

B. D. WHITNEY.
Improvement in Machines for Sawing Staves.
No. 126,603. Patented May 7, 1872.

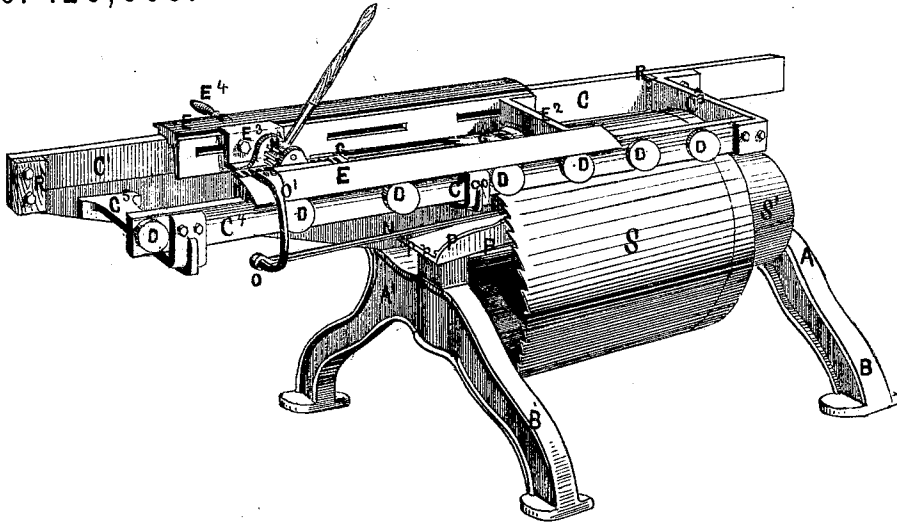


Fig. 1

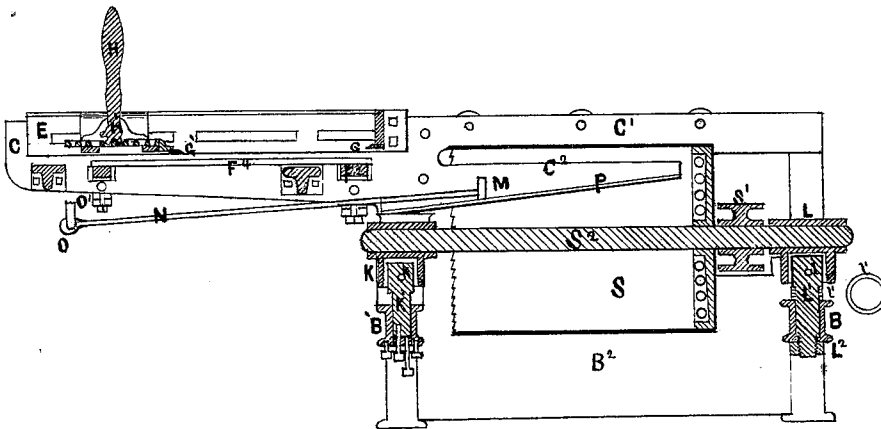


Fig. 2

Witnesses

Edw. Stewart
Frankl. Parker

Inventor

Burton Whitney

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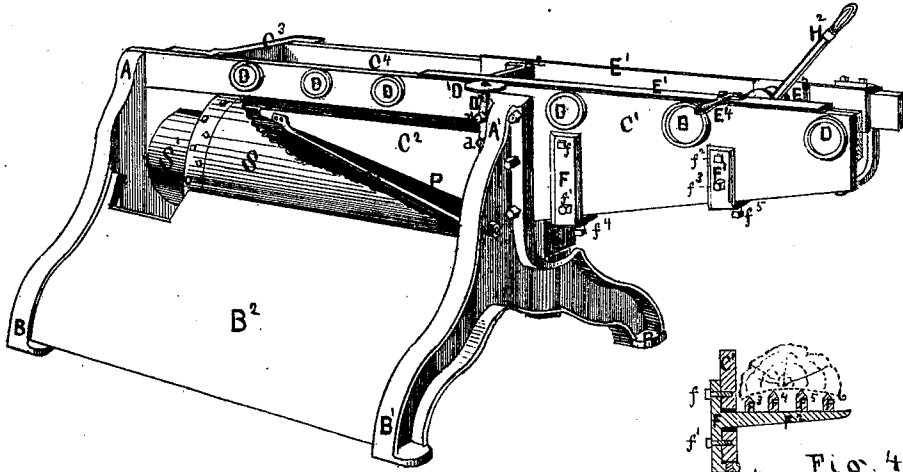


Fig. 3

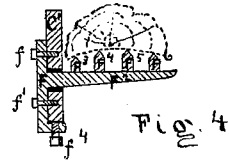


Fig. 4

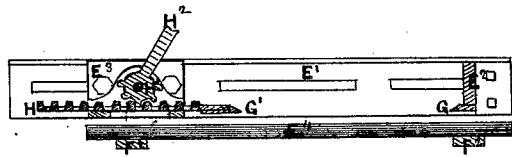


Fig. 5

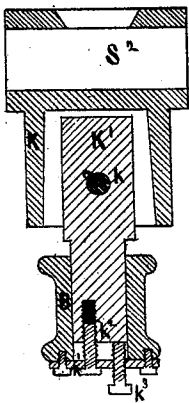


Fig. 7.

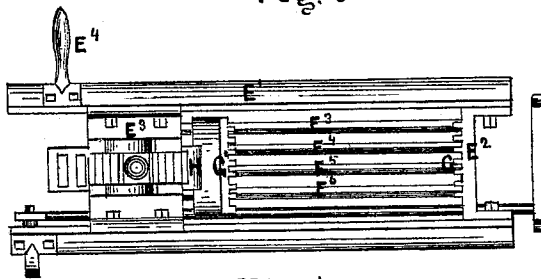


Fig. 6

Witnesses

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UNITED STATES PATENT OFFICE.

BAXTER D. WHITNEY, OF WINCHENDON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR SAWING STAVES.

Specification forming part of Letters Patent No. 126,603, dated May 7, 1872.

To all whom it may concern:

I, BAXTER D. WHITNEY, of Winchendon, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Stave-Machines, of which the following is a specification:

The Nature of the Invention.

The nature of my invention consists in combining with a cylinder-saw a carriage for carrying the block or bolt, the exact details of the construction of the same being of such a nature as to be best understood by reference to the specification and drawing.

Description of the Accompanying Drawing.

Figure 1 is a perspective view of the machine. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a perspective view, a part of the cylinder-saw being represented as broken away to show the stave-trough, &c. Fig. 4 is a section, showing one of the way-pieces C and the guide-bars F³ F³ F⁴ F⁵, upon which the block rests; also showing how the guide-bars are to be adjusted. Fig. 5 is a longitudinal section, showing the feeding-carriage and its adjuncts. Fig. 6 is a plan of the feeding-carriage. Fig. 7 is a section, showing the housings which support the arbor.

General Description.

I construct my machine as follows: A B A' B¹ B², Figs. 1 and 2, represent the frame of my machine, to which the other parts are attached. S, Figs. 1, 2, and 3, is a cylinder-saw running on the arbor S², Fig. 2. To this arbor S² is attached the driving-pulley S¹. The saw-arbor S² runs upon the housings K and L, which are arranged, as shown in the drawing, so that they may adjust themselves to the arbor. The box L, Fig. 2, is hung on a swivel, L¹, which passes down through the frame B and terminates in a screw, upon which the screw-nut L² acts. ^l are washers, which may be inserted between the shoulder of L¹ and the upper part of the frame B, so that the height of the housing L may be varied. The housing K, at the other end of the arbor S², is adjusted in a different manner. The upper part K is hung upon the standard K', being made fast to it by a pin, k, (see Fig. 7.) This standard K' passes

nearby through the frame B, and is held in position vertically by the screws k² k³, which pass through the plate k¹, which is made fast to the frame B by screws, as shown. The screw k² passes up into the standard K', so as to hold it down at any desired position, while the screw k³ screws through the plate and against the under side of the standard, so as to react against the tendency of the screw k². By these screws k² k³ the standard K' may be adjusted to any desired position. The way-plate C¹ C, Figs. 1, 2, and 3, is attached to the frame A B by bolts. C² is an extension of the way-plate C¹ C, which passes into the interior of the cylinder-saw S and forms one side of the stave-trough P, Figs. 1 and 2. This extension C² is held rigidly in place by the brace C³, Fig. 3. The other side of the stave-trough is formed by the piece P', Fig. 1. Upon the interior of the sides of the stave-trough, at the line of junction with the bottom of the trough, longitudinal channels p p, Fig. 1, are cast, to serve as guides for the hoe or stave-remover M, Fig. 2. The hoe M is made to operate by the handle N, which is connected by eye-joint O to the arm O', which is made fast to the carriage E, Fig. 1.

From the above it will be seen that the hoe moves with the carriage, so that, at the time a stave is sawed and ready to drop into the trough, the hoe is at the upper end of the trough, and as the carriage is drawn back will withdraw and bring the stave with it; the eye-hinge O allowing the hoe to follow the incline of the trough.

The way-bar C⁴ is attached to the way-plate C C¹ by means of the cross-pieces C³ C⁵ C⁶, Fig. 1. D D D, &c., Figs. 1 and 3, are rollers attached to the way-plate C C¹, and the way-bar C⁴, and serve as friction-rolls for the carriage E E. D', Fig. 3, is a horizontal roller attached to a spring-bar, D, and so arranged that it may be adjusted, by the screw d', so as to prevent the lateral motion of the carriage, which would otherwise take place from the pressure caused by the cut of the saw against the log or bolt while the sawing is taking place. The carriage E, upon which the log or bolt is made fast while being sawed, consists of two side-pieces E E, which run on rolls D D D D, &c., attached to the ways C¹ and C⁴. These side-pieces are fastened together by the braces E³ and E², Figs. 1, 5, and 6, which are firmly

bolted; the brace E^3 being adjustable. Attached to the brace E^2 is a series of points or spears, G , Figs. 1, 2, 5, and 6. H , Figs. 5 and 6, is a sliding rack, at the end of which a series of points or spears, G' , are made. H^1 is a segment-gear, operated by the lever H^2 . Inspection of Figs. 2 and 5 will show that by simply moving the handle H^2 the rack H and spears G' will advance or retreat. To fasten the log or bolt into the carriage it is only necessary to place it on the guide-bars $F^4 F^5$, &c., Figs. 5 and 6, and to force the spears G and G' into the ends by a movement of the levers H^2 , which action throws forward the rack H and spears G' , the pressure of the spears G' upon the log or bolt serving to force the same against the spears G at the other end. The guide-bars $F^3 F^4 F^5 F^6$ are attached to a base-piece or arm, F^2 , Fig. 4, which extends from a plate, F , which, in its turn, is made fast to the way-plate C^1 by the screws $f f^1 f^4$, Fig. 4. The screws $f f^1$ serve to clasp the plate F to the way-plate, while the screw f^4 serves as an adjusting-gauge. E^4 , Figs. 1, 3, and 6 is a handle attached to the carriage E , by which it is moved. R , Fig. 1, is a piece of rubber, or some other elastic material, attached to the piece C^3 , to ease the stroke of the carriage in its forward motion. R' is a piece of wood attached to the way-piece C , and serves as a stop to the carriage, while the inertia of the block disengages it from the teeth G , the han-

dle H^2 being raised. The guide-bars or supports $F^3 F^4 F^5 F^6$, on which the wood or bolt rests, are placed sufficiently near each other, that the smallest bolt will cover two of them, the object of the openings between them being to allow splints or bark from the bolt to fall through, so as not to be in the way of the bolt, and thus to cause the stave to be of unequal thickness. The housing K is made compact, as described, so as to allow of the saw being filed while in position. The rack H is made with openings between the teeth, so that dirt, sawdust, &c., may not accumulate between them and obstruct the action of the segment-gear H^1 . That part of the brace E^3 upon which the rack H rests is provided with openings, to admit of the passage of dirt, sawdust, &c., as they fall from the openings in the rack.

I claim as my invention—

1. The carriage E , provided with the dogging devices $H^1 G''$, in combination with the frame C , having rollers $D D$ and saw S , all constructed as shown and described, for the purpose set forth.

2. In combination with the carriage E , the arm O' , and rod N , constructed as and for the purposes specified.

BAXTER D. WHITNEY.

Witnesses:

JAS. S. CONANT,
FRANK G. PARKER.