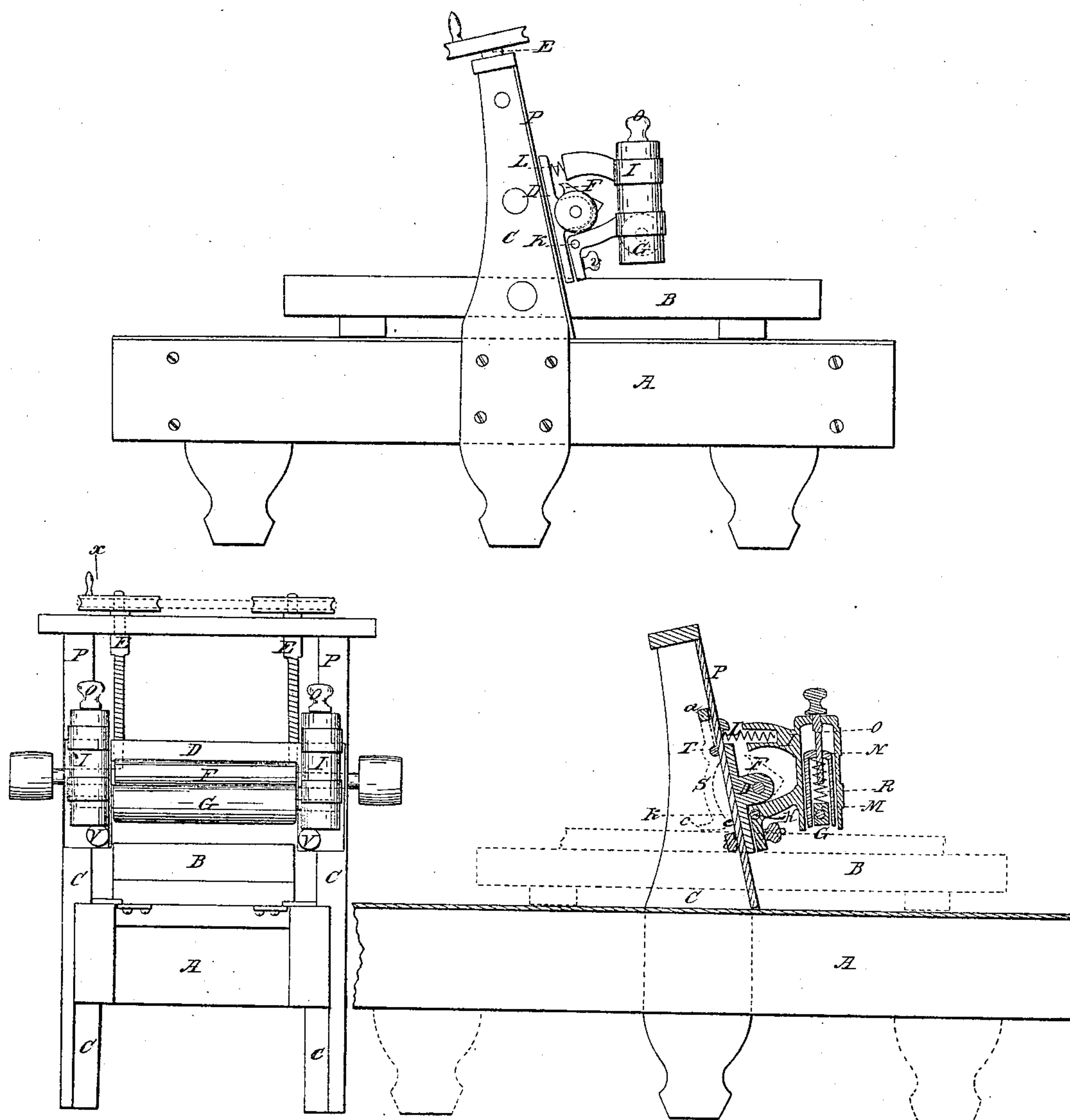


B. Fitts,
Wood Planing Machine.
No. 29,369. *Patented July 31, 1860.*



Witnesses
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UNITED STATES PATENT OFFICE.

BENAI AH FITTS, OF WORCESTER, MASSACHUSETTS.

IMPROVED PLANING-MACHINE.

Specification forming part of Letters Patent No. 29,369, dated July 31, 1860.

To all whom it may concern:

Be it known that I, BENAI AH FITTS, of the city and county of Worcester, State of Massachusetts, have invented a new and useful Improvement in that class of Planing-Machines known as the "Dimension-Planers," or Machine for Planing Lumber Out of Wind; 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 drawings, making a part of this specification, in which—

Figure 1 is a side elevation. Fig. 2 is an end elevation. Fig. 3 is a section through *x y*, Fig. 2, the same letters referring to the same parts in all.

The construction of my machine is as follows:

A is a frame for supporting the other parts of the machine.

B is a sliding carriage on which the lumber is fastened to be planed, and is made to feed forward and back in the usual manner.

C C are posts made fast to the frame A.

D is a sliding frame in which the cutting-cylinder hangs, and may be raised or lowered for planing various thicknesses of lumber.

E E are screws for raising or lowering the cylinder-frame D.

F is a rotary cutting-cylinder of the usual form and driven in the usual manner.

G is a pressure-roll which rolls upon the board in front of the cutting-cylinder, and is pressed down by springs R, so as to hold the board or lumber firmly on the table.

I is a stand for holding the roll G. It is attached to frame D by pivots K and spring L.

M is a box for the bearing of the roll G.

N is a hanger, and O is a screw, by means of which the pressure-roll is made adjustable.

P P are slides made fast to the posts C.

V is a hook. It passes through the frame D and hooks onto the slide P and holds the cylinder-frame D in its place.

S is a bar attached to the frame D by a pivot, T, and when the end *c* is pressed back by the board passing through, it bears against the slide P, as shown at *a* and holds the frame D firmly in its place.

To operate my machine, the cutting-cylinder being rotated and the carriage being fed in the usual manner, the cylinder-frame D, hang-

ing upon the screws E, may be raised or lowered and brought to any desired position with freedom. When the board passes under the roll G, the stand I turns on pivot K, drawing on hook V, and binds the frame D firmly to the slides P P, and thus the roll in passing over an uneven surface has no power to move the cylinder-frame D or cause the cutting-cylinder to make an uneven surface. The board, passing under the bar S, also causes the end *a* to bear firmly against the slides P P and bind the frame D more firmly in its position. When the board has passed through, the frame is loosened and may be raised with freedom; or if the carriage should be run back without the cylinder frame being raised the bar S will vibrate the other way, the point *e* comes against the slides, and the point *c*, being the longest, forces the frame D upward and prevents the cutting-cylinder from marking the board while running back.

It is sometimes necessary in planing lumber out of wind not to allow the pressure-roll to bear upon the board, as it is apt to spring it, the board being first dogged at the ends. This may be done by simply turning the screws O and raising the hanger N, springs, rolls, &c., all entirely out of the way. There now being no upward pressure from the board against the roll, the spring L, acting to tighten the hook V, holds the frame D sufficiently firm to the slides or post.

Having thus fully described the construction and operation of my machine, the characteristic features of my invention consist in the simple manner of hanging the pressure-roll to make it adjustable in connection or combination with the dimension-planer; also, hanging it in such a manner that as it passes over a thick or uneven board it will not raise or move the cylinder; likewise hanging the pressure-bar so that pressure against it will not move the cylinder, at the same time leaving the cylinder-frame D free to be moved when there is no board in the machine; also so arranging the bar that it will raise the cylinder, when the carriage runs back to prevent it from marking the board.

What I claim as new in dimension-planing machines, and desire to secure by Letters Patent, is—

1. The arrangement of the screw O, the

hanger N, the box M, and the spring R, in combination with the dimension-planer, when constructed and operating substantially as set forth.

2. So hanging or fastening the stand by which the pressure-roll is attached to the cylinder-frame D in such a manner that the pressure of the roll on the board will serve to hold or bind the cylinder-frame more firmly to the sides or posts, substantially as described.

3. Hanging the pressure-bar S in such a manner that its pressure upon the board will cause it to hold the cylinder-frame D more firmly to the slides or posts, substantially as set forth.

4. So forming and hanging the pressure-bar S, or its mechanical equivalent, that the backward motion of the carriage will raise the cylinder-frame D, so as not to plane or mark the board while running back.

In testimony whereof I hereunto set my hand and seal.

BENAIAH FITTS. [L. S.]

In presence of—

J. E. BEUCHLEY,
E. C. TAINTER.