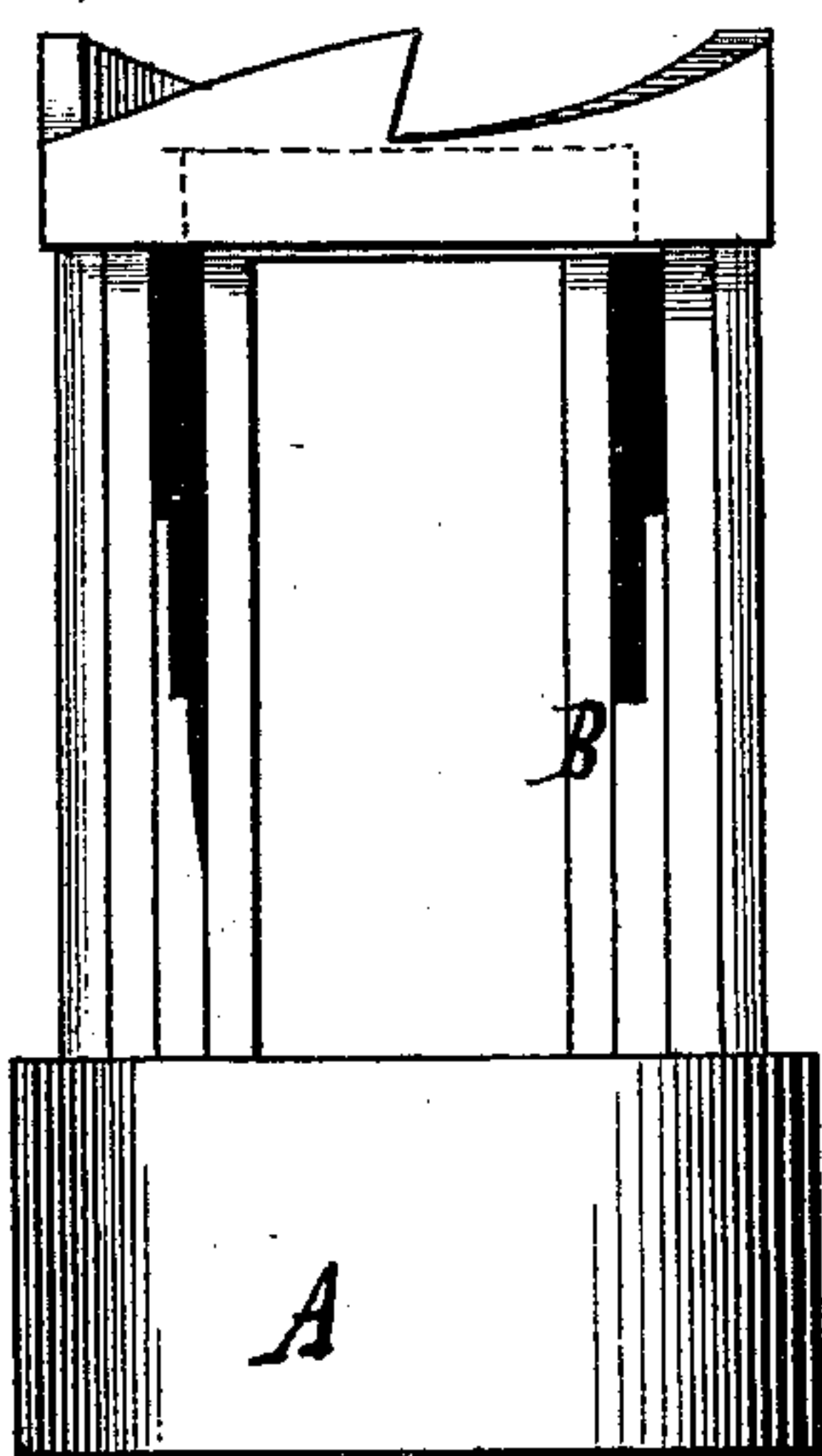


E. L. COMLEY.  
Machines for Turning Boxes.

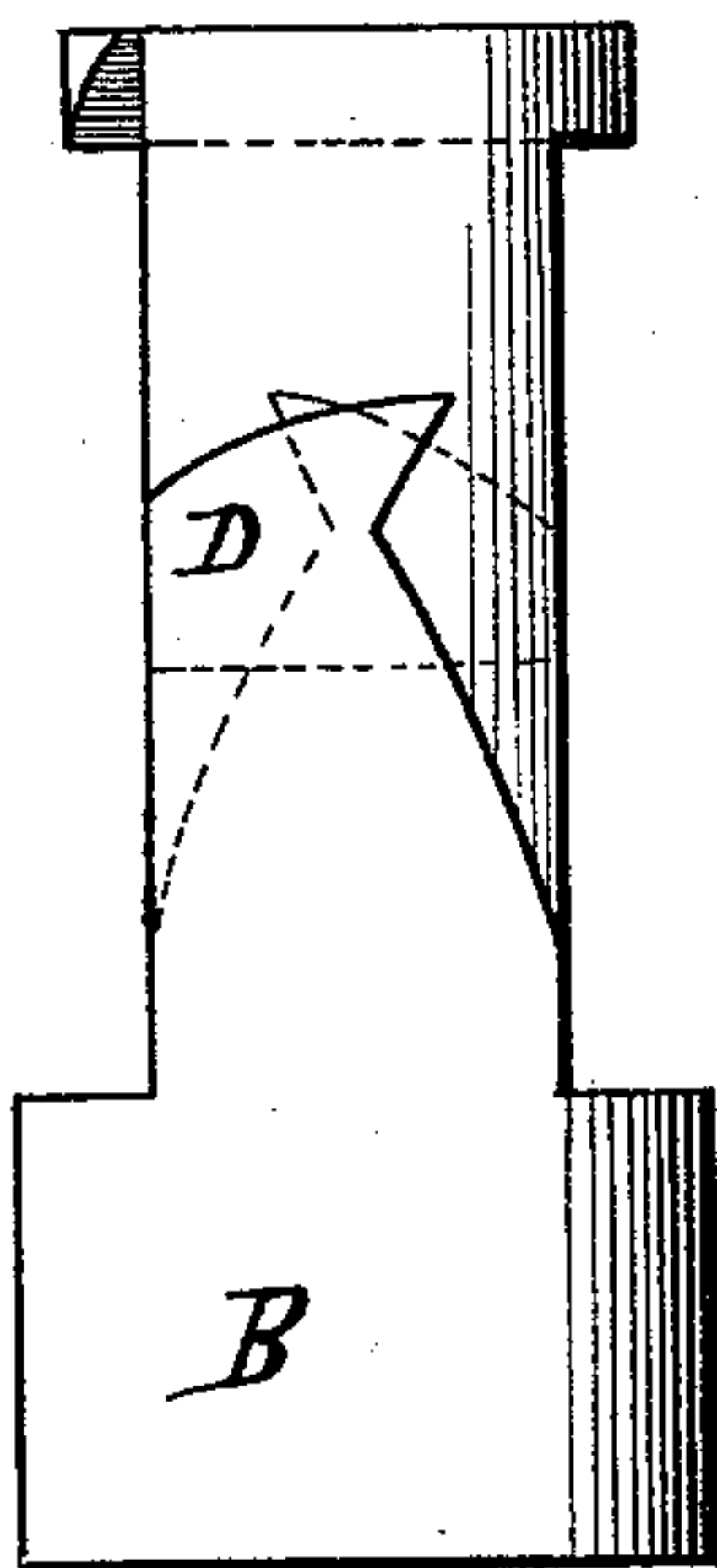
No. 148,599.

Patented March 17, 1874.

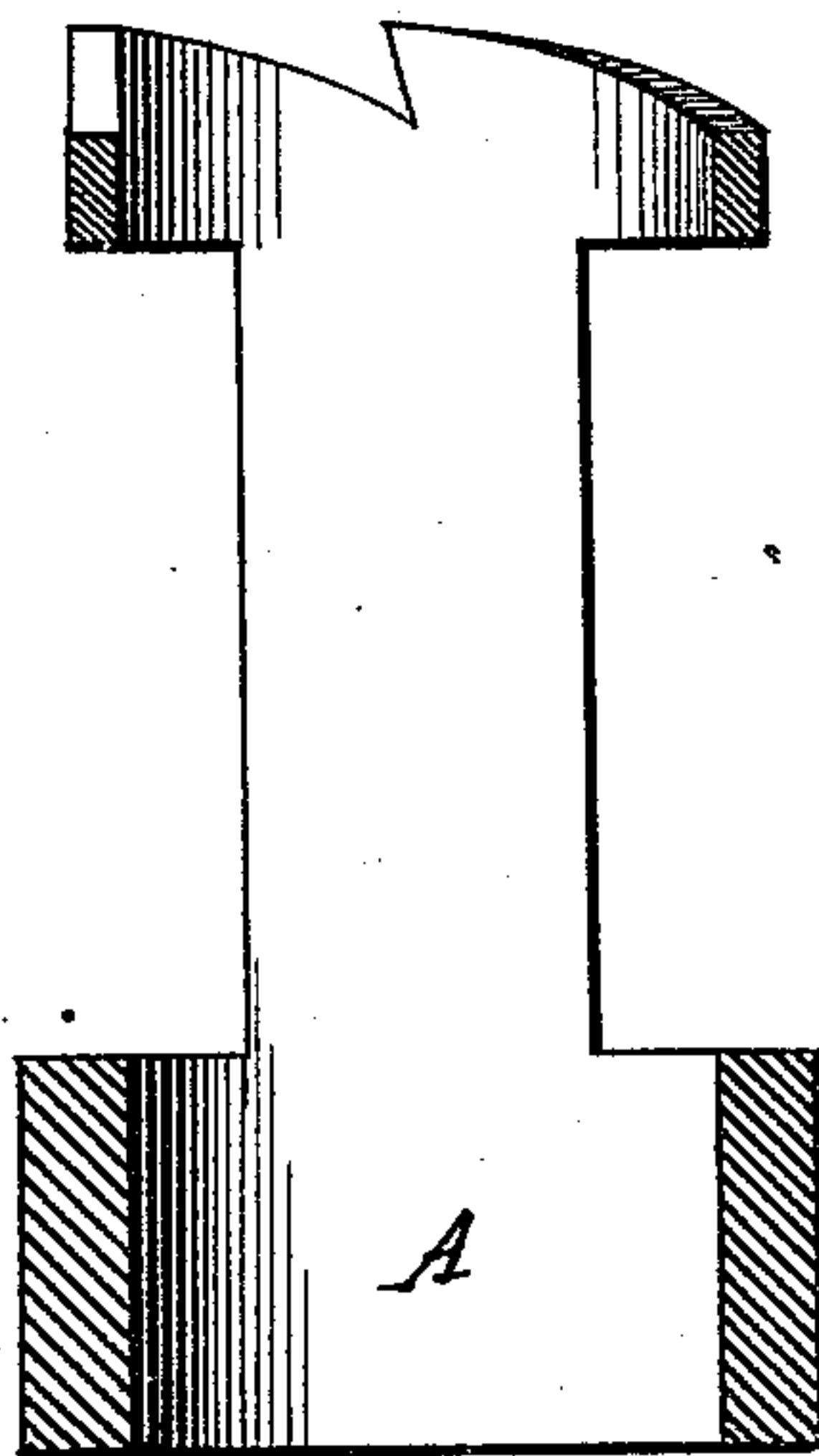
*Fig. 1.*



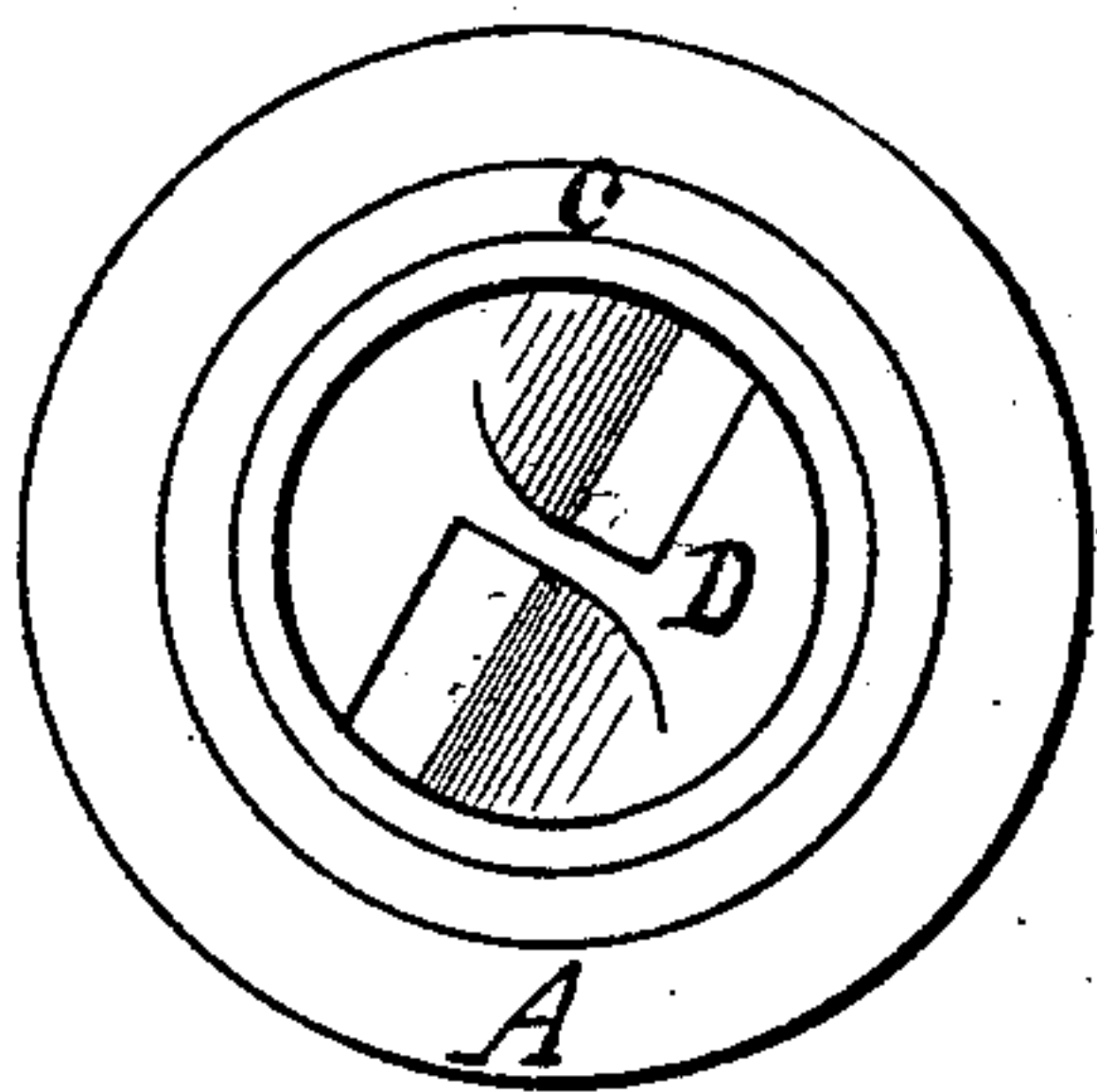
*Fig. 2.*



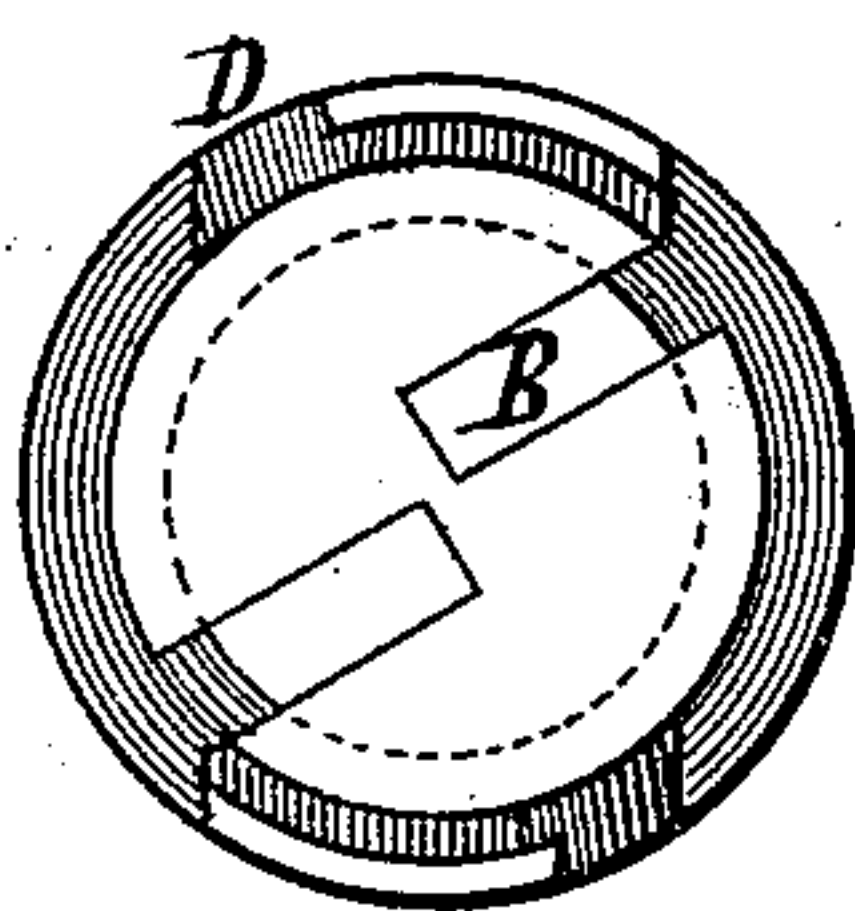
*Fig. 3.*



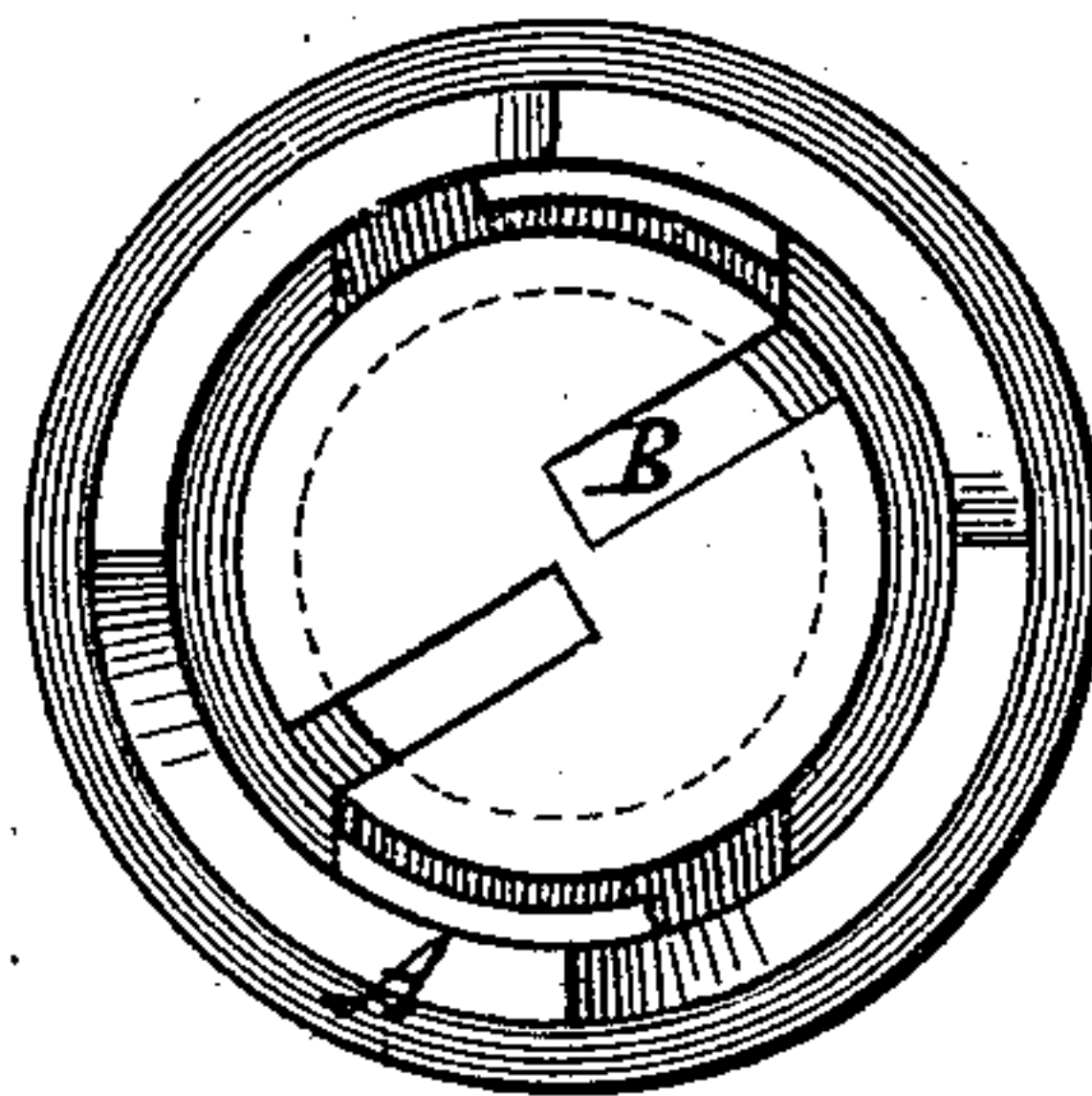
*Fig. 6.*



*Fig. 5.*



*Fig. 4.*



Witnesses.  
Shepherd H. Wheeler  
Gree O. Wheeler

Inventor.  
Ephraim S. Comley

# UNITED STATES PATENT OFFICE.

EPHRAIM L. COMLEY, OF NILES, MICHIGAN.

## IMPROVEMENT IN MACHINES FOR TURNING BOXES.

Specification forming part of Letters Patent No. **148,599**, dated March 17, 1874; application filed August 15, 1873.

*To all whom it may concern:*

Be it known that I, EPHRAIM L. COMLEY, of Niles, Berrien county, State of Michigan, have invented a new and useful Improvement in Machines for Turning Boxes, of which the following is a specification:

The accompanying drawing forms a part of this specification, and shows, in—

Figure 1, an elevation of my invention. Fig. 2 is a side view of the center-bit, with an outline sketch of the spur for rabbeting the top of the box to receive the cover. Fig. 3 is a vertical section of the cylindrical saw. Fig. 4 shows a plan of the cylinder-saw and center boring-bit, showing the vacant space between them. Fig. 5 is a top view of Fig. 2, and Fig. 6 is a top view of Fig. 1.

The letters of reference marked thereon indicate the parts referred to by a similar letter in the specification.

This invention relates in its nature to the method of manufacturing cylindrical boxes from square billets of wood, the inner and outer surfaces being formed simultaneously, and to the construction, arrangement, and combination of the specific parts employed, consisting of a cylindrical saw, a center boring-bit, a rabbeting-spur, and a circular cutting-off saw, all operated by any suitable mechanism.

In the drawing, A represents a cylindrical saw. The inner diameter of this saw is equal to the outside diameter of the box to be made, and may be of any suitable length. Two opposite sides of this cylinder are cut away, forming elongated openings for the escape of dust and chips. B represents a center boring-bit. This bit works within the saw, and is permanently attached to it at the base or rear end, leaving a vacant space between the saw and bit at the front end, as seen at *c*, for the re-

ception of the shell of the box. D represents a spur. This spur cuts an annular rabbet in the outer corner of the top of the box to receive the cover, and is permanently attached to the saw and bit in the bottom of vacant space *c*, thus uniting the saw, bit, and spur in one tool, which may be attached to the mandrel of a turning-lathe, or any suitable machine for running the tool rapidly.

To operate this machine, a square billet of wood is presented to the revolving tool endwise by means of suitable guides and carriage, that any good mechanic may supply, and need not be described here, and either the tool may be moved to the wood, or the wood to the tool; the result will be the same. The cylindrical saw cuts the exterior of the box, and the center-bit cuts out the interior, and the spurs cut the annular rabbet for the cover, all at one operation. The box is then cut off from the billet by means of a circular cutting-off saw, moving at right angles to the billet of wood.

This saw may be worked automatically, or by hand. Elongated openings are made in the opposite sides of the tubular bit B, corresponding with similar openings in the cylindrical saw, through which the chips are thrown by centrifugal force, making the tool self-clearing.

Having thus fully described my invention, what I claim is—

In a box-making machine, the combination of the cylindrical saw A, center boring-bit B, and rabbeting-spur D, all constructed, arranged, and combined as and for the purposes hereinbefore set forth.

EPHRAIM L. COMLEY.

Witnesses:

SHEPHERD H. WHEELER,  
IRA O. WHEELER.