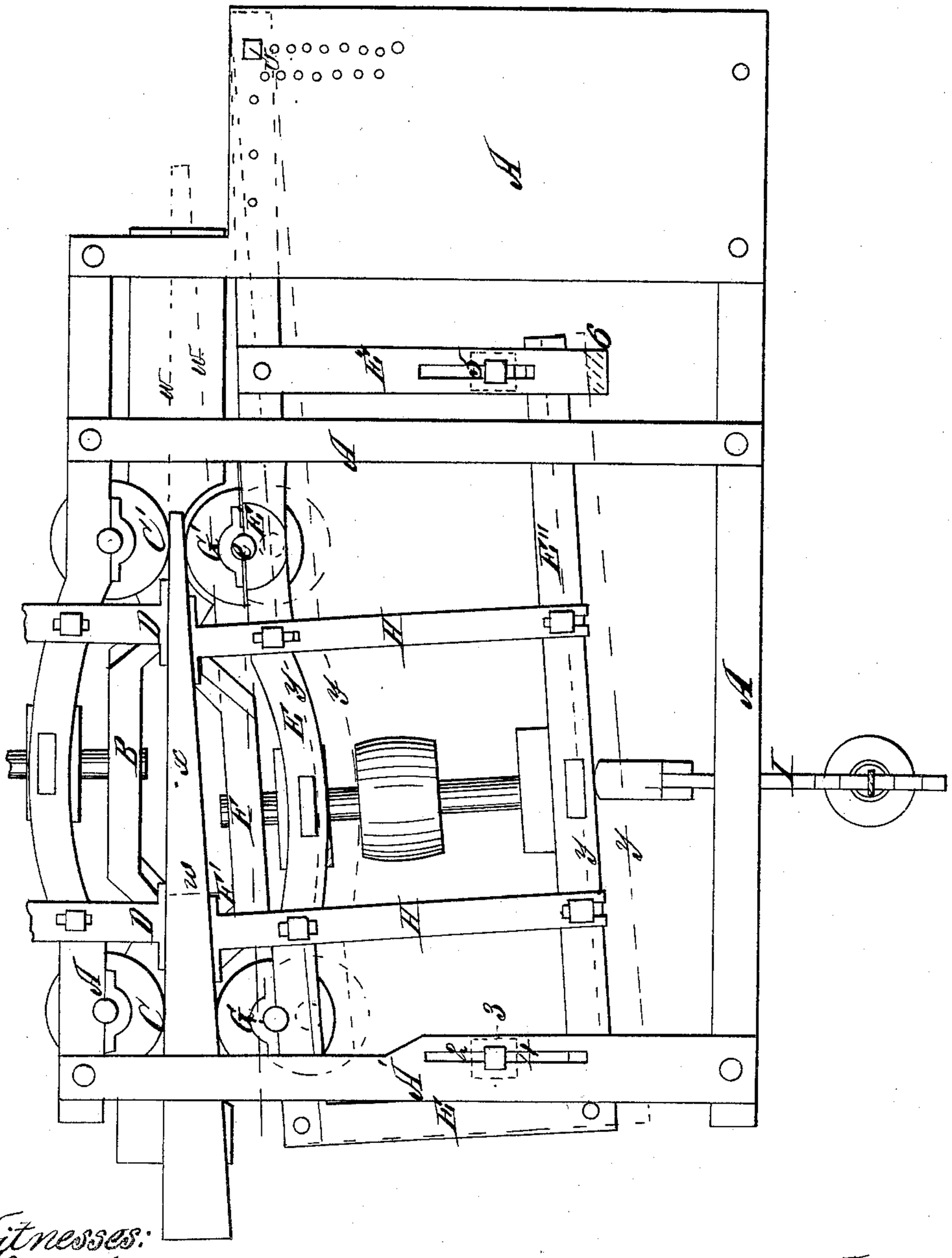
P. H. Woolsey,

Wood Plane Attachment.

No. 31,508. Patented Feb. 19, 1861.



Witnesses:
Fred Knight
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UNITED STATES PATENT OFFICE.

PHILIP H. WOOLSEY, OF ANDES, NEW YORK.

FEEDING TAPERING LUMBER TO ROTARY PLANERS.

Specification of Letters Patent No. 31,508, dated February 19, 1861.

To all whom it may concern:

Be it known that I, PHILIP H. WOOLSEY, of Andes, in the county of Delaware and State of New York, have invented a new and useful Improvement in Wood-Planing Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters of reference marked thereon.

My invention relates to an improved construction of the "swinging, or moving, frame" of the improved planing machine for which Letters Patent were granted to me dated the 29th day of Jany, 1861, and consists in providing the said frame with a yielding joint at the points of attachment thereto of the journals of the second feed-roller of the same, substantially as hereinafter described, whereby, in planing cuneate forms whose sides have a much greater angle between them than those of shingles, the plane of motion of the revolving cutter is kept more perfectly in the plane of the surface of the wedge which, while passing through the machine, is being operated on thereby, and therefore a more even surface produced thereon.

The drawing represents a plan-view of the upper side, or top, of the machine; the lower, or bottom, side being substantially a counter part of the same is not shown in the drawing.

A, represents the stationary frame, with its cutter B, feed rollers C, C′, and guides D, D, as described in my former specification.

E, is the "swinging or moving frame", the same being provided with the revolving cutter F, feed rollers G, G′, and guides H, H, and also caused to bear against the wedge *x*, by means of the weighted lever I, as the said wedge is drawn through the machine; the two said frames, A and E, being arranged in relation to each other, also, substantially as described in my said patent.

In the present improvement the swinging frame (E) has, in both its top and bottom, a yielding joint, as at E′, whose pivot is the shaft *o*, of the feed roller G′.

The guide plates H, H, are adjustably fixed to the frame E, the whole turning or swinging together, horizontally, from the bolt *u*, as heretofore. In the cross piece A′, of the fixed frame (A), there is a slot 2, and a screw bolt 3, whereby a stop-block 4 is adjustably secured to the same; and in like manner, a stay-block 5, is secured to the cross piece E″ of the frame (E); and also, on the one side of the end of the said cross-piece (E″) there is a stay-block 6, permanently secured—as indicated by the dotted line thereon. Corresponding pieces with blocks, in like manner, are secured to the bottom of the frames—though not seen in the drawing. These stay-blocks 4, 5, 6, are merely for the purpose of controlling and limiting, as hereinafter described, the extent of motion of the said jointed frame E, as the thickness and taper, of the particular wedge to be planed, may require.

Operation: In planing ordinary shingles with this improved machine, the joint E′ is not perceptibly operated, because the sides of the said shingles deviate but a few degrees from parallelism in respect to each other—the downward stroke of the cutters doing the planing; but, in wedges and other cuneate forms whose sides deviate from each other at a much more considerable angle, provision is made for the variation of the plane of motion of the cutter F, because, as the said wedge *x* passes through the machine, it continues to separate, farther and farther apart, the feed-rollers G′, C′, and thus—if the frame E should be rigid, as in my former machine—to throw the feed-roller (G) out of contact with the wedge (*x*), and therefore also the plane of motion of the cutter F, out of the plane of the side of the wedge. This defect in my former machine, in its relation to thick wedges, is remedied by the joint E, in the following manner. The block 4 in the piece A′ is adjusted to such a position thereon as will prevent the feed-roller G, from coming in contact with the feed-roller C, &c. for the purpose of protecting, thus, the cutters (F and B) from injury to each other, and also to allow a ready introduction between the said rollers, of the thinner end of the wedge *x*. As the said wedge is drawn in by and between the first pair of rollers (C and G) the end of the part E‴ of the frame (E) bears against the block 5, and thus the whole frame E is caused to move together and keep the plane of motion of its cutter (F) parallel with the face of the wedge; but,

when the said wedge enters and continues to pass between the rollers C′, G′, the joint E′ allows the frame (E) at this point to yield outward so as to preserve the parallelism between the plane of motion of the revolving cutter (F) and the face of the wedge (*x*), until the heel of the said wedge has passed the descending knife (F′) of the cutter (F)—as indicated by the red lines *w*, *w*,—at which time the frame E has come into contact with the stay-block 6—as indicated by the red lines *y*, *y*,—and the whole frame (E) again caused to move together, as at first, until the wedge (*x*) has passed from between the rollers C′ G′, when the weighted lever I, still bearing on the frame E forces it into its original or normal position.

Having thus fully described my improvement and pointed out its utility, what I claim as new therein of my invention and desire to secure by Letters Patent is—

Providing the swinging or moving frame (E) with a yielding joint at E′, the same operating therewith substantially in the manner described and for the purpose specified.

PHILIP H. WOOLSEY.

Witnesses:
BENJ. MORISON,
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