T. Hanvey,

Cutting Veneers.

No. 45,323. Patented Dec. 6, 1864.

Fig 2.

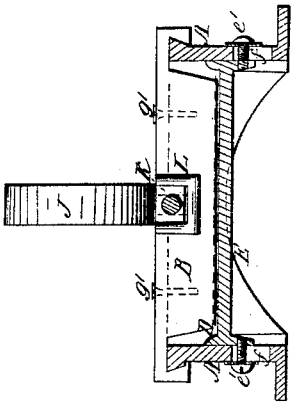


Fig 3.

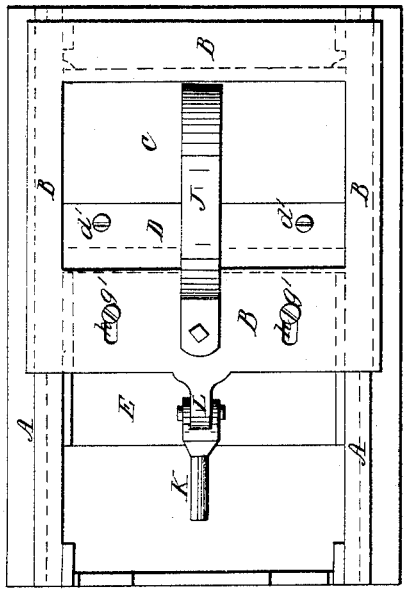
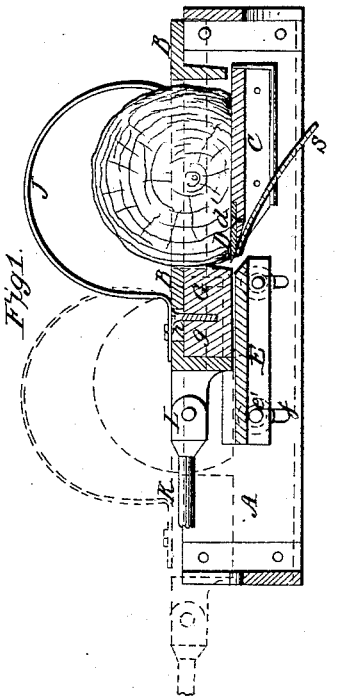


Fig 1.



Witnesses:

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E. B. Forbush

Inventor:

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AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

THOMAS HANVEY, OF ELMA, NEW YORK.

IMPROVEMENT IN MACHINES FOR CUTTING STAVES.

Specification forming part of Letters Patent No. **45,323**, dated December 6, 1864.

To all whom it may concern:

Be it known that I, THOMAS HANVEY, of the town of Elma, in the county of Erie and State of New York, have invented a certain new and Improved Stave-Cutting Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a longitudinal section. Fig. II is a transverse section. Fig. III is a top plan view.

Letters of like name and kind refer to like parts in each of the figures.

The nature of this invention relates to the construction and use of a machine for cutting or slicing staves from a bolt or block of wood, the cutter acting sidewise upon the block as distinguished from endwise, and slicing off the stave instead of splitting it; and it consists mainly of four elements—to wit: First, a four-sided box, without a bottom, so made as to receive and feed the block of wood to the cutter sidewise of the wood by a reciprocating movement of the box in the main frame of the machine; second, a stationary plate or table, which supports the block, and upon which the block slides back and forth as it is moved by the box; third, an adjustable table, placed a little lower than the stationary table, which catches the block as it slides off the stationary table in the reverse movement for a new feed and by which the thickness of the stave to be cut is regulated; and fourth, a knife or cutter (which cuts the timber instead of splitting it) which is attached by appropriate bolts or screws to the stationary table.

There are also attached to this machine two other devices of less importance, but very useful in the practical working of the machine—to wit: a spring for holding the block of wood in place while the operation is going on, and a head-block of wood, or other soft material, for the cutter to cut against as it slices off a stave.

A represents the main frame-work of the machine, which may be made of cast-iron or other suitable material.

B represents the four-sided bottomless box, hereinabove referred to, and which is also made of cast-iron. It is made to slide freely and steadily back and forth on the upper edge of the main frame, and thereby move the block of wood therein to and from the cutter. This box is made of sufficient capacity to receive a block for the longest stave to be cut, the length of the block being transverse the reciprocating motion of the box, so that the block will be driven sidewise against the cutter.

C is a stationary table, which is strongly connected with the main frame, or it may be cast with the frame as a part thereof.

D is the cutter, attached to the stationary table by means of the bolts or screws d'. It is made sufficiently wide to allow it to be bolted to the stationary table, and the edge is beveled on the under side, so that the stave which is cut will be directed downwardly. The cutter is made of greater length than the longest stave to be cut, so that it can cut the whole length of the stave sidewise of the stave at one stroke and in a manner parallel with the grain of the wood.

E is an adjustable table, upon which the block of wood drops in its backward movement from the cutter. This table is made adjustable by means of the large-headed screw-bolts e', which pass through appropriate slots, f, made in the side of the main frame. The bolts screw into the table, so that by loosening the bolts a little the table may be raised or lowered and placed for staves of any required thickness, and the bolts then screwed up tight so as to hold the table as placed. The distance this table is placed below the cutter determines the thickness of the stave.

G represents a strip of wood or other soft material, which is connected with the box, for the cutter to cut against. This strip is held in place by means of the screws g', which pass through the slots h and screw into the strip and hold it securely in place. The slots will allow the strip to be moved up as it wears away, so as to keep it flush for the cutter to cut against. This will prevent the timber from splitting at the outer edge as the cutter passes through.

J represents a spring, which is intended to bear upon the block of wood in the box and hold it close to and in contact with the strip G. This spring may be made in any convenient form and attached to the box so as to answer the required purpose.

S represents a stave just sliced from the block.

K represents a connecting-rod, which is jointed to the box, as shown at L, and connected with the driving crank of the engine, by which power is applied to the machine in a common manner.

Operation: The blocks of wood to be cut into staves are in the first place thoroughly steamed in a common manner. They are then one by one placed in the box (the box being at the limit of its reverse movement) so that the block will rest upon the adjustable table and in contact with the wood strips G and the spring J, brought to bear so as to hold the block in place. The first forward movement of the box will drive the block of wood against the cutter and a stave will be sliced off from the under side of the block, which will drop down under the machine while the block passes on to the stationary table. The reverse movement of the box draws the block back and it falls down by its own gravity upon the adjustable table, ready again to be fed to the cutter by the next forward movement of the box. And thus the operation is continued until the block is all sliced up into staves. In this manner staves may be cut very rapidly and as wide as the diameter of the block or log, and a great saving of labor and timber is thereby effected. The staves thus cut are ready to be passed through a forming and compressing machine and afterward jointed and crozed, and an excellent quality of staves is thereby produced.

This machine is also applicable for cutting heading, trunk-boards, veneering, and the like.

I claim—

1. In a machine for cutting or slicing staves from a bolt or block of wood, the combination of the movable box B, stationary table C, cutter D, and adjustable table E, for the purposes and substantially as described.

2. In a machine for cutting staves, substantially as herein described, a spring, J, attached to the movable box B, so that it will bear against the wood block to be cut and press it against the side of the box (or strip G therein) to prevent the wood block from sliding sidewise while the process of cutting is going on, substantially as set forth.

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