

MACHINES FOR CUTTING STAVES.

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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN MACHINES FOR CUTTING STAVES.

Specification forming part of Letters Patent No. 172,962, dated February 1, 1876; application filed December 3, 1875.

To all whom it may concern:

Be it known that we, ANDREW BURNS and JAMES F. WASS, of Westfield, in the county of Chautauqua and State of New York, have invented a new and valuable Improvement in Machines for Cutting Staves; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of my improved stave-cutting machine. Fig. 2 is a detached view, on an enlarged scale, of one of the equalizing-knives.

This invention has relation to stave-cutting machines; and consists in the combination and arrangement of the several parts composing the machine with the peculiar form and construction of vertical knives placed at each end of the longitudinal stave-cutting blade, for the purpose of equalizing the length of the staves during the operation, and at the same time they are cut from the block, as will be hereinafter described, and subsequently pointed out in the claim.

In the accompanying drawings, A represents the side pieces composing the frame of a stave-cutting machine, formed with cleats *a*, to which is secured a cross-piece, *c*, with fingers *d*, said fingers projecting upward sufficiently to act as guides for the pivoted table B, and also forming a rest for the front edge of the block when placed upon the table. The table B has a series of recesses, *e*, in number equal to the number of guide-fingers *d*, to admit of the table having a free oscillating movement, and be guided and steadied by the fingers. To the side pieces A, and at the top thereof, is secured a cross-piece, *c*, to which is fastened the longitudinal stave-cutting knife C. The equalizing-knives D E are placed at

the ends of the knife C, secured thereto by bolts *f*, the knife D being stationary, while the knife E is capable of adjustment upon the blade or knife C, the same provided with a line of perforations or holes, *g*, for that purpose, so that the knife E may be secured upon the knife C at the desired distance to the length of the stave to be cut. These knives D E are of peculiar form, having their cutting-edge *h* at right angles to the cutting-edge of the knife C, and the inner edge *i* is perpendicular, while the outer edge *j* is inclined from the upper or larger portion of the knife to the cutting edge *h*. The edge *h* of the knives D E strike the block at the same time the edge of the longitudinal knife C, the stave passing up between the perpendicular sides or edges *i* of the knives D E, while the inclined edges *j* press the end of the stave as it is being equalized gradually outward, thereby making a smooth cut upon the ends of the stave without tearing or slivering it.

If desired, instead of having the table oscillate, it may be made stationary, and the knives, in place of the table, may be arranged to oscillate.

Having now fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The guide-fingers *d* and table B, in combination with the longitudinal knife C, equalizing-knife D, and adjustable knife E, the equalizing-knives D E having the perpendicular edge *i* and inclined edge *j*, substantially as and for the purpose set forth.

In testimony that we claim the above we have hereunto subscribed our names in the presence of two witnesses.

ANDREW BURNS.
JAMES F. WASS.

Witnesses:

J. R. S. CROSGROVE,
W. R. DOUGLAS.