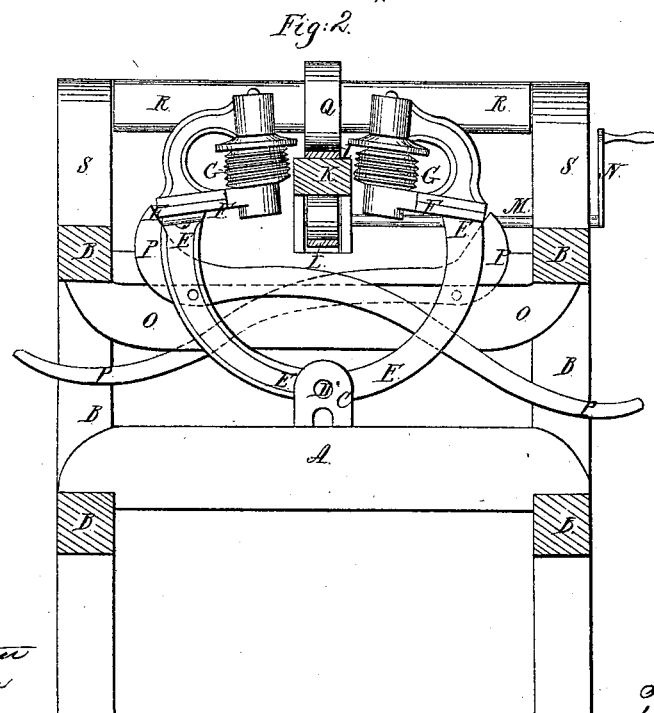
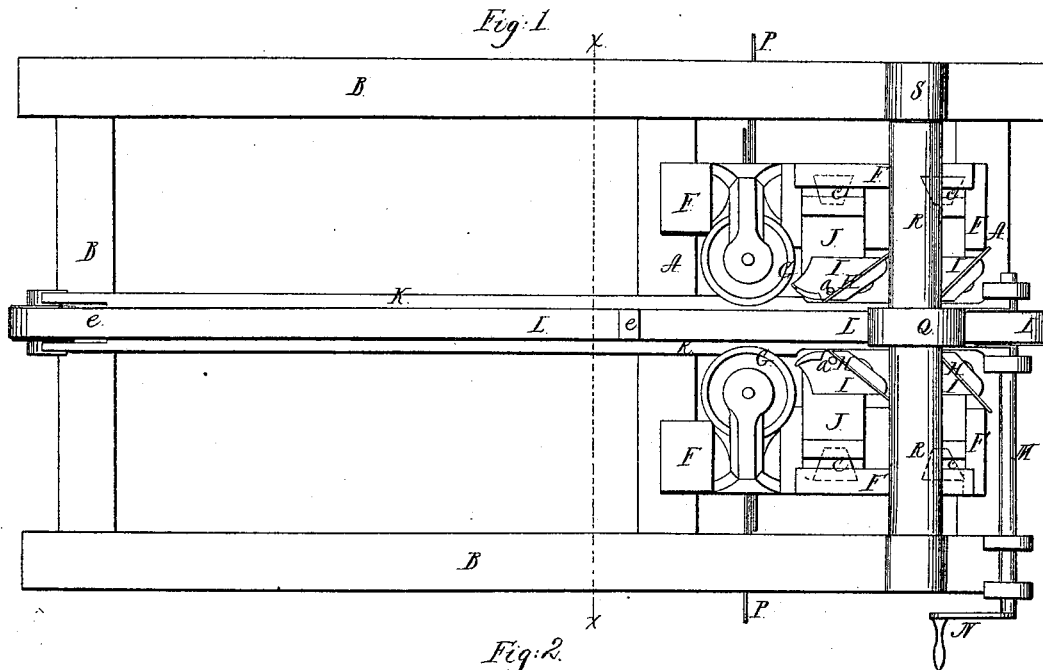


*T. Cheshire,
Jointing Staves.*

N^o 53,784.

Patented Apr. 10, 1866.



Witnesses:

*J. D. Patten
J. W. H. Brown*

Inventor:

*Thomas Cheshire
by atty. W. B. Langdon*

UNITED STATES PATENT OFFICE.

THOMAS CHESHIRE, OF CINCINNATI, OHIO.

IMPROVEMENT IN STAVE-MACHINES.

Specification forming part of Letters Patent No. 53,784, dated April 10, 1866.

To all whom it may concern:

Be it known that I, THOMAS CHESHIRE, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in the Manner of Dressing the Edges of Staves for Barrels, Casks, or Similar Articles; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a top plan of a machine applicable to the purpose, and Fig. 2 represents a vertical cross-section taken at the line *x x* of Fig. 1.

Similar letters of reference, where they occur in the separate figures, denote like parts of the machine in both of the drawings.

My invention consists in creasing or compressing the edges of the staves into grooves or scores, and then jointing the edges of the staves to the depth of the creasing, ready to be set up in the barrels or casks, the object and purpose of the creasing being that the wood thus compressed shall swell out when any liquid or fluid is put into the barrel, and thus make a perfectly tight or interlocked joint in the wood without the use of flagging.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

On the cross-pieces A of a substantial frame, B, and in suitable bearings C, in or by which it may be made adjustable, is placed a shaft, D, upon which the curved arms E are supported and may turn. A pair of these arms E extend outwardly and upwardly on each side of the shaft D, and support upon their upper ends a plate, F, respectively, upon which are placed the scoring or creasing wheels G, furnished with circularly grooved or serrated edges, which will compress the wood into scores or grooves as it passes by and in contact with them, and the creases so made by these wheels may be so arranged as to interlock with the projecting portions of the next adjacent edge or stave as to make the joint, when the wood has

swollen out, partake of the nature of a tongued and grooved joint.

Upon the plates F, in rear of the creasing-wheels G, are placed one, two, or more planes or jointing-cutters, H, the stock I to which the cutters are affixed being pivoted at *a* to a plate, J, that fits into and slides in grooves or recesses in the plates F, and between the plates J and F a rubber or other spring, *c*, is introduced, that the cutters may adapt themselves to the shape or bilge of the stave to be dressed, and to yield when any undue strain or pressure comes upon them.

K is a bench or support passing between the pairs of creasers and jointers, and over the top of this support an endless belt, L, furnished with dogs *e*, passes, to carry up and feed along the staves to be dressed. The belt L passes around friction-rolls at each end of the bench, and the roll at one end is placed on a shaft, M, that may be turned by a crank, N, or otherwise, and thus give motion to the feeding-belt.

A supporting-piece, O, of metal or wood, extends across the main frame underneath the plates F F, to which supporting-piece are pivoted, at its opposite ends, the two levers P P, which project from opposite sides of the machine, and upon which weights may be placed to cause said levers to throw and hold up the creasing or compressing wheels and the jointing-cutters against the edges of the staves as they are carried along by the endless belt L to be creased and jointed.

I have shown the creasing-wheels as arranged to turn by their friction or compression against or in the wood; but they may be turned by belts or bands, and thus aid to feed the staves against the action of the jointers.

Over that part of the machine where the jointing is done there is, above the feeding-belt, a pressing-roller, Q, arranged to turn with a shaft, R, supported in suitable uprights S S. This presser-roller Q is made concave, so as to snugly fit over the convex side of the stave as it passes underneath it, the object being to hold the stave against any lateral deviation when being creased and jointed.

Having thus fully described my invention,

what I claim therein as new, and desire to secure by Letters Patent, is—

1. Indenting or compressing into the edges of staves grooves or creases, so that the after swelling out of the wood in the casks or barrels shall make perfectly tight and strong joints, substantially as described.

2. In combination with indenting or creas-

ing wheels, the jointers pivoted and made yielding on the swing or rocking plates F, substantially as and for the purposes described.

THOMAS CHESHIRE.

Witnesses:

G. R. MUNSON,

R. M. BENNER.