

United States Patent Office.

ROBERT W. GEORGE, OF BOSTON, MASSACHUSETTS.

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IMPROVEMENT IN STAVE-JOINTER.

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

To all whom it may concern:

I, ROBERT W. GEORGE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Stave-Jointers, of which the following is a specification.

Nature and Object of the Invention.

The nature of my invention consists in combining, with a stationary automatic clamp, a frame carrying two circular saws, inclined to each other, to suit the quality of the work to be done; also, in the arrangement of parts, the object being to render the labor of tending of the machine much less, and to increase the amount of work done by the machine in a given time.

Description of the Accompanying Drawing.

Figure 1 represents a perspective view of my invention.

Figure 2 is a plan of the same.

Figure 3 is a vertical section.

Figure 4 is an enlarged view of part of the clamping device.

General Description.

I construct my machine as follows:

A B is the main frame or body of the machine.

L¹ is a form, or curved-shaped bar, which is attached to the main frame A B by means of the uprights *l l*, and forms the lower part of the clamp for bending the stave, and holding it in position while being operated upon by the jointing-saws D D¹.

L forms the upper part of the clamp, and is connected with the frame L² L⁴ L³, the whole being so arranged that it may move up and down, and thus holds or releases the stave.

The frame L² L⁴ L³, carrying the upper part L of the clamp, may be operated by foot-power, or by an automatic device, as hereinafter described.

C C' is a sliding frame or carriage, and carries upon it two circular saws, so arranged and set that, when in operation, they move longitudinally along the edge of the stave, and joint it to the required angle.

This carriage C C' has attached to it two ratchets F F', figs. 1 and 3, into which the pinion E', figs. 1 and 3, operates alternately.

This pinion E' is hung on a swinging frame, E², figs. 2 and 3, so that it may be moved up and down by the lever K, that is, it may be thrown into gear with the ratchet F', and thus cause the frame C C' to move forward, or thrown into gear with the ratchet F, as shown in fig. 3, and cause it to retreat, or the

pinion may be placed midway between the two ratchets. Then the frame C will not partake of the motion of the other parts of the machine.

The wheel E is the driving-wheel of the machine, and it transmits its motion by means of the belt E¹ E² E³, figs. 1 and 3, to the wheel E² E³ D¹.

The belt D², fig. 1, drives the saw D¹, while the belt D¹, figs. 1 and 2, drives the saw D.

The belt H, fig. 2, drives the pinion E', fig. 3.

The pulley E², figs. 2 and 3, serves to drive the shaft E², and, also, as an idler for the belt E¹ E² E³, fig. 3, to take it up while the frame C C' is passing back and forth.

The levers M and M² are pivoted to the frame A B, and are so arranged, in connection with the frame L² L⁴ L³, that, when the upper ends are thrown backward by the pin N in the sliding frame C C', they will lift the clamp-frame upward, and thus release the stave from pressure.

These parts are so arranged that the start N only comes in contact with the levers when the carriage C C' is at its limit of motion, either in one direction or the other.

1⁰² 1⁰³ are adjustable gauges, and are held in position by the clamp-screws P and P', fig. 4.

R, fig. 4, is a gauge-pin, fitted loosely in the part L, and is held down by the spring S. This pin serves as a gauge for fixing the longitudinal position of the stave, when it is placed in the clamp.

To use my machine, I proceed as follows:

The carriage C C' is moved so that the two saws D and D¹ occupy a position at one end of the clamp, the clamp being open, that is, the part L will be elevated; now the stave is put in position, and the lever K K² moved so as to draw the pinion E' into contact with the ratchet F or F', as the case may be. This will start the carriage, which, in its turn, will allow the clamp L to descend upon the stave and hold it in position, while the continued motion of the frame C C' and the saws D D¹ will joint the edges of the staves.

I claim as my invention—

1. The combination of the clamp L L¹ L² L³ with the sliding saw-frame C C', and saws D D¹, operating as described, and for the purpose set forth.

2. The combination of the pin N with the lever M and clamp-frame L² L⁴ L³, substantially as described, and for the purpose set forth.

ROBERT W. GEORGE.

Witnesses:

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