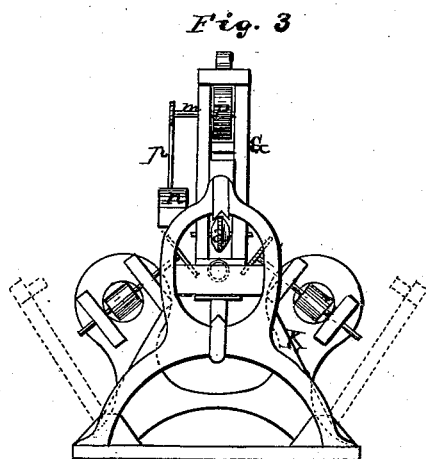
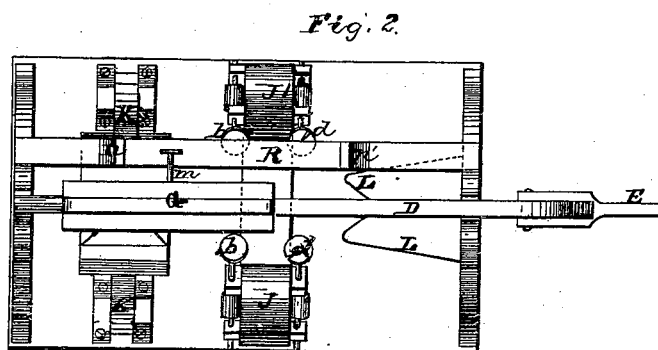
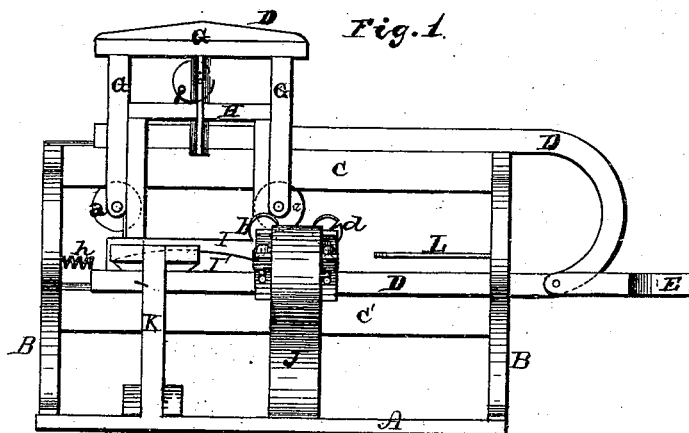


J. M. CHILDERS.

MACHINE FOR JOINTING STAVES.

No. 184,836.

Patented Nov. 28, 1876.



WITNESSES.

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*per*  
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# UNITED STATES PATENT OFFICE.

JOSEPH M. CHILDERS, OF WARREN, PENNSYLVANIA.

## IMPROVEMENT IN MACHINES FOR JOINTING STAVES.

Specification forming part of Letters Patent No. 184,836, dated November 28, 1876; application filed June 9, 1876.

*To all whom it may concern:*

Be it known that I, J. M. CHILDERS, of Warren, in the county of Warren and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Jointing Staves; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a machine for jointing keg or barrel staves, as will be hereinafter more fully set forth.

In the annexed drawing, which fully illustrates my invention, A represents the bed of the machine, upon which are secured two end frames, B B, connected by a top rail, C, and a rail, C', a suitable distance below the same. On the top edges of these two rails slides a horizontal frame, D, connected by a pitman, E, with the power employed to run the same. To the inner end of the top bar of the frame D is secured a vertical frame, G, having friction-rollers *aa*, running against the lower edge of the top rail C. In the vertical frame G is an up-and-down-sliding gate, H, which carries at its lower end one part, I, of a clamp, the other part, I', thereof being attached firmly to the bottom bar of the frame D. The clamps I I' are constructed according as the staves to be operated upon are cut straight or with a bilge. At or near the center, under the machine, is a stand, J, carrying on each side of the machine a circular saw, *b*, and planer-heads *d*, mounted upon separate arbors, set at the proper angles, and operated by suitable belts. At the inner end of the machine, on each side, is a hinged rest, K, and to the end frame B at this end is secured a spring, *h*. To the other or outer end frame are secured two spring-arms, L L. In the top of the vertical frame G is a horizontal shaft, *m*, carrying an eccentric, P, to operate the gate H. From the shaft *m* depends an arm, *p*, which is to be operated by two lugs or projections, *n n'*, or a rail, R, connecting the two end frames B B on one side.

The operation is as follows: The clamps be-

ing at the outer end of the machine, and open, the stave is laid upon the rests K K, and as the frame D is moved inward the clamp passes over the stave, which is held in proper place by the spring *h*. When the clamp is in proper position the arm *p* strikes the lug *n*, which turns the eccentric P, to force the gate downward and firmly clamp the stave. The frame D is then moved outward, the clamp carrying the stave with it, and as the stave passes the saws and planer-heads its edges are properly cut. The spring-arms L also open, and allow the stave to pass between them. The arm *p* then strikes the lug *n'*, releasing the eccentric and opening the clamp. As the clamp then returns for another stave, the spring-arms L hold the finished stave, to prevent its return with the clamp.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a machine for jointing staves, the combination of the horizontal reciprocating frame D, with vertical frame G and clamp I' attached thereto, the vertically-sliding gate H, carrying the clamp I, the eccentric P, and an operating mechanism operating the eccentric, substantially as and for the purposes herein set forth.

2. The combination of the gate H, having the clamp I secured to its lower end, stationary clamp I', secured to the bar C', frame G, eccentric P, shaft *m*, arm *p*, and lugs *n n'*, with the reciprocating frame D, substantially as set forth.

3. In combination with the stationary clamp I', movable clamp I, and the mechanism herein shown and described for operating them, the side rests K and spring *h*, for holding the stave in position, substantially as specified.

4. In combination with the frame D, clamps I I', saws *b*, and planer-heads *d*, the spring-arms L, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of May, A. D. 1876.

JOSEPH M. CHILDERS.

Witnesses:

D. I. BALL,

LE ROY A. CARROLL.