F. A. Bixler,

Bench Plane.

No. 109,487. Patented Nov. 22. 1870.

Fig. 1.

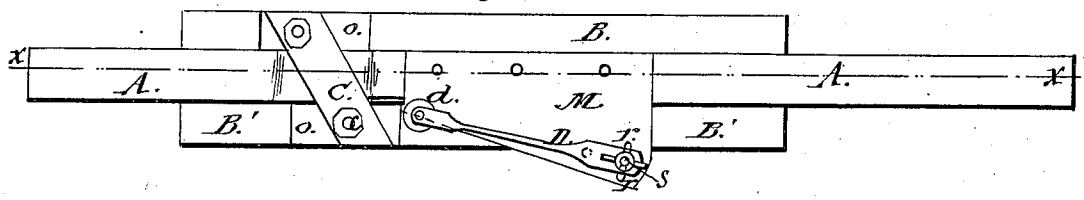


Fig. 2

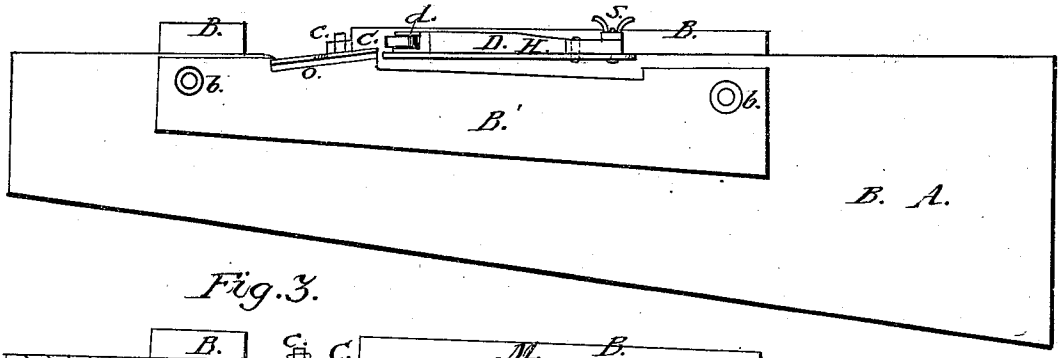
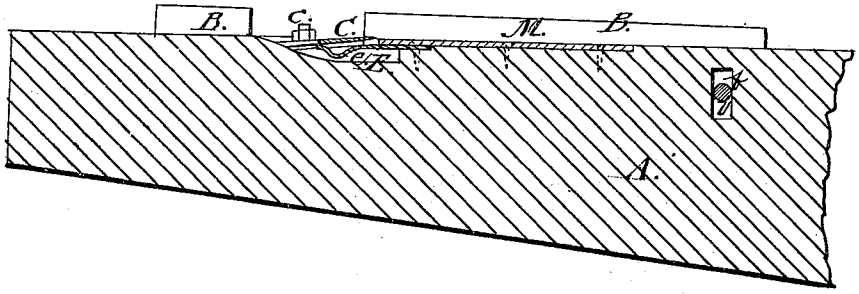


Fig. 3.



Witnesses:

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FRANCIS A. BIXLER, OF NASHVILLE, TENNESSEE.

Letters Patent No. 109,487, dated November 22, 1870.

IMPROVEMENT IN DEVICES FOR CUTTING SLATS FOR WINDOW-SHADES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, FRANCIS A. BIXLER, of Nashville, in the county of Davidson and State of Tennessee, have invented a new and improved Machine for Cutting Window-Shade Slats; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan;

Figure 2, a side view; and

Figure 3 a longitudinal vertical section through line *x x* of fig. 1.

The object of this invention is to so improve machines of this class that they will hold the stick more firmly in the proper position during their operation, while at the same time they will cut out the slat with the least possible expenditure of power.

To this end the invention consists in the construction and arrangement of the devices as hereinafter set forth.

In the drawing—

A represents a supporting-plank or frame, which is cut wedge-shaped across the grain of the wood, to prevent warping, and is reinforced by two lateral pieces, B B′, bolted together through the piece A, the upper edge of piece B coming above, and the upper edge of piece B′ slightly below the upper edge of the piece A.

C is a cutting-blade, arranged obliquely across the upper side of piece A, as shown in fig. 1, and fastened by screw-bolts and nuts *c c*, to the parts B B′, the bearings being so cut out or constructed as to hold the cutting-edge of the blade a little higher than the rear edge, as seen in figs. 2 and 3.

The edge of the frame-piece A is cut out or recessed under the cutting-blade, as represented at E.

In front of the blade a metallic plate, M, wider at one end than at the other, is set into the face of the part A, its upper surface slightly below the line of the cutting-edge C.

D is a pivoted spring-arm arranged obliquely on plate M, and bearing a guide-roller, *d*, at the end nearest to the cutter, its opposite end being provided with a clamping-screw, *s*, which extends down through a curved slot, *r*, in plate M, for the purpose of adjusting the distance between roller *d* and the side of piece B, according to the width of the slat to be cut out.

A curved flat spring, *e*, is fastened to the under side of plate M at its front edge, and extends down into recess E, and then up toward the blade C, in the manner clearly shown in fig. 3, its object being to hold the slat firmly up against the blade, so as to prevent cutting irregularly.

The bearings of the knife C are made inclined from front to rear, so that the thickness of the slat can be controlled by setting the blade forward or back, said bearings being covered with metallic plates *o o*, to prevent the knife from working loose.

The bolts *b b*, which confine the parts B B′ to the frame A, may be made to operate in slots *y y* in the side pieces or center piece, so that, by means of them, the blade C can be adjusted higher or lower, at pleasure.

In practical operation the width of the bed or track in which the stick is to move back and forth is to be adjusted by means of screw *s*, according to the width of the slat, the stick lying between roller *d* and side-piece B, and being held firmly against the latter by the spring.

The stick is then pushed forward against the knife, which cuts out the slat from the under side, the slat passing between spring *e* and the blade, and the stick passing over the blade.

The diagonal position of the latter enables it to cut into the wood more easily than if it was arranged squarely across the line of motion of the wood to be cut.

Having thus described my invention,

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

1. The spring-guide D and plate M, provided with the slot *r* and clamping-screw *s*, constructed and arranged to operate as described.

2. The frame-piece A, provided with slot *r*, the side pieces B B′, the knife C, and the set-screw *b*, all constructed and arranged to operate as described.

FRANCIS A. BIXLER.

Witnesses:

J. K. JENKINS,

J. W. SCOTT.