2 Sheets—Sheet 1.

S. NEWMAN.

Stave Jointer.

No. 110,271.

Patented Dec. 20, 1870.

Fig. 1

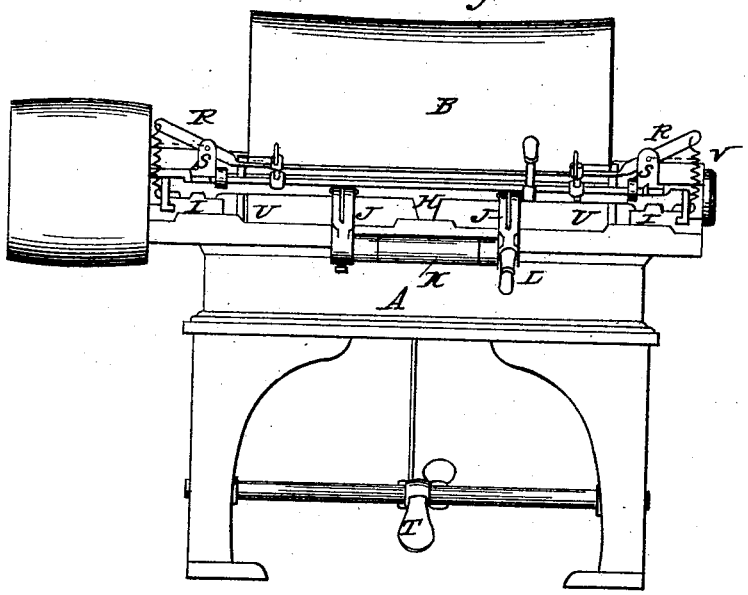
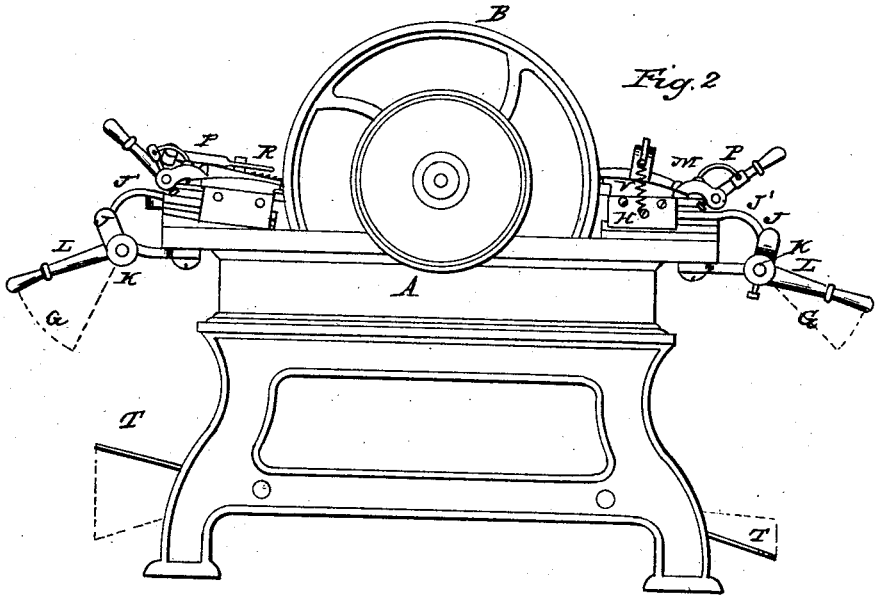


Fig. 2



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S. NEWMAN.

2 Sheets—Sheet 2.

Stave Jointer.

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Fig. 3

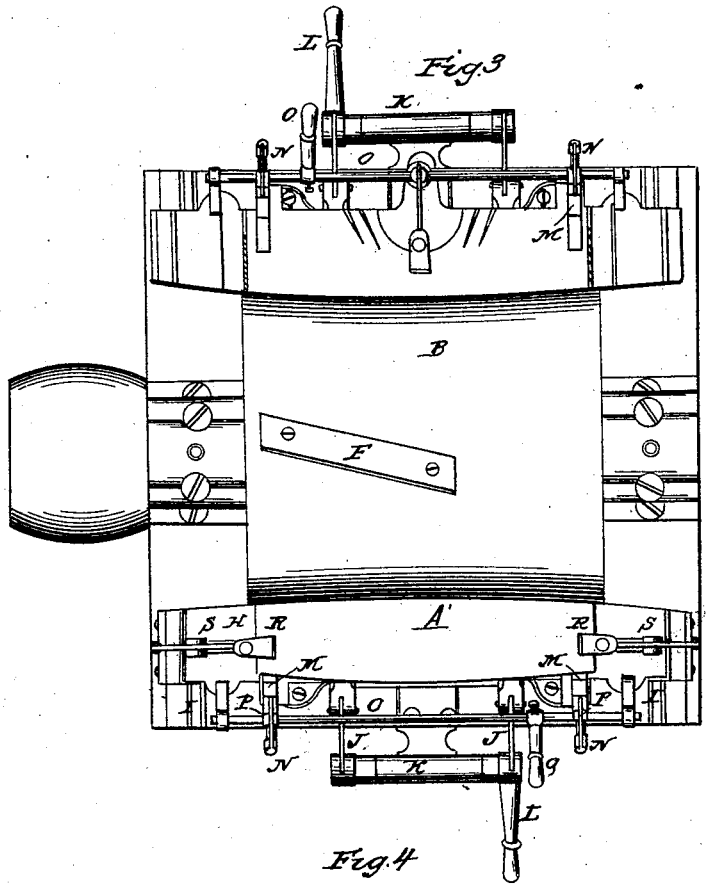
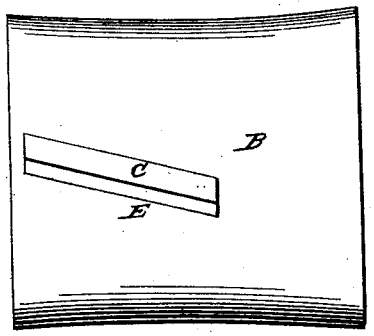


Fig. 4



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JOHN NEWMAN, OF CLEVELAND, OHIO, ADMINISTRATOR OF THE ESTATE OF SAMUEL NEWMAN, DECEASED.

Letters Patent No. 110,271, dated December 20, 1870.

IMPROVEMENT IN STAVE-JOINTERS.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that SAMUEL NEWMAN, of Cleveland, in the county of Cuyahoga, and State of Ohio, in his lifetime invented certain new and useful Improvements in Stave-Jointers, of which the following is a full and complete description, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a side view of the machine.

Figure 2 is an end view.

Figure 3 is a view of the top.

Figure 4 is a detached section.

Like letters of reference refer to like parts in the different views.

The nature of this invention relates to certain devices, whereby said staves are held and fed to the machine for being jointed, as hereinafter more fully described.

In figs. 1 and 2, A represents an iron frame, in which is journaled a cylinder, B. The face of said cylinder is concaved in direction of its axial line to a degree equal to the curvature of the edge of a stave, for giving the bilge to the barrel.

In a diagonal direction across the length of the cylinder, is sunk a recess, C, fig. 4; a narrow section of said recess is cut through the face of the cylinder, forming a long narrow opening or throat, E, the purpose of which will presently be shown.

In the recess above referred to is fitted a cutter or blade, F, fig. 3, and which is secured therein by screws G.

The bottom of the recess, on which the blades lie, is such as to throw the cutting edge of the blade a certain distance above the face of the cylinder, so that they shall have cutting capacity more or less as the edge stands above the face.

It will be obvious that the cutters thus arranged in the cylinder will have an easy shaving-like cut, as the edge of the blade can be made very thin by grinding the basil far back, and inasmuch as all the cutters are made of an equal and exact thickness, and the recesses of an equal and exact depth, the cutting edge of each blade will be of an equal distance from the face of the cylinder, and hence the several blades will have a cut of an equal thickness, each one doing the same amount of cutting, and with much greater ease than if the cutters were projected through the cylinder in slots and secured by keys, as they are in other similar machines for doing this class of work.

In such other machines, much trouble is had in so setting the cutters in the cylinder that each one shall do an equal amount of cutting, their adjustment requiring much time and care, and, when set, they present a cutting edge so nearly on a radial line of the cylinder that the blade tears the wood rather than cut or shave it from the stave, leaving the edge torn, or too rough to make a close or tight joint, which, however, is not the case when the cutters are arranged upon the cylinder in the manner above described, and which are more easily removed or adjusted than when secured in the ordinary way.

The device for holding the stave while being jointed is a sliding clamp, consisting of a bed-plate, H, figs. 2 and 3. Said bed slides upon guides or ways I, to and from the face of the cylinder, by means of the arms J projecting from the shaft K, and connected therewith by links J', fig. 2.

Said arms are operated by the handle L, as indicated by the dotted lines *a*, fig. 2, thereby moving the bed-plate backward and forward, as above said.

M, fig. 3, is a pair of sliding lugs, fitted in the upper side of the bed-plate in grooves, in which they slide backward and forward by means of the arms N, projecting from the shaft O, and to which they are attached by links P, fig. 2; said shaft is operated by a handle, Q, whereby the lugs are in turn operated for a purpose presently shown.

R, fig. 3, is a pair of lever clamps, pivoted in standards S, and vibrate therein by means of the treadle T, fig. 1, operating a shaft, to which the clamps are attached by rods U, which, on depressing the treadle, draws down the inner end of the clamp, which is again drawn upward by the springs V, and thereby retained until operated by the treadle.

The practical operation of this machine is as follows:

A stave to be jointed is laid upon the bed H, as shown at A', which represents a stave; said stave is held down upon the bed by the clamps R, operated by the treadle T. It is also prevented from being forced back from the cylinder by the sliding lugs M; a stave thus arranged upon the bed and properly secured is approached to the cylinder for the action of the knives by the lever or handle L, which on being moved, as indicated by the dotted line *a*, fig. 2, operates the bed toward or from the cutters, as the case may be.

The curvature of the cylinder and the position of the cutters thereon, obtains to the stave the proper bilge curve, and at the same time the relative position of the stave to the cylinder is such that the proper bevel is given to the edge, so as to form the circle of the barrel. Thus the inner edge of the bed is higher than the outer edge, so that the inner edge of the stave is highest as it lies upon the bed, thereby bring-

ing it above the axial line of the cylinder more or less as the size or circumference of the barrel may requir that the bevel of the edge of the stave should be.

A similar clamping device is arranged on both sides of the cylinder, operating substantially alike and for the same purpose, one important difference only being made, viz., that on one side of the cylinder the inner edge of the bed is above the axial line, whereas the bed on the opposite side is below it, this being necessary in order to obtain the proper bevel on the edge of the staves which are placed on their respective beds reversely to each other.

Claims.

What I claim as the invention of SAMUEL NEWMAN, and desire to secure by Letters Patent, is—

1. The combination of the foot-treadle T, its connecting rods and spring-lever clamp-jaws R, with the adjusting reciprocating lugs M, upon inclined part of bed plate H, constructed and arranged to operate in the manner and for the purpose described.

2. The combination of the hand-lever Q, rock-shaft O, arms N, pivoted links P, and sliding lugs M, constructed and operating in the manner and for the purpose described.

3. The combination of the hand-lever L, shaft K, connecting links J, reciprocating bed H, carrying the stave A and its clamping devices, with the revolving planing cylinder B, having knives F, constructed and operating in the manner and for the purpose described.

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Administrator.

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