catches with the handle to front center of cutter C^1, and is in position for cutting the next handle.

In working the machine as last described—to wit, making two operations with one fastening—the lower catch-slot V^4 is plugged, so that the catch W will slide over it.

Having thus fully described my invention and its operations, what I claim as new and useful, and desire to secure by Letters Patent of the United States, is—

1. The oscillating swinging frame for holding the blanks, in combination with the revolving cutters C^1 C^2 and their operating mechanism, substantially as specified.

2. The oscillating swinging frame, in combination with standard D and lever X, for the purpose of giving the frame a reciprocating movement, as shown and described.

3. The blank-receiving beds S^1 S^2, constructed as described, in combination with the swinging frame, as set forth.

This specification signed and witnessed this 2d day of May, 1871.

WILLIAM P. LATHROP.

Witnesses:

WILLIAM A. CHAPMAN,

ORRA S. FIELD.