W. LYNCH.
Splint Cutting Machine.

No. 201,806. Patented March 26, 1878.

Fig. 1.

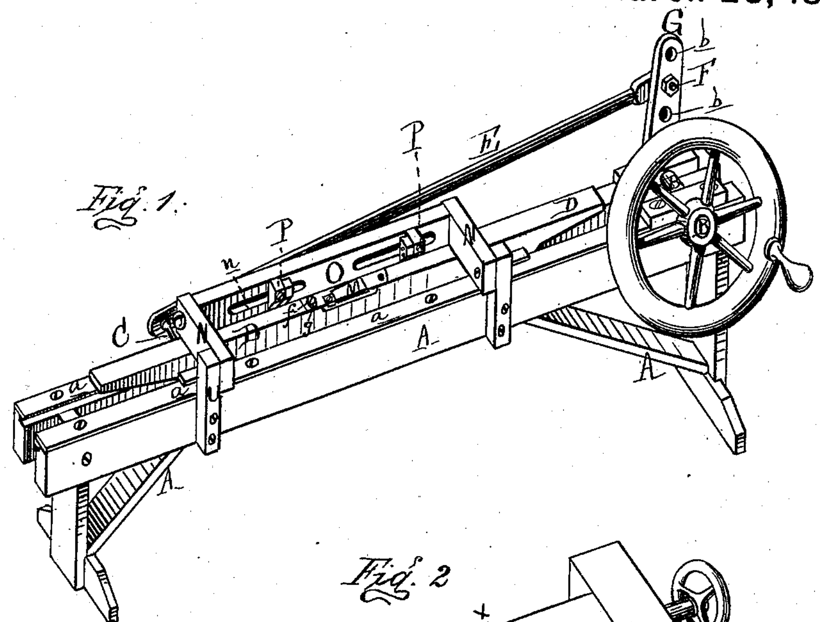


Fig. 2

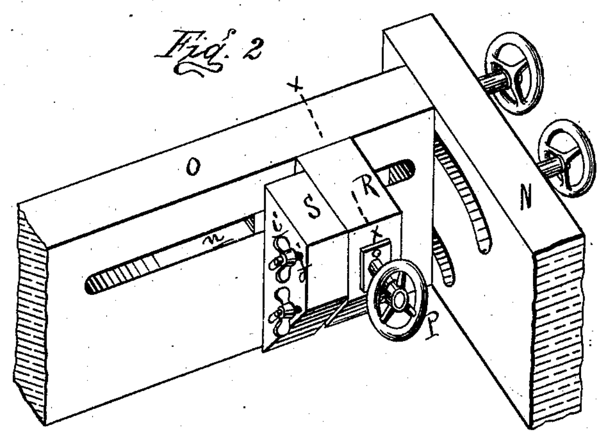


Fig. 3

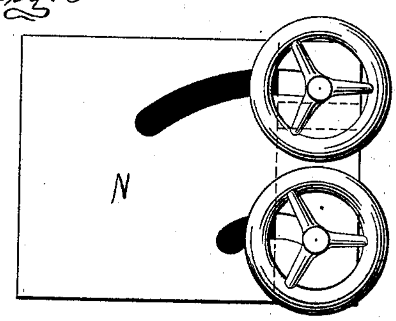
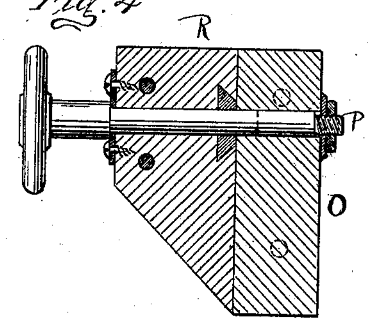


Fig. 4



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W. LYNCH.

Splint Cutting Machine.

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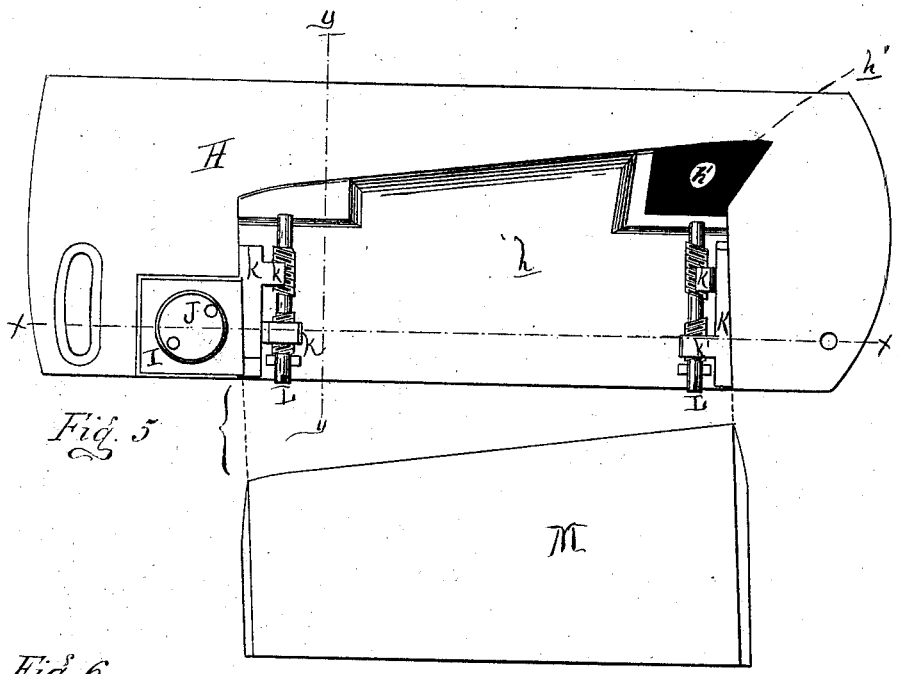

Fig. 5

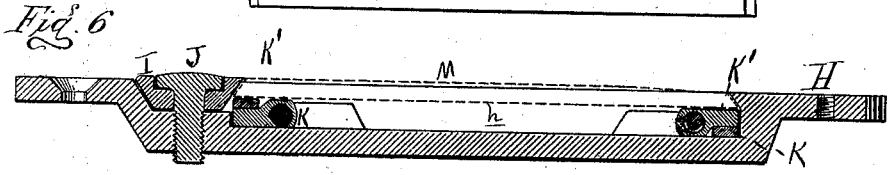

Fig. 6

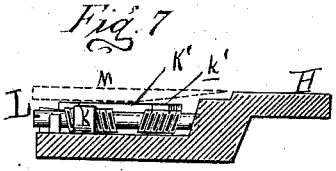

Fig. 7

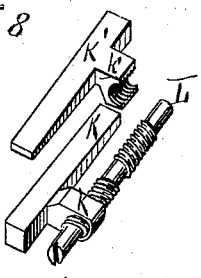

Fig. 8

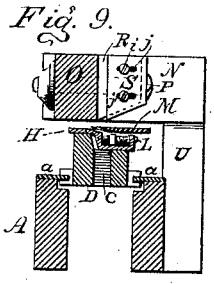

Fig. 9.

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UNITED STATES PATENT OFFICE.

WILLIAM LYNCH, OF DETROIT, MICHIGAN.

IMPROVEMENT IN SPLINT-CUTTING MACHINES.

Specification forming part of Letters Patent No. **201,806**, dated March 26, 1878; application filed December 8, 1877.

To all whom it may concern:

Be it known that I, WILLIAM LYNCH, of Detroit, in the county of Wayne and State of Michigan, have invented an Improvement in Splint-Cutting Machines, of which the following is a specification:

The nature of this invention relates to an improvement in splint-cutting machines of that class employed for cutting long thin splints or slats from the edge of a plank, and which are generally used in the manufacture of splint window-shades.

The object of the invention is to so construct the machine that the operator can easily and quickly adjust the same so that splints can be cut of various thicknesses and lengths, and that will leave the splints entirely free from "riffs" or checks.

The invention consists in a traversing knife-stock, operated by an adjustable connecting-rod and crank-shaft; in the peculiar construction and arrangement of the means for adjusting the knife, whereby splints of various thicknesses can be cut; and also in the construction and arrangement of the various parts, all as more fully hereinafter set forth.

Figure 1 is a perspective view of my machine. Fig. 2 is an enlarged perspective of a modification of one end of the back-rest, with its adjustable end-rest and guide-block, showing means of adjustment. Fig. 3 is an end elevation of the same. Fig. 4 is a section on line *x x* in Fig. 2. Fig. 5 is an enlarged plan view of the bed-plate, with knife removed. Fig. 6 is a longitudinal section on line *x x* in Fig. 5. Fig. 7 is a cross-section on line *y y*, Fig. 5, showing arrangement of wedge-blocks. Fig. 8 is a perspective view of one set of wedge-blocks and their adjusting-screw. Fig. 9 is a central cross-section through the frame, traversing stock and knife, and back-rest.

In the drawing, A represents a suitable frame, in one end of which is journaled in proper bearings a shaft, B, provided with suitable driving-wheel. D is a traversing knife-stock, traveling on suitable slides *a* on the top of the frame. This knife-stock is provided with a rearwardly-projecting arm, C, by means of which and the connecting-rod E and crank-pin F said stock is connected to the crank-bar G, which is rigidly secured to one end of the shaft B. In the bar G two or more holes, *b*, are drilled, to allow of an adjustment of the connecting-rod, in order that the travel of the knife-stock can be lengthened or shortened, as may be desired.

H is the knife bed-plate, pivoted at one end to the knife-stock, over an elongated slot, *c*, Fig. 9, in the latter, in any convenient manner, while the other end of the bed-plate is secured to the desired position by means of the screw *f*, which passes through the segmental slot *g* in the bed-plate into the stock. In this bed-plate there is formed a recess, *h*, the ends of which recess are downwardly beveled, as shown. In the bed-plate and at one end of the recess *h* there is placed a beveled jam-block, I, sleeved upon a screw, J, which latter passes through the bed-plate, for the purposes hereinafter described.

Through the bed-plate, and at the heel of the cutting-edge of the knife, there is an opening, *h'*, coincident with the slot in the knife-stock, through which the splints pass as they are cut from the plank.

K K' are wedge-blocks, adjustably secured in pairs at each end of and within the recess of the bed-plate. Each wedge-block has inwardly-projecting threaded studs or nuts *k k'*, to engage with the right and left hand threaded adjusting-screws L.

M is the knife, of proper size, that it will easily slide into the recess of the bed-plate and on top of the wedge-blocks, in which position it can be easily locked by turning the screw J, so as to depress the jam-block I down upon the end of the knife. This will force or jam the knife against the opposite end of the recess, and will rigidly lock the knife in place, the knife being held as in a dovetail.

Secured to the upper ends of the standards U, rising from the frame A, are two cross-bars, N, between which is secured a back-rest, O. Near the ends of this back-rest are cut two slots, *n*, through which pass bolts or screws P into the end rests R, which are adjusted at suitable distances apart to receive the board to be operated upon. Adjustably secured to the inner faces of these end rests R are guide-blocks S, by means of set-screws *i* and slots *j*, said guide-blocks being for the purpose of holding the plank from which the splints are to be

cut to the same vertical plane as is given the face of the back-rest.

If desired, the back-rest may be adjustably secured between the cross-bars, so that the face of the back-rest may be placed at an angle with the face of the knife-stock, which will allow of bevel-strips being cut.

The operation of this machine is as follows: I first take the board from which I desire to cut splints, and adjust the end rests and guide-blocks so that they will loosely hold the plank in a vertical position, with its lower edge resting upon the top of the knife-stock. I then adjust the knife to cut the desired thickness, elevating or depressing the same by drawing together or forcing apart the wedge-blocks by means of the adjusting-screws.

In order that the cut shall be made by the entire cutting-edge of the knife, I adjust the same, together with its bed-plate, so that the two points of the knife shall just clear both sides of the plank. This adjustment I obtain by moving back or forward that end of the bed-plate which is secured by the screw and segmental slot. The plank is thus presented edgewise to the knife, which, in its forward movement, cuts a splint from the edge of the plank, and as the knife is retracted the plank falls of its own gravity upon the stock ahead of the knife, again presenting its edge for another cut, and so on until the plank is entirely used up.

What I claim as my invention is—

1. In a slat-cutting machine, and in combination with a reciprocating knife-stock, an adjustable knife-bearing plate, pivoted at one end and adjustable at the other end by means of a slot in said plate and a screw passing through the same into the knife-stock, substantially as and for the purposes set forth.

2. In a slat-cutting machine, a knife bed-plate, recessed as described and shown, in combination with the adjusting wedges and screws, substantially as and for the purposes set forth.

3. In a slat-cutting machine, and in combination with a reciprocating knife-stock and a recessed bed-plate, constructed as described, a knife substantially of the form shown, with its ends beveled for adjusting and holding it in the bed, substantially as set forth.

4. In a splint-cutting machine, and in combination with the frame thereof, a slotted back-rest, O, provided with end rests R, adjustable laterally by means of said slots and suitable bolts, the adjustable guide-blocks S, constructed to operate substantially as and for the purposes set forth.

WILLIAM LYNCH.

Witnesses:
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