2 Sheets—Sheet 1.

# W. H. WEBB.

## Machine for Planing and Sawing Wood.

**No. 204,403.** **Patented May 28, 1878.**

Fig. 1.

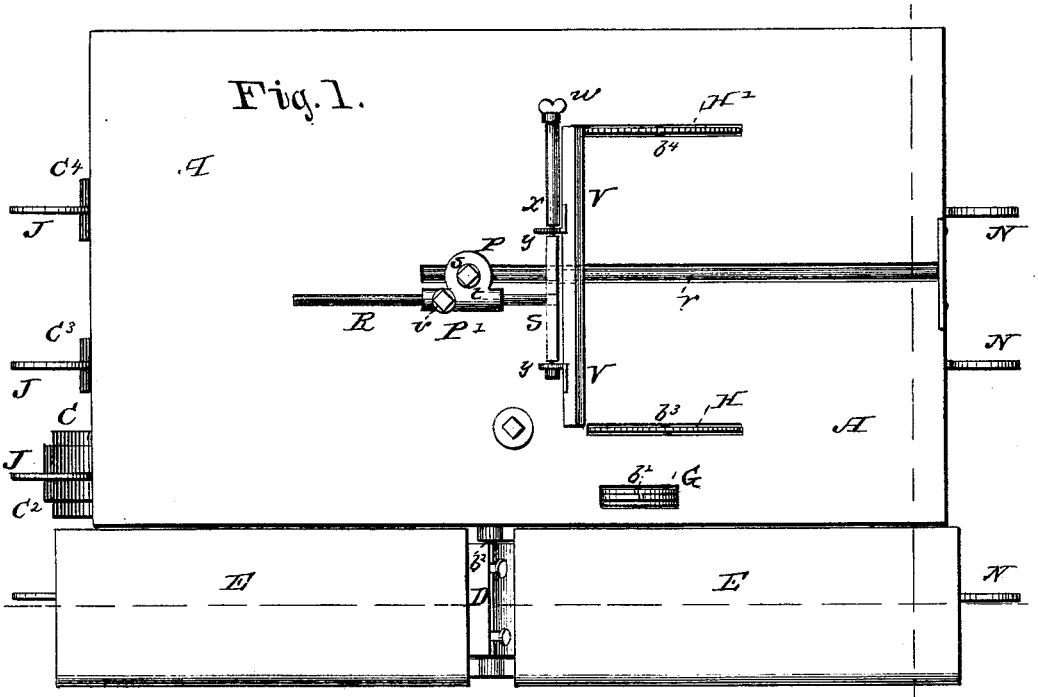
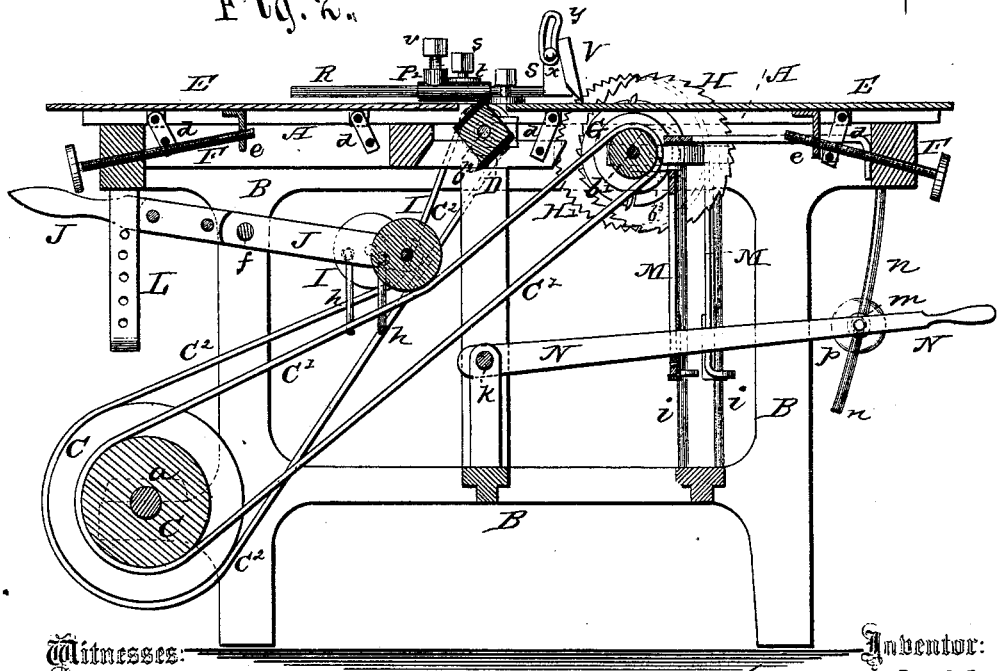


Fig. 2.



Witnesses:

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2 Sheets—Sheet 2.

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## Machine for Planing and Sawing Wood.

No. 204,403. Patented May 28, 1878.

Fig. 3.

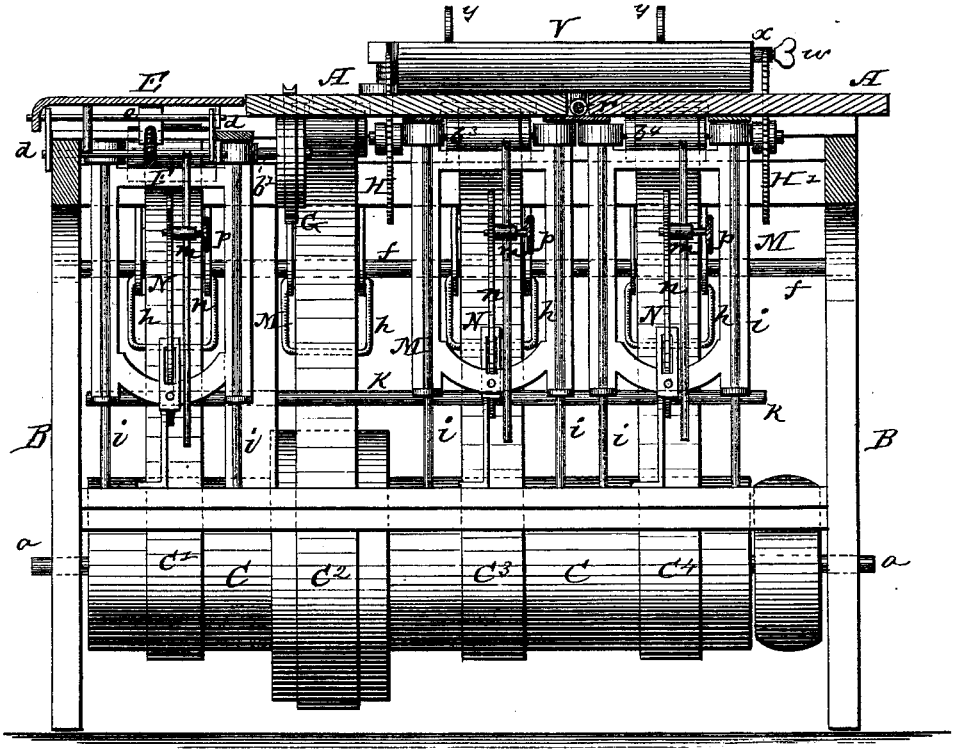


Fig. 4.

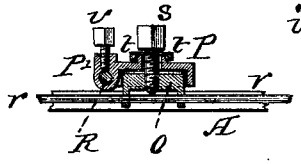
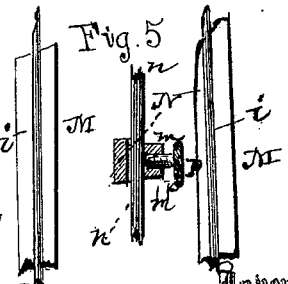


Fig. 5



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# UNITED STATES PATENT OFFICE.

WILLIAM H. WEBB, OF CONNEAUT, OHIO.

## IMPROVEMENT IN MACHINES FOR PLANING AND SAWING WOOD.

Specification forming part of Letters Patent No. **204,403**, dated May 28, 1878; application filed March 29, 1878.

*To all whom it may concern:*

Be it known that I, WILLIAM H. WEBB, of Conneaut, in the county of Ashtabula and State of Ohio, have invented certain new and useful Improvements in Devices for Sawing, Planing, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention consists in the construction and arrangement of a wood-working machine which combines a planer, a grooving-head or dado, a rip-saw, and a cross-cut saw, all arranged in such a manner as not to be in the way of one another, as will be hereinafter more fully set forth.

In the annexed drawings, to which reference is made, and which fully illustrate my invention, Figure 1 is a plan view of my improved wood-working machine. Fig. 2 is a longitudinal vertical section, and Fig. 3 a transverse vertical section, of the same. Fig. 4 is a detail view thereof.

A represents the table of the machine, supported upon a suitable frame, B. In the lower portion of this frame, at the rear end, is mounted a shaft, *a*, upon which are secured either a series of pulleys or one continuous or elongated pulley, C, and around the same are passed the driving-belts $C^1$, $C^2$, $C^3$, and $C^4$ for running the various parts of the machine.

The belt $C^2$ communicates motion to a shaft, $b^2$, upon which the planer D is secured. This planer works in an opening between two plates, E E, arranged upon the frame B, as a part of the table. Each plate E is connected to the frame B by means of pivoted links *d d*, and is adjusted by means of a screw, F, which is swiveled in the end of the frame, and screws through a nut, *e*, fastened to the under side of the plate. The plate E is thus adjusted on the arc of a circle—that is to say, as it is moved inward toward the planer it is at the same time raised, and as it is moved outward it is at the same time depressed. By this means the work of the planer is adjusted as required without in any way changing the position of the planer.

The belt $C^1$ communicates motion to a shaft, $b^1$, on one end of which is secured the grooving-head G.

The belts $C^3$ and $C^4$ respectively communicate motion to shafts $b^3$ and $b^4$, upon which are secured the saws H and H′, said saws, as well as the grooving-head G, when in operation, working through slots in the table A.

All the four belts described are provided with separate and independent belt-tightening pulleys I I, each pulley being mounted in a forked lever, J. All the levers J are hung upon a rod, *f*, and the inner end of each lever provided with a stirrup, *h*, passing under the top portion of the belt, as shown. The rear end of each lever J extends through a slotted and perforated arm, L, depending from the frame B, and in said arm the lever J may be adjusted, and held by means of a pin, so as to cause the roller I to bear on the belt with more or less pressure, as required.

Each of the shafts $b^2$, $b^3$, and $b^4$ is mounted in a gate, M, sliding upon two vertical rods, *i i*, and operated by a lever, N, said levers being pivoted on a rod, *k*. Each lever N is, near its front end, on the side, provided with a stud, *m*, having a hole through it to pass over a curved rod, *n*, permanently affixed to the frame B, and a set-screw, *p*, is passed through the end of said stud to bear against the rod, and thus hold the lever at any point desired. By these means the grooving-head and saws may be adjusted independently of each other, so as to throw them below the surface of the table, or more or less above the same, as required for the work intended to be done.

In a longitudinal slot in the table A, between the two saws H H′, is secured a stationary rod, *r*, upon which is placed a slide, O. The lower portion of this slide is made to fit in the slot, and has the rod *r* passing through it, while the upper part of the slide is circular in form, and has a cup-shaped plate, P, placed over it. A set-screw, *s*, passes through the centers of the two parts, which set-screw answers for a pivot, when loosened, for the plate P to turn on; and when said screw is tightened it holds the slide O on the rod *r*, and also holds the plate P firmly on the slide, a spring-washer, *t*, being introduced under the head of the screw, around a collar on the plate, for this purpose.

At the side of the cup-shaped plate P is formed an elongated horizontal tube, P′, through which is passed a rod, R, held at any point desired by a set-screw, *r*. On the end of the rod R is secured a frame, S, having a rod, *x*, passing through it, with a thumb-nut, *w*, on the end. V represents a gage or guide, provided on the back with curvilinearly-slotted ears *y y*, which pass over the rod *x*, as shown, and admit of the gage being placed at any angle, and then fastened by means of the thumb-nut *w*.

It will thus be seen that the gage can be adjusted in any direction and in any manner desired, and held firmly in position when thus adjusted.

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

1. In a wood-working machine, the combination, with a shaft carrying a saw or other tool, of the vertically-sliding frame M, guide-rods *i i*, pivoted lever N, with perforated stud *m*, curved rod *n*, and set-screw *p*, all substantially as and for the purposes herein set forth.

2. In a wood-working machine, the combination, with the slotted table A, of the rod *r*, slide O, plate P, with tube P′, rod R, frame S, rod *x*, gage V, with slotted ears *y y*, and the set screws *s*, *v*, and *w*, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

WILLIAM HAMILTON WEBB.

Witnesses:

PETER B. DOTY,

LOREN GOULD.