

(Model.)

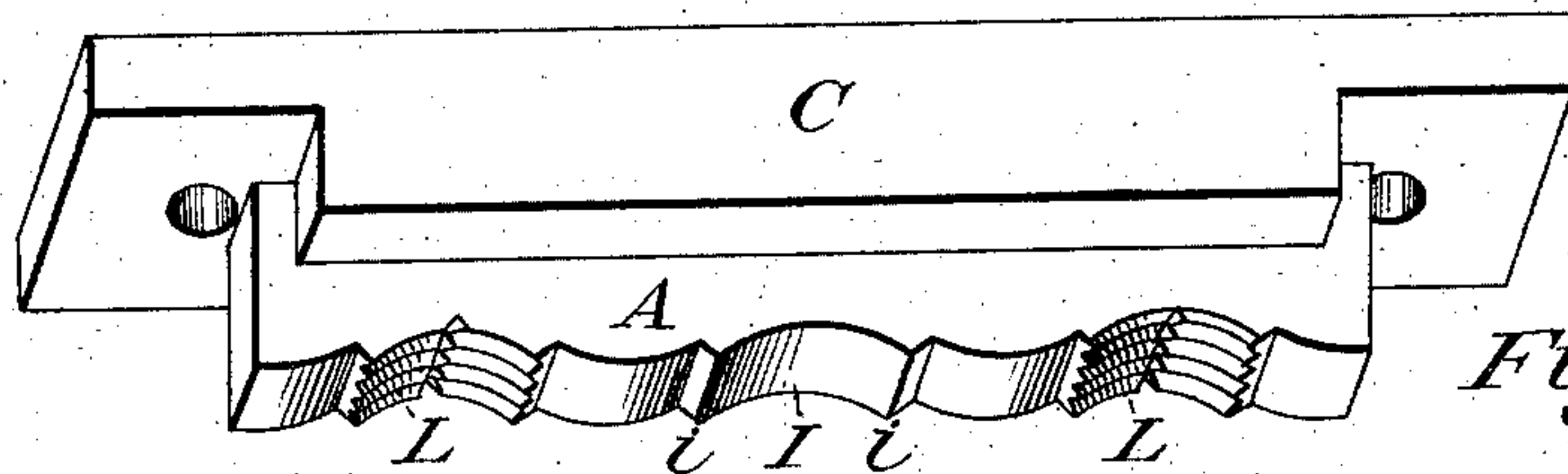
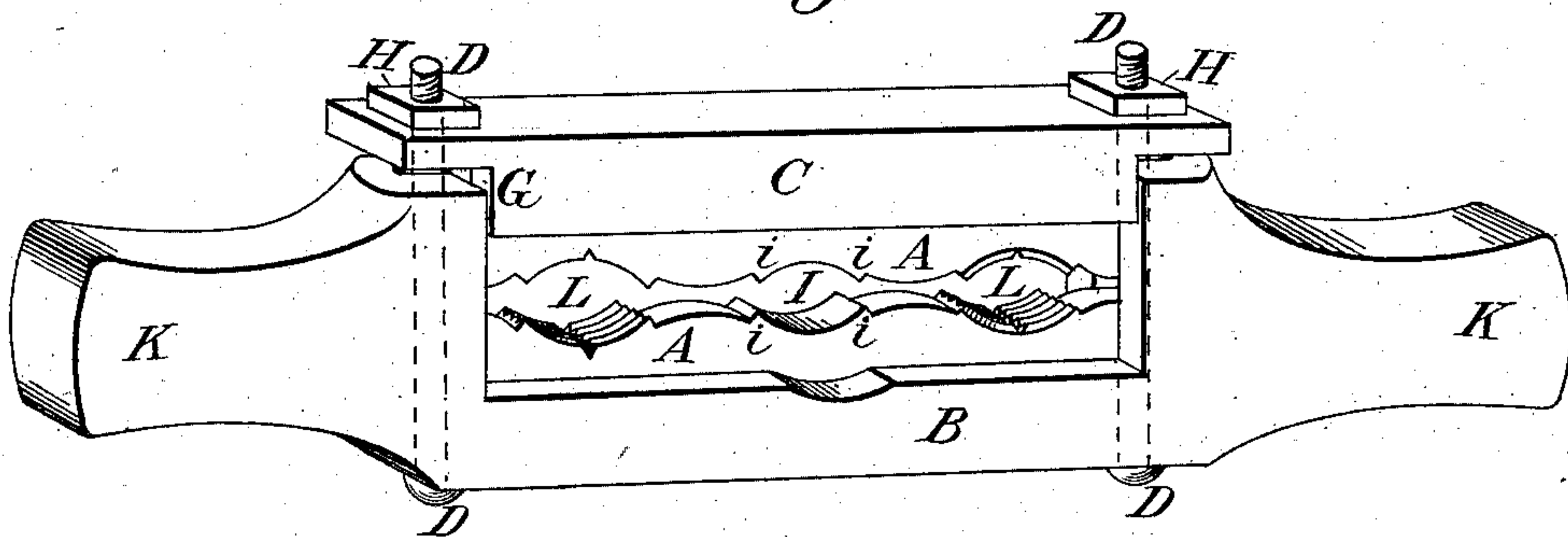
O. S. HULBERT.

Device for Turning and Screw Cutting Axles.

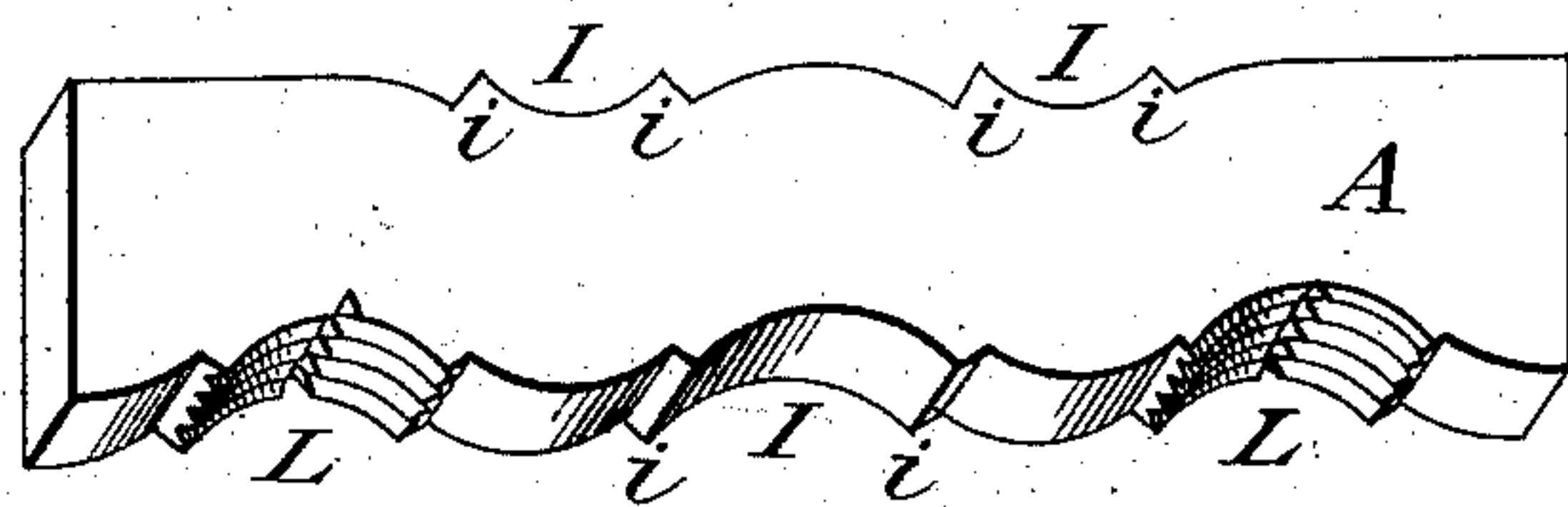
No. 239,501.

Patented March 29, 1881.

*Fig. 1.*

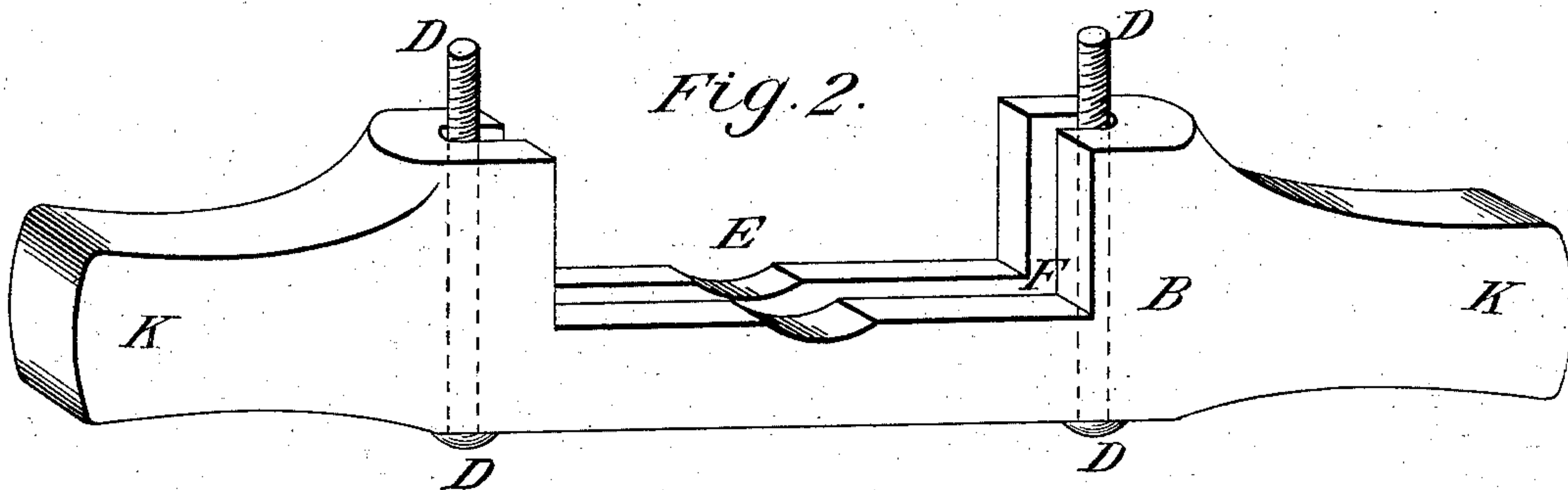


*Fig. 3.*



*Fig. 4.*

*Fig. 2.*



Witnesses:  
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# UNITED STATES PATENT OFFICE.

OREN S. HULBERT, OF BRYAN, OHIO.

## DEVICE FOR TURNING AND SCREW-CUTTING AXLES.

SPECIFICATION forming part of Letters Patent No. 239,501, dated March 29, 1881.

Application filed December 2, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, OREN S. HULBERT, of Bryan, county of Williams, and State of Ohio, have invented a new and useful Improvement in Devices for Turning and Screw-Cutting Axles, of which the following is a specification.

Figure 1 is a perspective view of my improved tool. Fig. 2 is a view of the long bar, showing the handles for turning the tool by when placed upon an axle, the slot and groove for the die-blocks, and the bolts for holding the bars and die-blocks in position. Fig. 3 is an edge view of the short bar, showing one of the die-blocks in its groove, and openings for the passage of the bolts. Fig. 4 is a view of one of the die-blocks, showing parts of axle-turning and screw-cutting dies.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish a light, compact, portable tool, simple in construction, inexpensive in manufacture, and convenient in use, which shall be adapted to repairing carriage-axles by turning down and screw-cutting their ends, so as to allow the face of the nuts to be turned close up to the outer ends of the worn and shortened axle-boxes, thus avoiding the necessity and expense of discarding the old axles and boxes and supplying new ones, as has been the custom, adapted, also, to turning grooves and tenons, and to ordinary screw-cutting by hand-power.

The invention consists in die-blocks provided with a turning-die and with screw-cutting dies, to be mounted in and between two grooved bars, which are held in position by two bolts and nuts, the die-blocks being pressed toward each other by turning the nuts upon the threads of the bolts. Some of its advantages are that the die-blocks are easily fitted to the bars or the bars to the die-blocks; that the die-blocks are supported and strengthened on every side by the grooved bars and bolts; that the pressure of the die-blocks against the axle is even and direct at every point, so that by reason of these advantages the die-blocks may be of any desired length, may contain

parts of turning-dies and screw-cutting dies on both edges of both die-blocks; and, finally, that the various kinds of work named can be done with what is substantially one tool.

A represents the die-blocks, B the long bar, and C the short bar. D D are the bolts, which go in openings in the said bars and hold them in position.

In the inner edge of the long bar, and between the bolts, is a rectangular slot, E, at the bottom and ends of which is a groove, F; also, in the inner edge of the bar C is a groove, which grooves are for the purpose of receiving and holding the die-blocks.

G is a projection on the inner edge of the bar C, which drops into the slot E, to make the tool more compact and to take part of the strain off the bolts.

By turning the nuts H H down upon the threads of the bolts D D the short bar and the die-block mounted in its groove will be pressed toward the long bar and the die-block mounted in its groove.

In the edges of the die-blocks are nearly semicircular slots I, for receiving an axle to be turned, and at both ends of said slots are sharp shoulders i, to press against and turn down that part of the axle designed to be screw-threaded. The slots I are shorter than the diameter of the axle after it has been turned down, so that the shoulders i will press against the axle till the work is done.

To operate this turning device, that part of the axle to be turned is placed in the slots I, and between the shoulders i pressure is applied, as before described, until the shoulders i press against the axle. The axle-nut is then turned on the thread of the axle until it comes against the die-blocks or the bars for a guide. Then the tool is grasped by the handles K on the ends of the bar B and turned round the axle, either to the right or left, or both ways, and held gently against the axle-nut, and the axle will quickly and easily be turned down to the desired diameter. When this is done the axle-nut and the tool are removed, and one of the screw-cutting dies, L, is fitted on the thread of the axle, and a screw is cut on the newly-turned part of the axle. To turn

grooves and tenons a clamp is used for a guide, otherwise the procedure is the same as that described in turning an axle.

Having thus described my invention, I claim  
5 and desire to secure by Letters Patent—

The die-blocks A, provided with turning-die I i and screw-cutting dies L, jointly with

the grooved bars B C, and bolts and nuts D H, substantially as and for the purposes described.

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Witnesses:

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