

(No Model.)

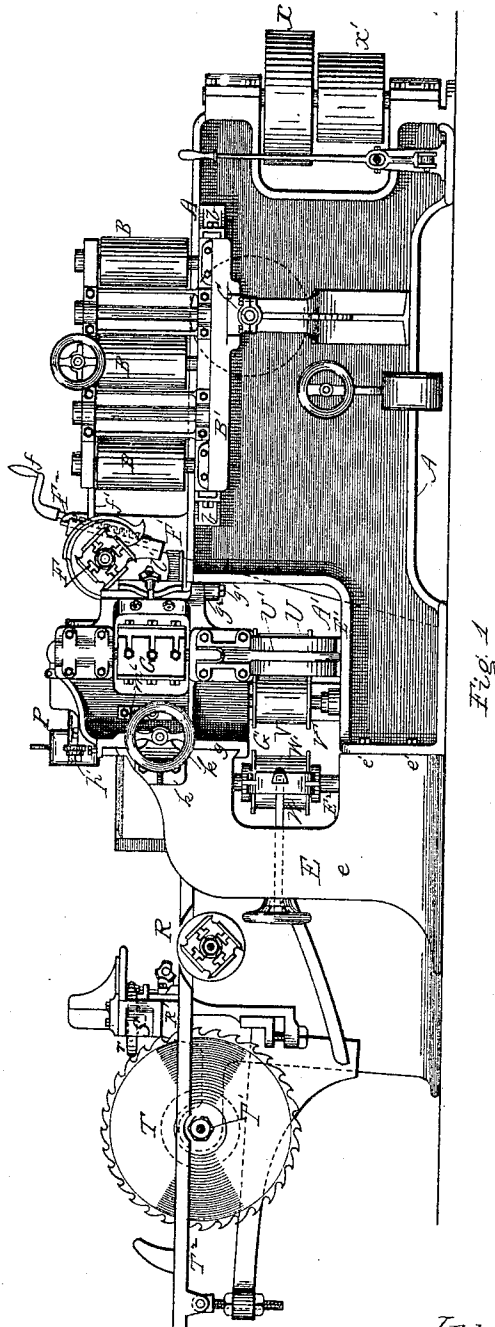
2 Sheets—Sheet 1.

G. LHOTE.

PLANING AND RESAWING MACHINE.

No. 328,794.

Patented Oct. 20, 1885.



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Inventor
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Attorneys

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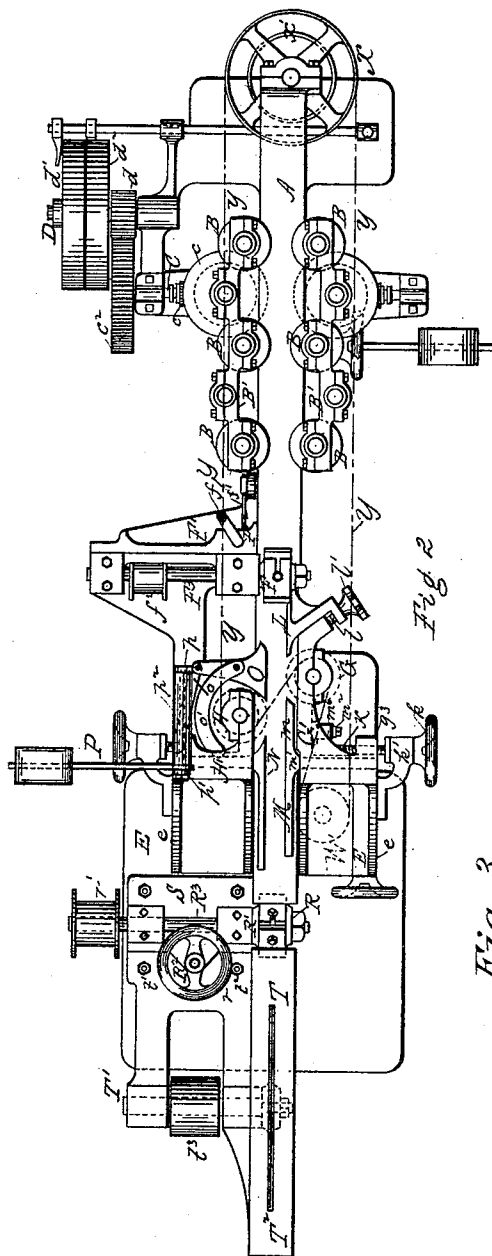
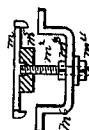


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE LHOTE, OF NEW ORLEANS, LOUISIANA.

PLANING AND RESAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 328,794, dated October 20, 1885.

Application filed May 27, 1885. Serial No. 166,884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE LHOTE, a citizen of the United States, residing at New Orleans, in the State of Louisiana, have invented certain new and useful Improvements in Planing or Weather-Board Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a plan, of a machine embodying my improvements. Fig. 3 is a vertical section of bracket, &c., for adjusting the surfacing-platen.

My invention has for its object to provide a machine which will plane two sides and both edges of a board and split the same by sawing it all at one operation.

A further object of my invention is to provide a machine adapted for doing the work abovesuggested, and which, by a slight change of some of its parts, will be capable of planing both sides and tonguing and grooving the two edges of a board at a single operation.

A further object of my invention is to provide a machine in which the board, while being planed, shall pass through the machine on its edge, in order to avoid having impressions made on the planed sides by chips getting between the same and the platens.

A still further object of my invention is to provide a construction in which the various parts of the machine shall be more readily accessible than they have heretofore been in machines as previously constructed.

My improvements consist in the peculiar construction and combinations of parts hereinafter fully set forth, having reference particularly to the following: first, a single centrally-located frame forming a support for the feed-rolls and their pulleys, said feed-rolls being supported upon bearings on either side of the frame and arranged on vertical axes; second, cutter-heads on vertical axes, one on either side of the middle line of a supporting-frame, said heads being mounted in supports adapted and arranged to move transversely of the main frame; third, two cutter-heads on vertical axes, one arranged on one side of machine to take surface cut and the other on opposite side to take parallel cut, one of said heads being in

advance of the other, and both provided with platens, and having means of adjustment; fourth, the combination of a top and bottom head with two side heads on vertical axes, whereby a board may be planed on two edges or tongued and grooved and planed on both sides at one operation while standing on its edge; fifth, the combination of a top and bottom and two side heads and a saw, whereby a board may be planed on both its edges and its two sides and sawed in two parts at one operation; sixth, certain details hereinafter specifically claimed.

Referring to the accompanying drawings, A represents a single middle frame, consisting of a casting which forms the bed of the forward end of the machine and the support for the feed-rolls B B B, there being six of the latter, three on each side, on vertical axes. The shafts of these rolls have their bearings in boxes B' B', fastened to the outer sides of the frame A by means of brackets b b. The pulleys receive motion from a shaft, C, having bevel-gears c c and a wheel, c', in gear with a pinion, d, on shaft D, having the fast and loose pulleys d' d'. Said feed-rolls and their shafts and gears, being on either side of the middle frame, are more readily accessible than in machines where a frame having two outside supports is employed, and the single frame is less expensive than one with two side supports.

E is another frame or bed consisting of a single casting having two side supports, e e, said frame being bolted at e' e' to the end of the frame A. The frame E affords support for the cutter-heads F, G, H, and R and for the saw. The head F is the top head, and is constructed and arranged as is usual in molding machines, being supported on a standard, F', on the right-hand side of central line of machine so as to overhang, and having a screw-shaft, F'', with handle f, for raising and lowering, and a weighted lever, f'', for keeping cutters in contact by a yielding pressure with the top edge of a board being worked.

F³ is the shaft of the top head having a driving-pulley, f².

G is the surfacing side head, the shaft of which is vertical and has its bearings in a casting, G', which forms a slide, being fitted, by means of a dovetail, g, on the forward end of frame E, so as to be capable of moving

transversely thereon. To effect this movement, a screw, K, with hand-wheel *k*, and having its bearings in a bracket, *k'*, rigidly fastened to frame E, is employed. The slide G' is also fastened at its forward end by means of a bolt, *g'*, which passes through a vertical slot in a bracket, *g''*, firmly bolted to the rear end of frame A. This bolt must first be loosened, and then by turning screw K, which is swiveled in a boss, *g''*, in slide G', the latter can be adjusted or moved transversely.

L is the adjustable platen for the surfacing-head G, and is in the form of a shoe fastened to the slide G' by an adjusting-screw, *l*, having a hand-wheel, *l'*.

M is the rear platen on the surfacing side, consisting of a vertical plate, *m*, with central stem, *m'*, having its bearing in the slide G'. Said platen is rendered adjustable by means of a set-screw, *m''*, tapped in the back of the platen and having nuts *m'''* *m'''*. By this construction it will be seen that the head G and its two platens are adjustable toward and from the middle or central line of the machine, all moving with the slide G' when the latter is moved.

The platen M is made yielding, as it has an india-rubber washer, *m''*, interposed between it and the bracket *m''*, in which the screw *m''* has its outer bearing.

The other side head, H, which is the "thick-nessing-head," is mounted on a slide, H', like the slide G', and is similarly adjustable. It has also a platen, N, which moves with the slide H'. Its presser O is a shoe fastened to two links, *o* and *o'*, one of which is straight, the other being curved, as shown, the opposite end of said links being fastened to the slide H', so that said presser has a "parallel" or straight movement transverse to the line of feed of the machine. To hold this presser O up to its work, it is connected by a bell-crank or elbow lever, *p*, and a rock-shaft, *p'*, in a barrel, *p''*, to a weighted lever, P.

R is the under head, which is supported in a vertically-adjustable slide, R', movable by means of a screw-spindle, R'', with handle *r*, said slide being dovetailed on a frame-piece, S, bolted to the rear end of the frame E. The shaft R'' of the under head has a driving-pulley, *r'*.

T is the saw, which is fast on a shaft, T', having its bearings on a rearward extension or table, T'', bolted at *t'* *t''* to the frame E, so as to be both vertically adjustable and removable when desired. The saw-shaft T' has a driving-pulley, *t''*.

The pulleys of the side heads are shown at U V, and stand in an offset, A', of the frame A, having their bearings in brackets U' V', which are bolted at their upper ends to the slides G' and H', respectively, and rest upon the web or top edge, E', of said frame A.

W is a belt-tightener fitting in an offset, E'', in frame E.

The belt Y, which runs the side heads, passes

over the pulleys U V, around the pulley W' of the tightener W, and over another pulley, X, at the forward end of the machine, the shaft of this latter pulley having another pulley, X', to which power is applied. Both side heads are thus driven by one belt, securing perfect uniformity of speed, and as this belt is exterior to the frame and the pulleys exposed easy access is permitted to the several parts.

In operation, the board to be worked is passed in between the feed-rollers standing on its edge. The top head planes the upper edge, and then the first side head makes a surfacing cut of any required depth, regulated by the adjustable platen. The other side head next planes the opposite side, reducing the board to the required thickness. The under head then planes the lower edge, after which the saw splits the board vertically in two, so that at one operation two boards with one side and both edges of each planed are produced.

By removing or dropping the saw and substituting tonguing and grooving heads for the top and under heads, a board may have both its sides planed and its two edges respectively tongued and grooved at one operation.

What I claim as my invention is as follows:

1. In a planing or weather-board machine, the combination of a central supporting-frame with feed-rolls on vertical axes supported in bearings on either side of and attached to said central frame, substantially as shown and described.

2. In a planing or weather-board machine, the combination, with a supporting-frame, of two side cutter-heads on vertical axes and provided with platens, said heads and platens being supported in adjustable slides movable transversely to the line of feed, substantially as shown and described.

3. The combination, in a planing or weather-board machine, of feed-rolls on vertical axes, a top head and an under head on horizontal shafts, and two side heads on vertical axes, the said parts being supported by the frame of the machine and back of the feed-rolls, with the side heads located on either side of the line of feed and between the top and bottom heads, whereby a board may be planed while standing on its edges on two sides and both its edges at one operation, substantially as shown and described.

4. The combination, in a weather-board machine, of feed-rolls on vertical axes, a top head and an under head, two side heads on vertical axes, and a saw on a horizontal shaft, said heads and saw being supported by the frame of the machine back of the feed-rolls, whereby a board may be planed on two sides and both edges and split or divided into two parts at one operation, substantially as shown and described.

5. In a weather-board or planing machine, the combination, with side cutter-heads on vertical axes, of a saw on a horizontal shaft located at or near the end of the machine be-

hind the feed-rolls and cutter-heads, said saw being driven separate from and independent of the shaft which drives the cutters, substantially as shown and described.

5 6. In a planing or weather-board machine, the combination, with the frame on which the side cutter-heads are supported on vertical axes, of a saw-table detachably fastened there-
10 zontal shaft, said table and saw being located in the rear of said frame and back of the cutter-heads, substantially as shown and described.

15 7. In a planing or weather-board machine, the combination, with a single middle frame, A, supporting the feed-rolls, having an offset, A',

of a double frame, E, supporting the side heads and fastened to the feed-roll frame, substantially as shown and described.

8. In a planing or weather-board machine, 20 the combination, with a single middle frame, A, supporting the feed-rolls, having an offset, A', of a double frame, E, supporting the side heads and fastened to the feed-roll frame, substantially as shown and described. 25

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of May, 1885.

GEORGE LHOTE.

Witnesses:

A. MICHEL V. DYER,
HENRY P. LABATUT.