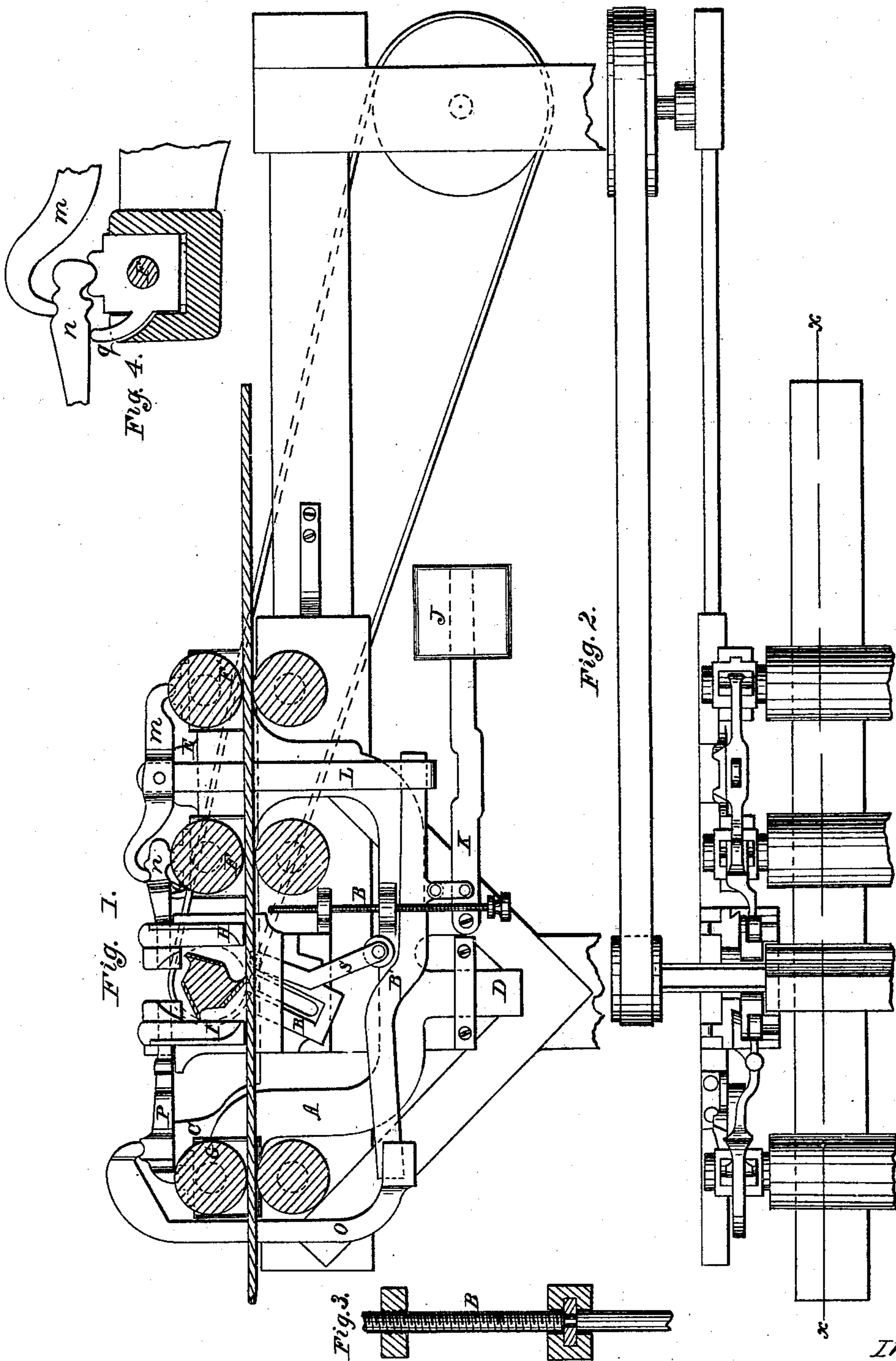


*J.B. Schenck.*

*Planing Mach.*

*N<sup>o</sup> 86,461.*

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*Witnesses:*

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# UNITED STATES PATENT OFFICE.

JOHN B. SCHENCK, OF MATTEAWAN, NEW YORK.

## IMPROVEMENT IN PLANING-MACHINES.

Specification forming part of Letters Patent No. 86,461, dated February 2, 1869.

*To all whom it may concern:*

Be it known that I, JOHN B. SCHENCK, of Matteawan, in the county of Dutchess and State of New York, have invented a new and useful Improvement in Woodworth Planing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to new and useful improvements in that class of planers known as "Woodworth planers," whereby they are made much more convenient and useful than they have hitherto been; and the invention consists, first, in the combination of parts whereby the upper feed-rolls are adjusted upon either side of the cutters simultaneously; also, in the combination of parts whereby the facing-cutter and pressure-bars are adjusted in an oblique direction, and the top feed-rolls in a perpendicular direction simultaneously; also, in the combination of the box of the inner adjustable feed-roll and the saddle connecting it to the presser-bar with said bar, for the purpose of preserving the relative positions and pressures of the feed-roll and pressure-bar during their simultaneous movements; also, in the means employed to arrest the upward movement of the pressure-bar to prevent its being thrown in contact with the facing-cutter; also, in the combination of the weighted levers, the stirrups, and saddles with the top feed-roll and the pressure-bars, for the purpose of giving to each part a due proportion of pressure, so that increasing or diminishing the pressure by shifting the position of the weight on the lever will not affect the proportionate distribution of the weight or pressure on the parts; and it consists, lastly, in the combination of the shorter saddle with its pressure-bar and feed-roll, for the purpose of varying the amount of pressure upon the pressure-bar in accordance with the thickness of the lumber to be operated upon as the bar and roll approach or recede from each other in their movements.

In the accompanying plate of drawings, Figure 1 represents a vertical longitudinal section through the line *xx* of Fig. 2. Fig. 2 is a sectional top view. Fig. 3 is a detailed

view of one of the graduating-screws. Fig. 4 is a detailed view, showing the method of raising the saddles, which are connected with one of the feed-rollers and receiving pressure-bar.

Similar letters of reference indicate corresponding parts.

A represents the part which carries the top feed-rolls, and is supported by the screw B, by which it is raised and lowered, according to the thickness of the lumber to be dressed, and is kept in position and guided by the guides C, D, and E, by which arrangement a simultaneous and accurate adjustment is effected. F F' are the upper receiving feed-rollers, and G the upper delivery feed-roller.

The arrangement for weighting embraced in my improvement distributes the pressure, as required, on the end of the feed-rolls, and on the two pressure-bars H and I, using only one dead-weight, J, and lever K, as follows:

L is a stirrup, which is suspended from the saddle *m*, one end of which saddle rests on the box of the feed-roll F'. The other end rests on the short saddle *n*. One end of the short saddle *n* rests on the box of the feed-roll F, and the other end passes loosely through the pressure-bar H. The point where the saddle *m* rests on the saddle *n* is near the box of the feed-roll F, so as to give the proper proportion of pressure to the roll and to the pressure-bar, respectively.

B' is a long saddle-bar, one end of which rests on a projection near the lower end of the stirrup L. The other end rests on a projection on the lower end of the stirrup O. The upper end of this stirrup O rests on the saddle P. One end of the saddle P rests on the box of the roll G, while the other end rests on the pressure-bar I, and the point where the stirrup O rests on the saddle P is near the roll G, so as to give each (the roll and pressure-bar) the proper proportion of pressure.

The saddle B' (at a point about one-third of its length from the stirrup L) is connected with the weighted lever K, by which the pressure is produced which gives the receiving or introducing rolls and the delivery-rolls their proportionate pressure.

The box of the roll F' is provided with a projection or horn, *q*, which raises (as it is raised itself) the short saddle *n*, the end of

which saddle raises at the same time the pressure-bar H.

This arrangement keeps the pressure-bar and the roll in the same relative position (after the roll is raised by the lumber) that they occupied before, so that the lumber raises the pressure-bar only so much as the bottom of it is set below the bottom of the roll, say one-eighth of an inch.

The ends of the saddles *n* and *P* project through slots in the pressure-bars, and into slots formed in the facing-cutter carrier near its top. These latter slots form stops, against which the ends of the saddles strike, (should they be raised so high by the thickness of the lumber, or from any other cause,) and prevent thereby the pressure-bars from being raised into contact with the cutter-knives.

The slide *R*, which supports one end of the facing-cutter and both pressure-bars, is graduated on oblique slides, placed at such an angle as to require the same length of facing-cutter belts in all positions required by the different thicknesses of lumber. This slide is graduated simultaneously with the upper feed-rolls, it being connected to the part *A* by the bar *S*.

The object of this simultaneous adjustment is saving of time, accuracy of adjustment, and preserving the relative positions of the parts under all circumstances.

The feed-rolls are graduated on perpendicular slides, and the cutter and pressure-bars on oblique slides, which incline toward the introducing feed-rolls, and when the parts are raised or lowered, to admit thicker or thinner lumber, the introducing pressure-bar *H* is brought nearer to or farther from the point on the saddle *n* at which it receives the saddle *m*, the saddle *n* slipping between the projection on the pressure-bar *H*. This increases the pressure received by the pressure-bar *H* when thicker lumber is to be dressed, and decreases the pressure when thinner lumber is to be dressed, the importance of which is obvious.

I claim as new and desire to secure by Letters Patent—

1. The combination of the part *A* and adjust-

ing-screws *B* with the feed-rolls *G*, *F*, and *F'*, whereby the feed-rolls are adjusted or graduated upon each side of the cutters simultaneously, as described, for the purpose specified.

2. The combination of the part *A* and screw *B* with the bar *S*, the oblique cutter-carrier slide *R*, and the pressure-bars *H* *I*, whereby the facing-cutter and pressure-bars are adjusted in an oblique and the top feed-rolls in a perpendicular direction simultaneously, as herein described, for the purpose specified.

3. The combination of the box of the feed-roll *F*, having the horn *q* and the weighted saddle *n*, with the slotted pressure-bar *H*, whereby the relative positions and pressures of the feed-roll and pressure-bar are preserved during their simultaneous movements, as described, for the purpose specified.

4. The combination of the slotted cutter-carrier with the slotted pressure-bar *H* and saddle *n*, whereby the upward movement of the pressure-bar is arrested, to prevent its being carried in contact with the facing-cutter, as herein shown and described.

5. The combination of the weighted levers *K*, the saddle-bar *B'*, stirrups *L* *O*, and saddles *m* *n* *P* with the top feed-rolls and the pressure-bars, whereby each part is given a due proportion of pressure, so that increasing or diminishing the pressure, by shifting the position of the weight on the lever, will not affect the proportionate distribution of the weight or pressure on the parts, as herein shown and described.

6. The combination of the saddle *n* with the obliquely-adjustable pressure-bar *H* and the perpendicular adjustable feed-roll *F*, whereby, as the bar *H* and roll *F* approach or recede from each other in their movements, the amount of pressure upon the pressure-bars is raised, according to the thickness of the lumber to be operated upon, as herein shown and described.

JOHN B. SCHENCK.

Witnesses:

J. A. WOOD,

E. S. PHILLIPS.