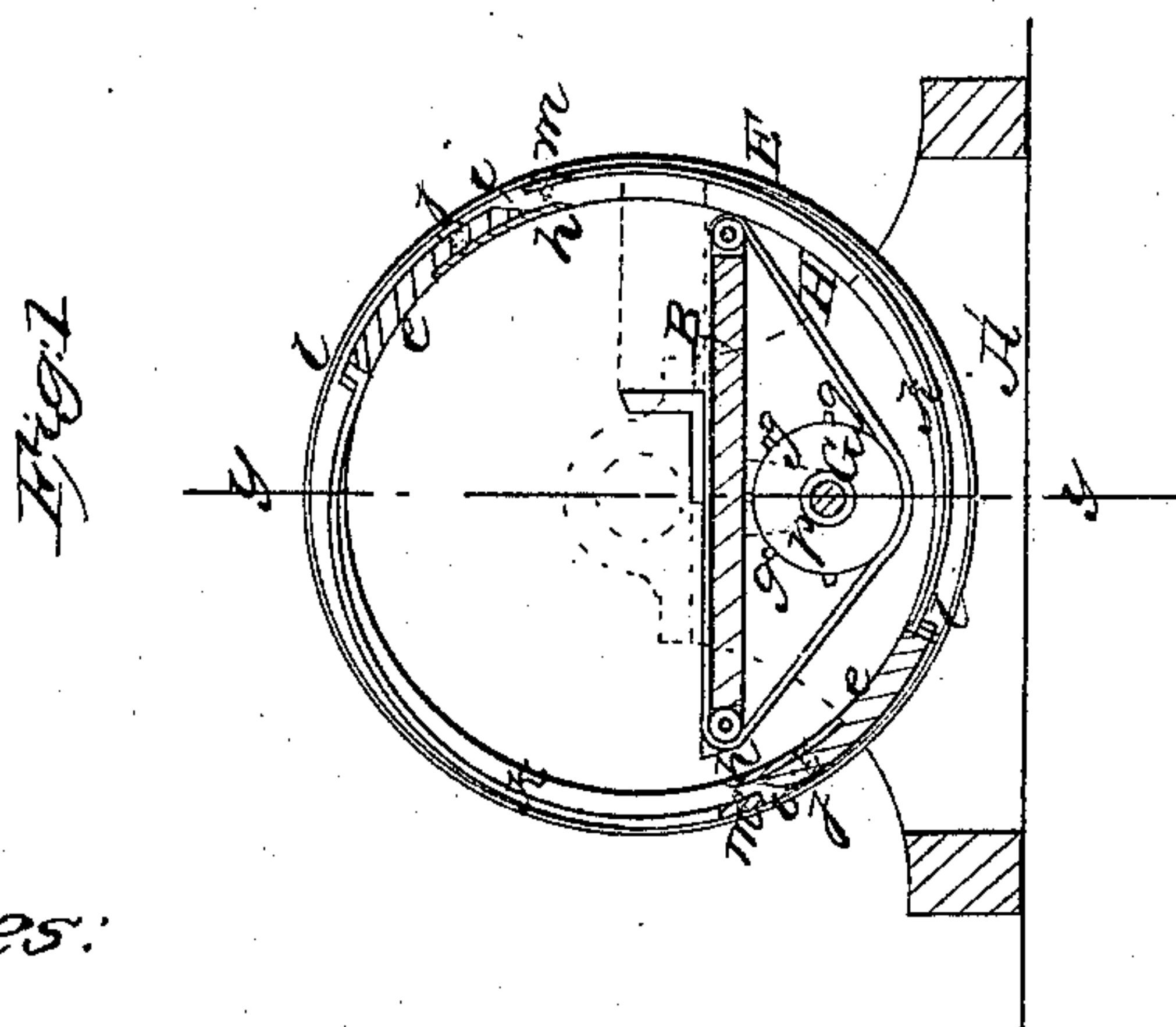
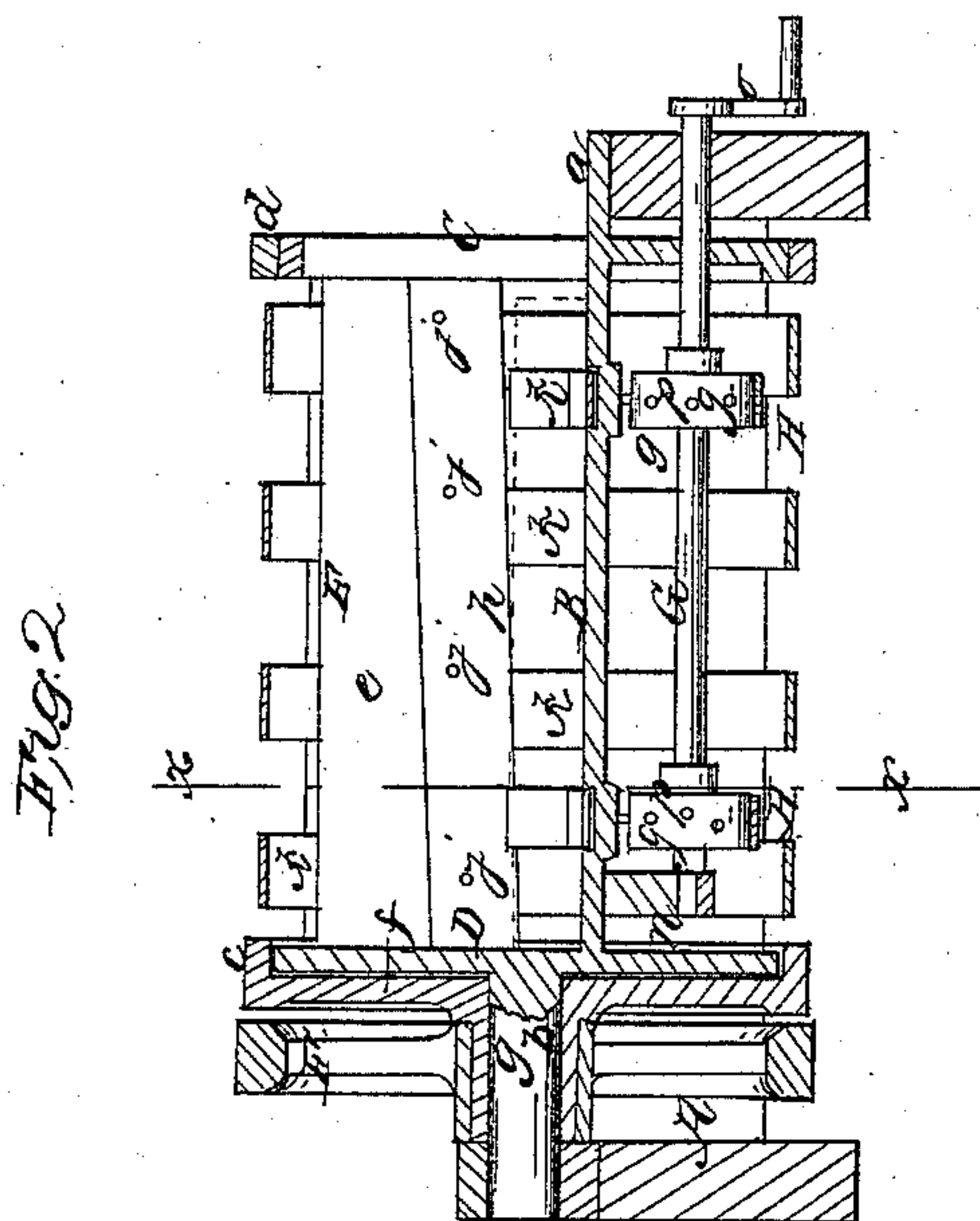


*J. Little,
Making Stares.*

17th 23, 181.

Patented Mar. 8, 1859.



Witnesses:
C. F. Lurman
E. B. Symon

Inventor:
James Little

UNITED STATES PATENT OFFICE.

JAMES LITTLE, OF EVANSVILLE, INDIANA.

MACHINE FOR CUTTING STAVES FROM THE BLOCK.

Specification of Letters Patent No. 23,181, dated March 8, 1859.

To all whom it may concern:

Be it known that I, JAMES LITTLE, of Evansville, in the county of Vanderburg and State of Indiana, have invented a new and Improved Machine for Cutting Staves; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a transverse vertical section of my invention taken in the line *x, x*, Fig. 2. Fig. 2, is a longitudinal vertical section of ditto ditto taken in the line *y, y*, Fig. 1. Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in the employment or use of a revolving hollow cylinder provided with knives and gages and having a stationary bed-plate and feeding device fitted within it, the whole being arranged as hereinafter fully shown and described, whereby staves may be cut very expeditiously and in a perfect manner.

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a frame on which a horizontal metallic bed B, is secured, one end of said bed having a ring C, attached or cast with it. The opposite end of the bed has a circular plate or disk D, attached or cast with it, the plate or disk D, and ring C, being of equal diameter. The bed B, is supported at one end by a projecting plate *a*, and the opposite end is supported by a cylindrical shaft *b*, which projects from the center of the plate or disk D, and is attached to the frame A, see Fig. 2.

E, is a cylinder which is formed of two rings *c, d*, connected by longitudinal plates *e, e*, the plates and rings may be cast in one piece, and the rings are fitted respectively on the ring C, and disk D, that are attached to the bed B. The ring *c*, is attached to or is cast with a circular plate *f*, which has a hub or collar *g*, said hub or collar being fitted loosely on the shaft *b*, that supports one end of the bed B. The hub or collar *g*, of the plate *f*, has a driving pulley F, placed on it. The periphery of the ring C, and disk D, with the shafts *b*, form the bearings for the cylinder E, as shown clearly in Fig. 2.

The front edges of the plates *e, e*, have oblique positions relatively with the axis of

the cylinder, and to the inner sides of the plates *e, e*, knives *h, h*, are attached, one to each, and the front edges of the plates *e, e*, are beveled as shown at *i, i*, in Fig. 1.

The plates *e, e*, and consequently the knives *h, h*, are at opposite points of the cylinder E, the knives being secured to the plates by bolts *j*.

To the back end of each plate *e*, one end of a series of curved metal strips *k, k*, are attached as shown at *l*. The opposite ends of these strips are attached to transverse bars *m, m*, which are secured to the cylinder E, parallel with the front and oblique edges of the plates *e, e*.

Below the bed B, a shaft G, is placed longitudinally. This shaft has its inner bearing in a pendent plate *n*, attached to bed B, its outer bearing being in the end of frame A. On the outer end of shaft G, a crank *o*, is placed. On the shaft G, below the bed B, there are two pulleys *p, p*, which have teeth *q*, on their peripheries. H, H, are two endless belts which are fitted in recesses or grooves in the bed B, the belts passing transversely over the bed and underneath the pulleys *p*, the belts being perforated with holes to receive the teeth *q*, of the pulleys. The bed B, it will be seen by referring to Fig. 1, is a trifle below the center of the cylinder E.

The operation will be readily seen:—The bolt from which the staves are cut (shown in red) are got out of proper dimensions and placed on the bed B, dogs *r, r*, which are attached to the belts H, bearing against the back edge of the bolt. The cylinder E, is rotated by means of a band passing around the driving pulley F, and as the cylinder rotates the knives *h, h*, cut the staves from the bolt with an oblique cut, the cut staves passing through the throats or spaces between the front beveled edges *i, i*, of the plates *e, e*, and the bars *m, m*. The thickness of the staves is regulated by adjusting the bars *m, m*, of the gage strips *k, k*, farther in or out on the cylinder, which may be done by inserting wedges under the ends of the bars *m*, or by other suitable means, and the front edge of the bolt is kept up against the gage strips by turning the shaft G, by hand or by any automatic mechanism, the toothed pulleys *p, p*, moving the bands H, H, and the dogs *r, r*, shoving the bolt. The disk D, and plate *f*, and hub *g*, keep the cylinder

in proper working position, and the bolt is placed on the bed B, through the ring C.

By this invention staves will be cut very rapidly, for as the cylinder E, moves with
5 a continuous rotary motion, there is no loss of time, as is the case with the reciprocating stave cutting machines.

The invention as within described may also be constructed wholly of metal at a
10 very reasonable expense and a very strong and durable machine obtained.

Having thus described my invention what

I claim as new and desire to secure by Letters Patent, is.

The hollow cylinder E, provided with 15 the knives *h*, *h*, and gage strips *k*, in connection with the bed B, and the feeding belts H, H, or their equivalents, the parts being arranged to operate substantially as and for the purpose set forth.

JAMES LITTLE.

Witnesses:

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