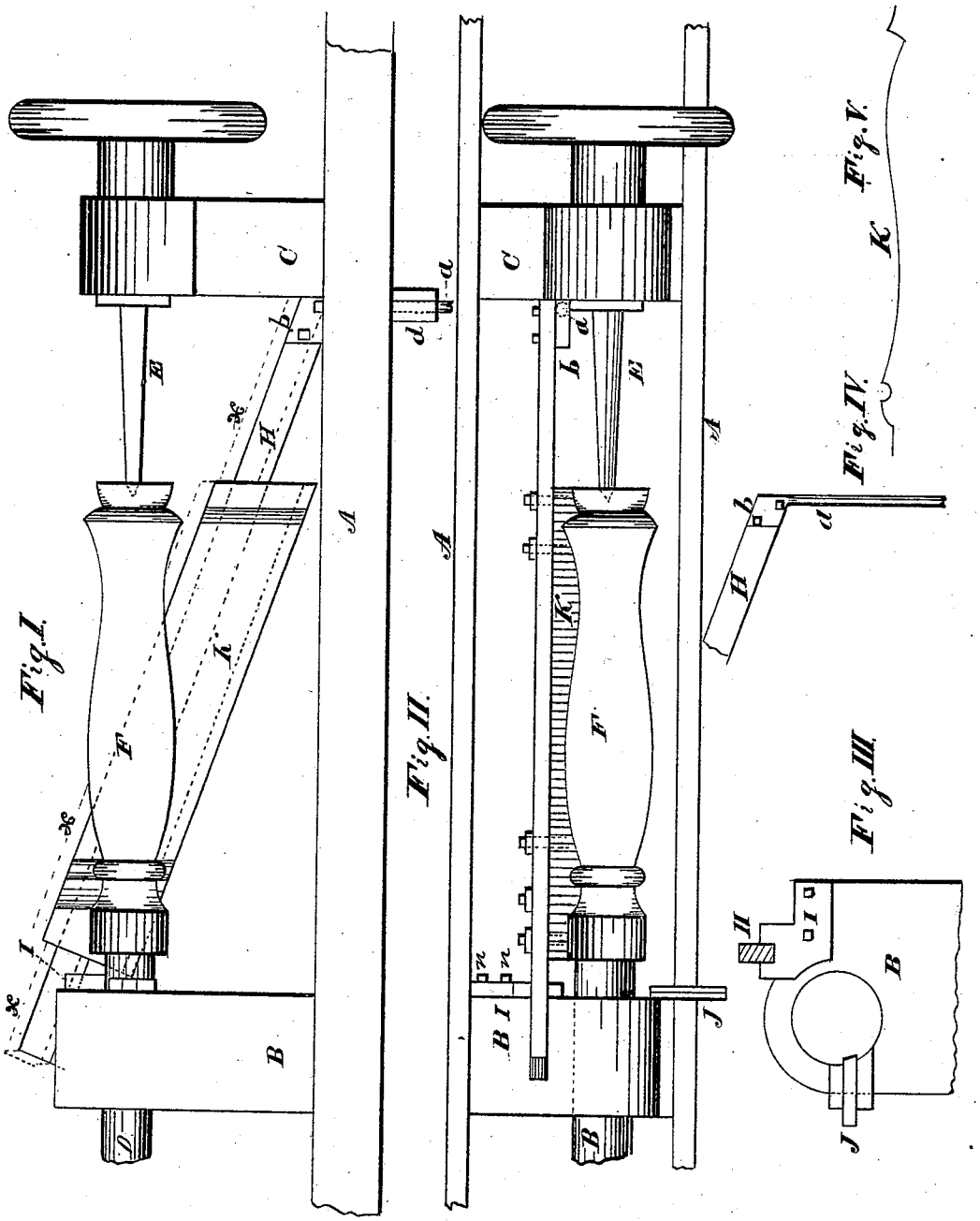
(No Model.)

C. A. CURTIS.

WOOD TURNING LATHE.

No. 267,332. Patented Nov. 14, 1882.



WITNESSES.
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UNITED STATES PATENT OFFICE.

CYRUS A. CURTIS, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO MARSHALL GARRISON, OF SAME PLACE.

WOOD-TURNING LATHE.

SPECIFICATION forming part of Letters Patent No. 267,332, dated November 14, 1882.

Application filed April 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, CYRUS A. CURTIS, of Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Wood-Turning Lathes, of which the following is a specification, reference being had to the accompanying drawings, illustrating the invention, in which—

Figure I is a broken side elevation of a wood-turning lathe embodying my improvements; Fig. II, a plan or top view of Fig. I; Fig. III, an inside elevation of the movable former-head broken away from the frame or table; Fig. IV, an elevation of the lower part of the adjustable arm removed from its guide-support; Fig. V, a line showing the edge of the finishing-bit.

The present invention relates to an improvement for turning spindles, handles, and other articles which are formed first in the rough by being put through a form-turning head endwise.

The nature of the invention consists in a finishing bit or tool whose face in shape conforms to the contour of the article to be finished, and lies vertically parallel to axis of the article, and is attached to an inclined bar, which, at the stationary head of the lathe, operates in a vertical guide so that a guide-bearing for the opposite end of the bar on the movable former-head will raise and lower the finishing-bit to shave the periphery of the article during the time it is passing through the former-head, as the whole is hereinafter fully described and shown.

A A represent the bed, *c* the stationary head, and B the former-head, of one of that kind of well-known lathes in which a former-head to turn from a pattern travels longitudinally between the stationary heads, the left-hand head being omitted as not necessary to clearness.

F represents the article in the lathe, finished by the bit K.

H represents an inclined bar, which is bolted to a stock, *a b*, which is fitted to have a vertical reciprocating movement in a guide, *d*, attached to the frame of the lathe.

To the former-head B is attached by bolts a guide, I, which gives to the bar H such a downward movement, as the former-head B moves to the left, as to bring the bit K in contact with the article F and finish its periphery by an inclined cut, the finishing being done so fast as the article F is cut away in the rough by the bit J of the head B. That part *a* of the stock *a b* is to be made long enough to serve as a guide when the lower edge of the knife K is brought above the article F, as when the head B is brought onto pivot E preparatory to forming F in the rough.

For certain work the bit K requires no adjustment to or from the article F, as the bit may be placed in construction in position to cut the proper thickness of shaving therefrom to smooth it; but for general purposes the stock *a b* and guide I should be held in place by bolts *n* passing through slots, so as to bring the bit K to cut more or less from the surface of the article F.

In lathes for turning quite short stuff, the guide I will elevate the bar H as the head B moves to the right; but for larger lathes it should be raised by hand, or a treadle may be placed under the stock *a b* for that or other well-known mechanism applied for that purpose. The bit K may be made in one or more pieces, with vertical joints between and bolted fast to the bar H. The bit being on an incline, its face, as shown, must be formed to cut in horizontal section a line shown at K, Fig. 5. The bit formed on the face as stated is sharpened by a bevel on the back, whereby if a nick should be formed in its edge only so much would have to be ground away as to form an edge at that point. The inclined edge of the bit not being straight makes no difference in work.

A practical test of a machine made as described demonstrates that a class of work can be done thereby for which there are no other mechanical means of which the applicant has a knowledge, and so speedily as the work comes through the forming-lathe.

I claim and desire to secure by Letters Patent—

The inclined adjustable arm H, provided with a bit, K, whose horizontal cutting-line

coincides with the contour of the article to be formed, and provided with a stock, *a b*, which is vertically adjustable in a guide, *d*, and which moves down therein simultaneously with the downward movement of the higher end of the bar H by the left-hand movement of the head B, whereby the bit K is brought to finish the article F as it is being cut in the rough by said head, as specified.

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Witnesses:
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