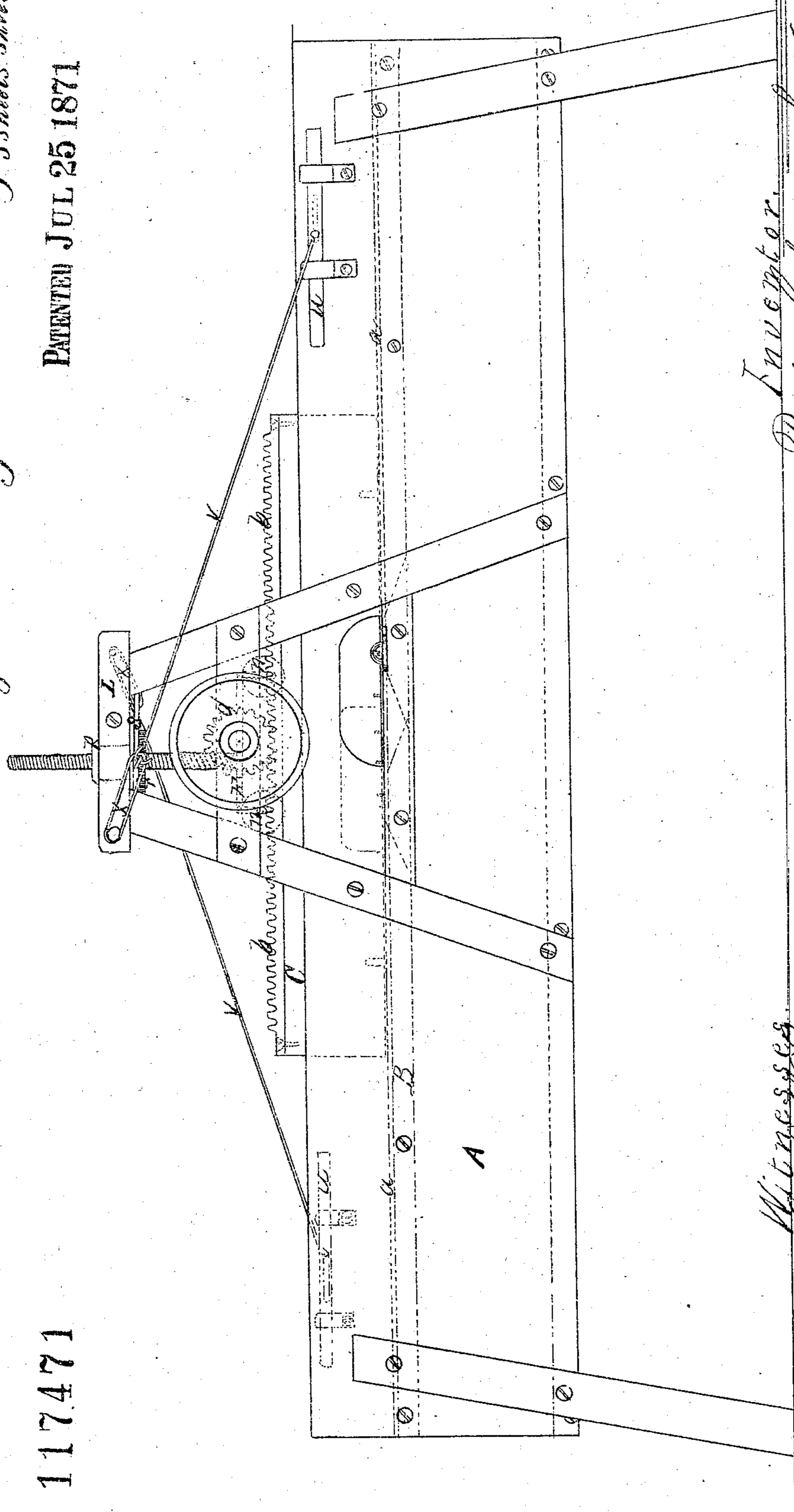


Paul Schumacher, Blind Slot

Fig. 1. Riving and Planing Machine.  
3 Sheets, Sheet 1.

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PATENTED JUL 25 1871



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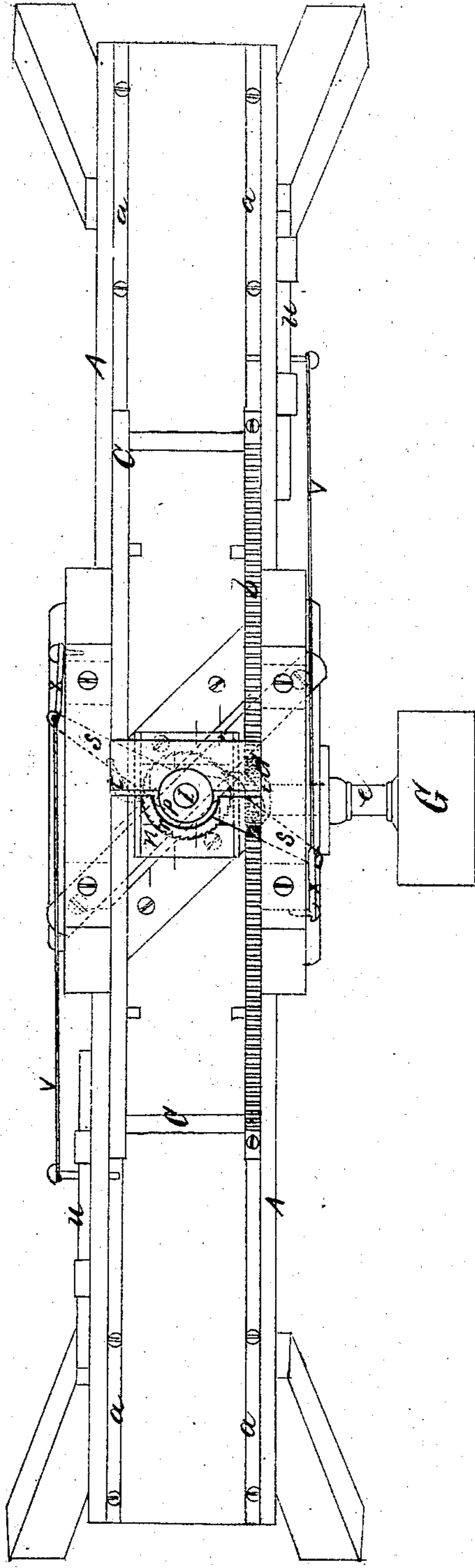
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Paul Schumacher Blind Slot Riving and Planing Machine.

3 Sheets Sheet 2

117471

Fig. 2.



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3 Sheets sheet 3

Paul Schumacher Blind Slot Riving and Planing Machine

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Fig. 5.

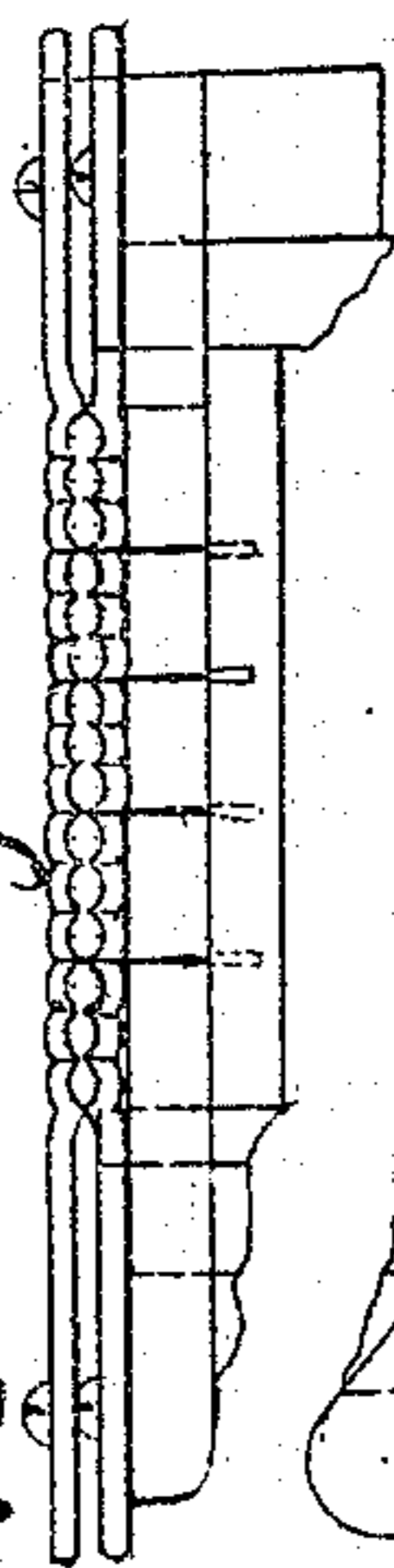


Fig. 3.

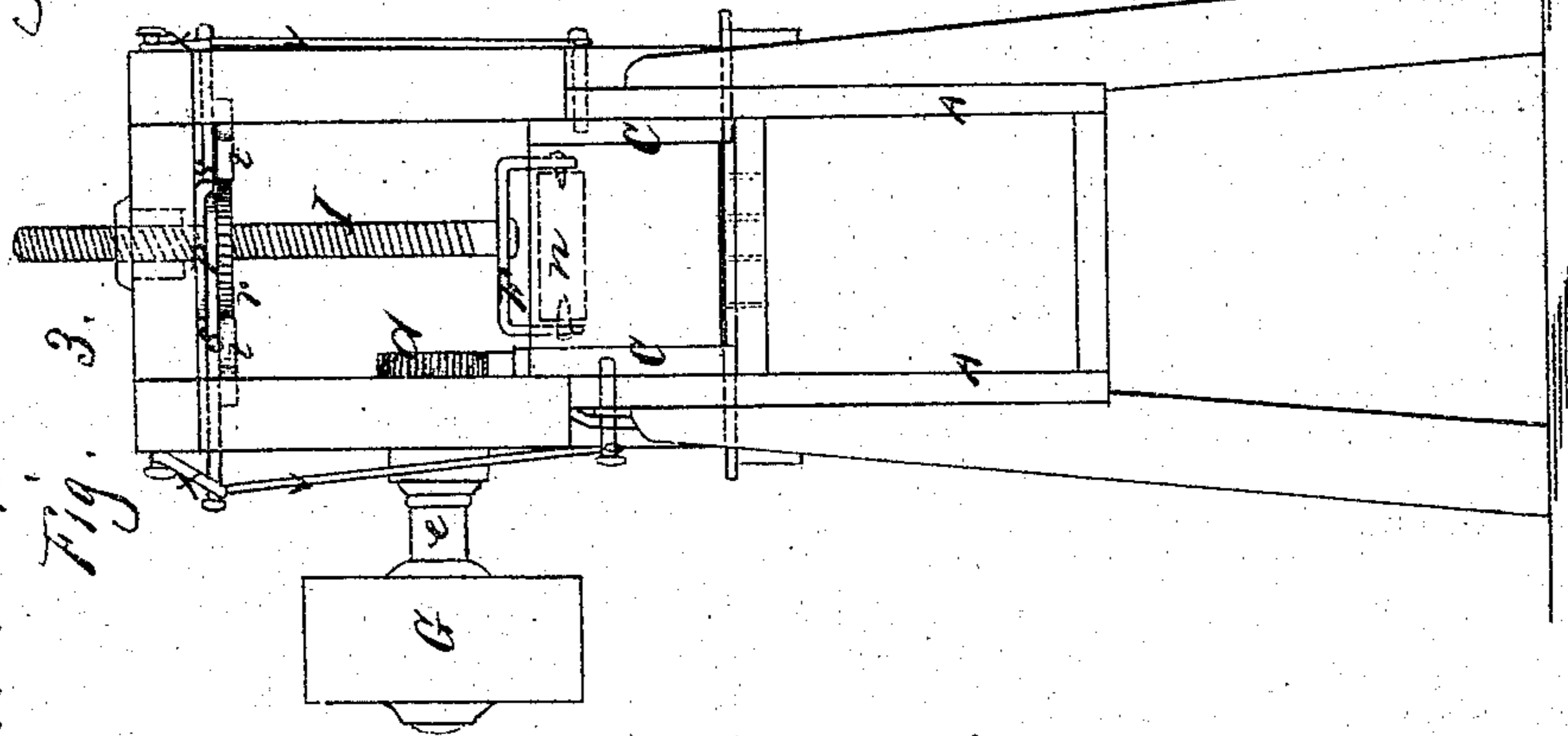
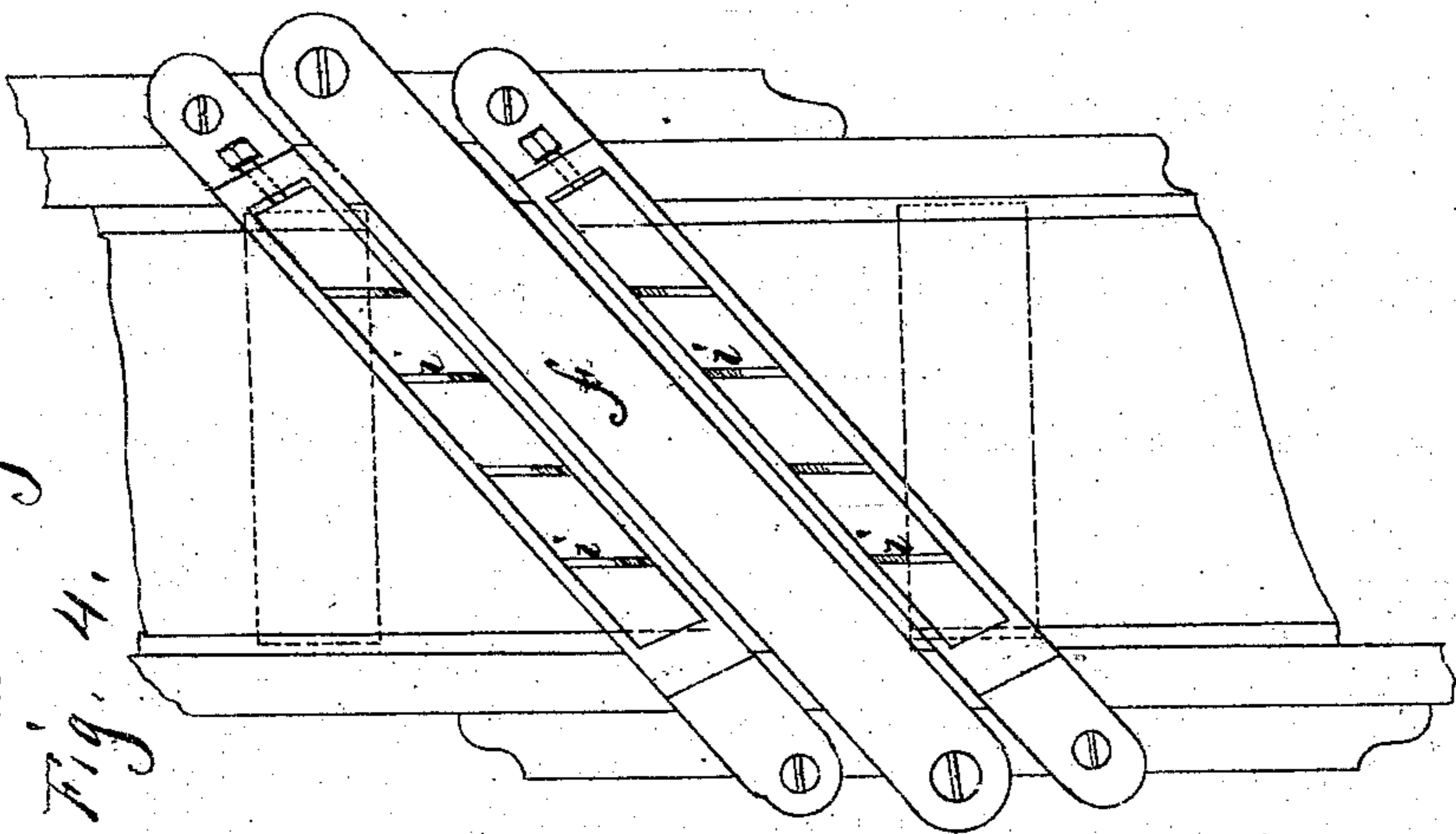


Fig. 4.



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# UNITED STATES PATENT OFFICE.

PAUL SCHUMACHER, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN MACHINES FOR MAKING BLIND-SLATS.

Specification forming part of Letters Patent No. 117,471, dated July 25, 1871; antedated July 24, 1871.

*To all whom it may concern:*

Be it known that I, PAUL SCHUMACHER, of the city and county of San Francisco, State of California, have invented an Improved Blind-Slat Riving and Planing-Machine; and I do hereby declare the following description and accompanying drawing are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My invention relates to improvements in a machine for riving out and planing thin wooden slats suitable for making wooden window-blinds; and it consists of a box, in the bottom of which is fixed a number of knives. A sliding frame is arranged to slide back and forth inside this box and carry the block of wood from which the slats are rived over the knives. The block is pressed down upon the knives, as it becomes thinner, by rollers, which are fed automatically downward by a vertical screw.

In the annexed drawing, Figure 1, sheet 1, represents a side view of my blind-slat riving and planing-machine. Fig. 2, sheet 2, is a plan. Fig. 3, sheet 3, is an end vertical section. Figs. 4 and 5, sheet 3, are plans showing the arrangement of the knives.

A represents a narrow box of the required length, having a false bottom, B, which divides it into two compartments. In each of the angles formed by the uniting of the false bottom B with the sides is laid a metallic rail, *a*, Fig. 2, of the thickness which it is desired to cut the slats. A frame or bottomless box, C, the edge of one side of which is provided with a rack, *b*, fits inside the box A and rests upon these rails, along which it is moved by a pinion, *d*, on the main driving-shaft *e*. In the false bottom B is secured horizontally a double-edged knife, *f*, at a proper angle to the movements of the frame C to cause it to readily rive or split the block which is driven over it. This knife is fixed at a height above the false bottom B equal to the thickness of the slats which it is desired to cut. Short splitting-knives *i* are fixed vertically on each side of the horizontal knife *f*, and are placed at a distance apart equal to the width it is desired to cut the slats. The block of wood from which the slats are to be split is placed inside the sliding frame or bottomless box C. The shaft *e* is then set in

motion by a belt which passes around the pulley G, and, by means of the pinion *d* and rack *b*, the sliding frame is driven back and forth over the knives, which split off and separate as many slats as the width of the block will permit at each throw of the sliding frame. A presser-block, F, is suspended, by a screw-rod, I, from the cross-timbers K of the frame L, so as to stand directly over the knives, at a sufficient height to permit the block to pass beneath it. Secured to this presser-block on its under side is one or more rollers, *n*, which bear upon the wooden block as it is driven over the knives and under the presser. This device serves to keep the block down firmly upon the knives so as to cut the slats of uniform thickness. In order to feed the presser down as the thickness of the block is reduced the screw-rod I passes through a loose box, *p*, from which it depends. To the lower end of this box *p* is secured a ratchet-wheel, *r*, and directly above this is placed two loosely-revolving arms, *s*, upon which are fixed pawls *t*. The arms or levers *s* extend one toward each side of the frame L, and their extremities are connected to slides *u* upon the sides of the box by connecting-rods *v*. One of these connecting-rods extends toward one end of the box A, while the one on the opposite side extends toward the opposite end, as shown at Fig. 1. The slides *u* have each a pin, which passes through a slot in the inside of the box A in a convenient position to be caught by the ends of the sliding box as it is driven over the knives, and by throwing them toward the ends of the box the arms or levers *s* are partially turned, causing the pawls *t* to revolve the box *p* so as to feed the screw downward sufficiently at each throw of the sliding box to carry the presser-block down the thickness of the slat which has been removed from the under side of the block of wood. The levers *s* are retracted by a suitable spring, *x*.

I am aware that a single set of vertical knives has been used with a horizontal knife; but this I do not claim.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The box A, provided with the rails *a*, in combination with the sliding box or frame C and knives *f* and *i*, substantially as and for the purpose above described.

2. The horizontal double-edged knife *f*, in combination with the double row of vertical knives *i*, for cutting the slats to the proper width and thickness at each movement of the block, substantially as above specified.

3. The revolving box *p*, with its ratchet-wheel *r*, arms *s*, and pawls *t*, in combination with the screw-rods *I* for feeding the presser-blocks downward, as described.

4. The slides *u*, arranged to be operated by the

sliding box *C*, in combination with the arms *s*, pawls *t*, and ratchet-wheel *r*, substantially as and for the purpose above described.

In witness that the above-described invention is claimed by me I have hereunto set my hand and seal.

PAUL SCHUMACHER. [L. S.]

Witnesses:

JOHN L. BOONE,  
GEO. H. STRONG.