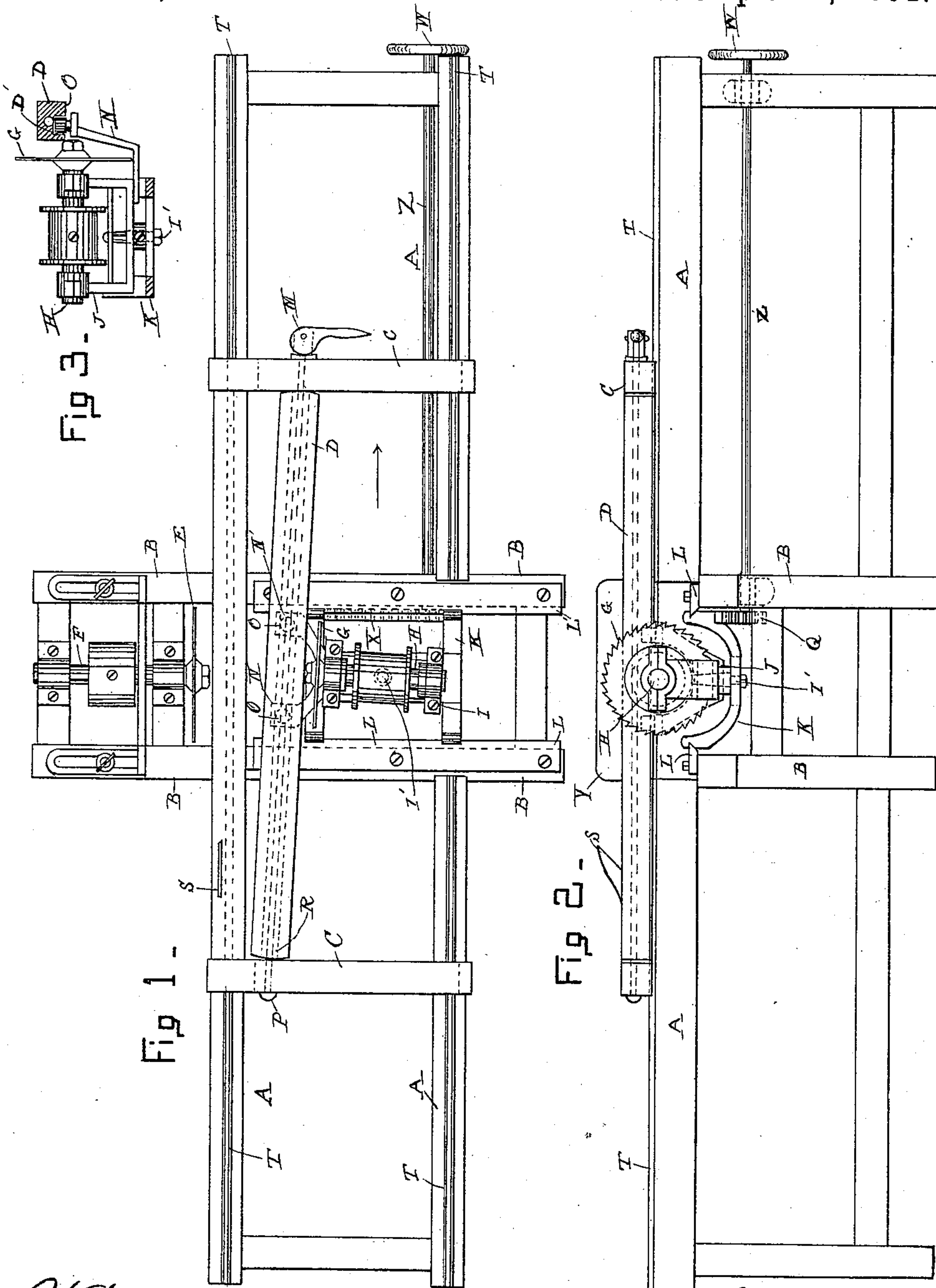


(No Model.)

H. A. HOLT.
WOOD SAWING MACHINE.

No. 451,233.

Patented Apr. 28, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY A. HOLT, OF WILTON, NEW HAMPSHIRE.

WOOD-SAWING MACHINE.

SPECIFICATION forming part of Letters Patent No. 451,233, dated April 28, 1891.

Application filed August 13, 1890. Serial No. 361,928. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. HOLT, of Wilton, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Wood-Sawing Machines, of which the following is a specification.

This invention relates to an improved wood-working machine for trimming and straightening the edges of lumber and forming pieces the edges of which will be parallel or at any desired angle with relation to each other.

My improvement consists in a saw-bench having two independent saw-arbors, one of which runs in stationary bearings secured to a supplementary frame at right angles to the main frame, while the other runs in bearings in a pivotal frame. Said pivotal frame is pivoted to a transversely-sliding frame, and is capable of being inclined at various angles with relation to stationary saw-arbor. Said arbors are located upon the same horizontal plane and capable of assuming a position in line each with the other. The inclination of the horizontally-movable or pivoted arbor is controlled by a guide-bar, which is attached to a carriage in such a manner as to be readily adjustable at any desired angle with the length of the carriage, which slides on a track secured to the upper surface of the main frame.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a plan of the entire machine. Fig. 2 represents an elevation of the entire machine. Fig. 3 represents a side elevation of the horizontally-movable arbor and frame, section of transversely-sliding frame, and cross-section of guide-bar, showing guide-rolls and pivotal connection between the frames.

The same letters of reference indicate the same parts in all of the figures.

In the drawings, A represents the main frame of the machine, upon the upper side of which is secured the tracks T T, upon which the lumber-supporting carriage slides.

B is the supplementary frame, to one end of which are attached the stationary bearings of arbor F. Ways L L are attached to said frame to guide the frame K when said frame is moved from or toward arbor F.

C represents the carriage, upon which is placed the lumber to be edged or sawed.

D represents the guide-bar, which is attached to the carriage in such a manner as to be readily adjusted and stand either parallel with the direction of movement of the carriage or at any desired angle thereto.

E represents a saw upon the arbor F, and G represents the saw upon the arbor H.

I represents the horizontally-movable saw-frame, which is connected by a vertical pivot-bolt I' to the transversely-moving frame K.

M represents a clamping device composed of a cam-shaped lever pivoted to the end of a rod P, extending through the guide-bar lengthwise of the latter and through the end sections of the carriage C. Said clamping device operates to secure the guide-bar in any position or at any angle to which it may be adjusted.

N represents a bracket secured to the under side of the frame K, said bracket having arms, to the upper side of which are attached guides or rolls O, which slide in grooves D' or tracks on the under side of guide-bar D. Said guides or rolls O are mounted on the bracket M and run in said groove D', thereby causing the saw G to stand in a plane which is parallel with guide-bar D.

S represents a stop or dog against which the lumber is held when being operated upon, said stop holding the lumber in place.

Y represents a gage attached to frame B in such a manner as to be readily adjusted from and toward saw E. Said gage is used to determine the width of pieces sawed only by saw E.

Z represents a shaft adapted to rotate in bearings attached to frame A. Upon one end of said shaft is secured a hand-wheel W and to the other the pinion Q. Said pinion Q gears into rack X, attached to the frame K, and operates to move said frame K from and toward the saw E.

The operation of the machine is as follows: Set the guide-bar D at the desired position or angle, draw the carriage back in the direction indicated by the arrow in Fig. 1 until the left-hand end of the guide-bar is in engagement with the rolls O O, place the lumber to be

sawed against stop S. Then as the carriage is pushed forward or in a direction opposite that indicated by the arrow saw G follows the guide-bar D, thereby giving one edge of the lumber the shape and width desired.

The machine may be set and secured in position so that any number of duplicate pieces may be sawed, the cam-lever M being adapted to hold the guide D at any position to which it may be adjusted, while the said guide by its engagement with the rolls O O holds the pivoted frame I in such position that the saw G will always be parallel with the guide.

I claim—

1. In an edging or sawing machine, the combination of a supporting-frame, a carriage mounted to move on guides or ways on the frame, a saw journaled in fixed bearings on the frame and arranged in a plane substantially parallel with the direction of movement of the carriage, a frame movable on ways on the supporting-frame at right angles to the movement of the carriage, a bearing pivoted to said movable frame, a saw having its shaft journaled in said pivoted bearing, and a movable guide adjustably secured to the carriage and engaged with the pivoted bearing, said guide controlling the position of the pivoted bearing and the saw supported thereby, as set forth.

2. An edging or sawing machine having two independent saws and arbors placed upon the same horizontal plane and opposite each other, one journaled in stationary bearings and the other in movable bearings pivoted to a transversely-sliding frame, and an adjustable guide-bar on the carriage of said machine engaged with said pivoted bearing, as and for the purpose specified.

3. An edging or sawing machine having two independent saws and arbors, one revolving in pivoted bearings, and an adjustable guide-bar engaged with the pivoted bearing, as set forth.

4. An edging or sawing machine having two independent saws and arbors, one revolving in pivoted bearings, and an adjustable guide-bar engaged with the pivoted bearing, said pivoted bearing having guide-rolls running in a groove in the under side of the guide-bar, as and for the purpose described.

5. In an edging or sawing machine having two independent saws and arbors therefor, a carriage having a guide-bar which is capable of being adjusted at any desired angle or width with relation to the longitudinal section of the carriage, a supporting-frame on which said carriage is movable, and connections between said guide-bar and one of the saws, whereby said saw is held in a plane parallel to the length of the guide-bar, as set forth.

6. In an edging or sawing machine, the combination of two independent saws and their arbors, one of said arbors being capable of being moved bodily from and toward the other while inclined at any desired angle, and an adjustable guide-bar attached to the carriage of the machine by which said arbor is so moved and inclined, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 7th day of July, A. D. 1890.

HENRY A. HOLT.

Witnesses:

RICHARD P. ELLIOTT,
J. H. WILLOUGHBY.