

Lemuel R. Palmer.

Stave Machine

No. 118,387.

Patented Aug. 22, 1871.

Fig. 1.

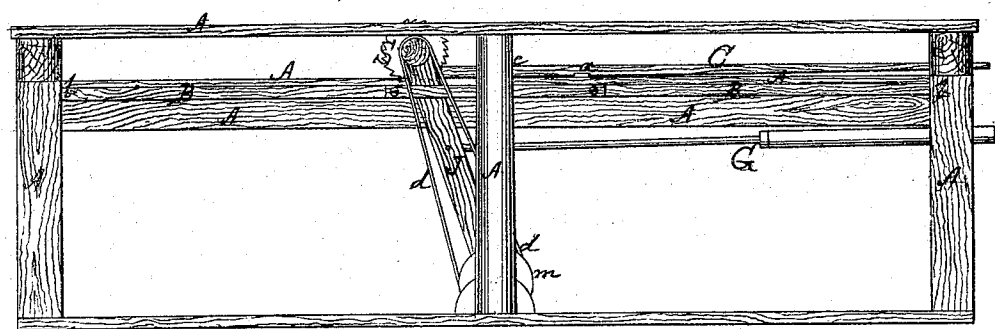


Fig. 2.

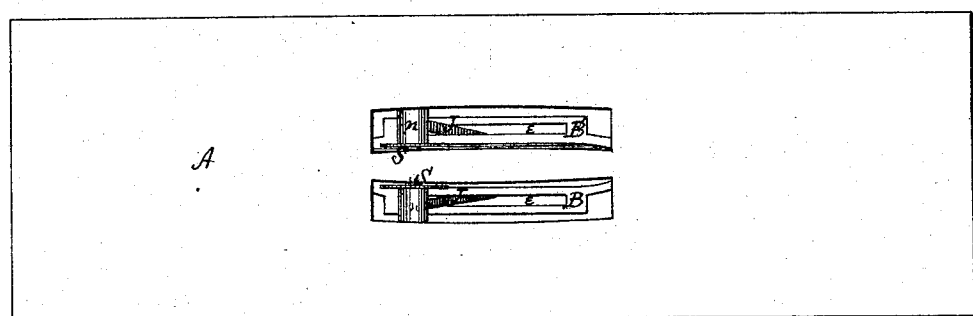


Fig. 3.

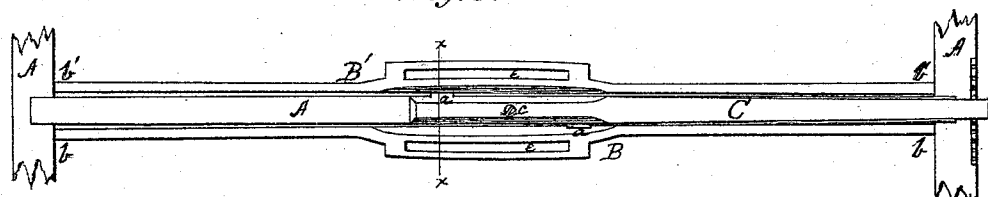
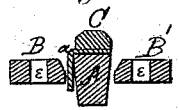


Fig. 4.



Witnesses.
Ab. Rawlings.
Dr. H. Ellsworth.

Inventor.
Lemuel R. Palmer
By Hill & Ellsworth
Attys.

UNITED STATES PATENT OFFICE.

LEMUEL R. PALMER, OF BELFAST, MAINE.

IMPROVEMENT IN STAVE-JOINTERS.

Specification forming part of Letters Patent No. 118,387, dated August 22, 1871.

To all whom it may concern:

Be it known that I, LEMUEL R. PALMER, of Belfast, in the county of Waldo and State of Maine, have invented a new and useful Improvement in Machines for Jointing and Beveling Staves; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation; Fig. 2, a plan; Fig. 3, a plan of the saw-guides and adjusting-lever; and Fig. 4, a cross-section of the same.

Similar letters of reference indicate corresponding parts.

I have heretofore filed an application for Letters Patent of the United States upon a machine for jointing and beveling staves in such a manner that the taper of the stave from the center to the ends shall be directly in proportion to its width at the center. In said machine the curve given to the edges of the stave was effected by means of a carriage running upon a movable track, said track being capable of lateral adjustment by means of a lever or other equivalent apparatus.

My present invention is an improvement upon said machine, consisting, first, in a guide-track pivoted or fixed at one or both ends, and capable of lateral adjustment between the ends, for the purpose of guiding either the log-carriage or the saw; secondly, in a combination of two such tracks with an apparatus by which they can be simultaneously spread apart or drawn together; and thirdly, in a combination of one or more saws with said track or tracks, as hereinafter set forth.

In the drawing, A represents the frame of the machine, and B B' are two guide-tracks, jointed or otherwise fastened to the frame at *b b'*, and capable of being simultaneously spread apart or drawn together at the center by means of a lever, C, pivoted to a part of the frame at *c* between the two tracks, and connected to each guide-track by means of a short arm, *a*. By a simple movement of the lever to the right or left, as the case may be, the tracks are forced asunder, while a reverse movement brings them together. Each guide-track thus constructed and operating may be composed of an elastic or flexible strip, which bends laterally, or of two or more rigid bars, articulated or otherwise connected together at or near the middle of the track. It may be em-

ployed either for guiding the saws when the log-carriage is stationary, or the log-carriage when the saws are stationary. And it may be adapted as a guide by providing it either with a guiding-slot or groove, or projecting flange or rib, the same extending from end to end of the track or only through a portion of its length. In the drawing, a slot, *e*, is represented as the guide, extending only partially along the bars, which are here shown as spring-bars. The saws S S are preferably mounted upon swinging or rocking supports J J, and the driving-belts *d d* run over pulleys *m n* concentric with the saw-mandrels and the pivot of the standards J, respectively, so as to preserve the same tension of the belt during the entire movement of the saws. The whole apparatus J J S S may be moved back and forth by means of a forked bar, G, or any equivalent device, and they may, if preferred, be so constructed that one set, J S, may be disconnected at pleasure, and the stave thus be jointed only on one side at a time. When guide-grooves, flanges, or projecting ribs are used instead of the slots the saws are to be mounted on carriages which run or slide on the tracks. Only one side of a carriage need run on the track, the other running on the smooth saw-table; or, if preferred, there may be a track under each side of the carriage, the two rails being connected by a bar which always keeps them parallel, like railroad rails at a switch.

In my former machine I employed stationary saws, with a movable carriage running on an adjustable track. In the drawing filed herewith I show movable saws guided by a curved track, and adapted to a fixed carriage. The adaptation of the devices shown in my drawing to the stationary saws and movable carriage of my former machine I consider so obvious as to need no further description. So, too, it is obvious that the track may be made so as to swing outward at its center while it swings inward at its ends. The additional complexity of this arrangement would more than counterbalance its advantages, and I do not propose to use it, although I consider it my invention.

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

1. In a machine for jointing staves at different tapers, a track, so constructed as to move later-

ally at and near its center, but not in the same direction at its ends, substantially as described, for the purposes specified.

2. The combination of a track laterally adjustable at its center, but not in the same direction at its ends, with a movable saw, guided in varying curves by said track, substantially as described.

3. The combination of two tracks simultaneously adjustable in opposite directions at the center with two movable saws arranged alongside of each other, and guided in varying curves by said tracks, for the purpose of jointing both edges of

a stave at one movement, substantially as described.

4. The combination of the double-acting lever C, constructed as described, with the two adjustable guide-tracks, substantially as and for the purposes specified.

5. The combination of the adjustable guides with the swinging saw-standards, the bar G, and the belts *d* and pulleys *m n*, all arranged to operate as and for the purposes set forth.

Witnesses: LEMUEL R. PALMER.

WM. H. FOGLER,
FORD GAY.