2 Sheets—Sheet 1.

N. L. SEELYE.

Machine for Finishing Box-Heads.

No. 222,083. Patented Nov. 25, 1879.

FIG. 1.

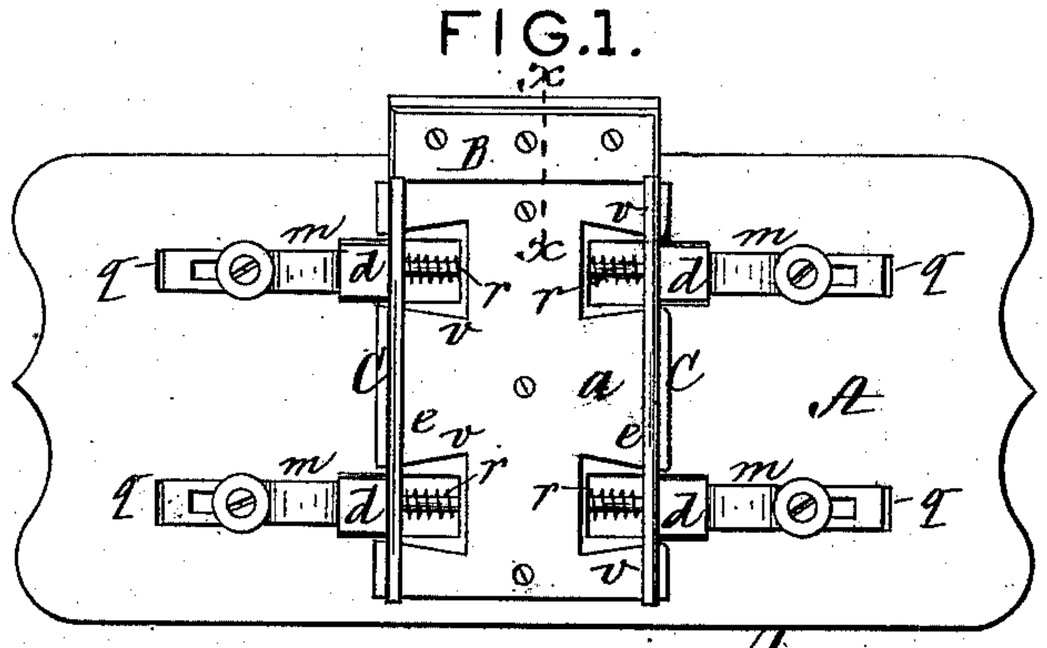


FIG. 2.

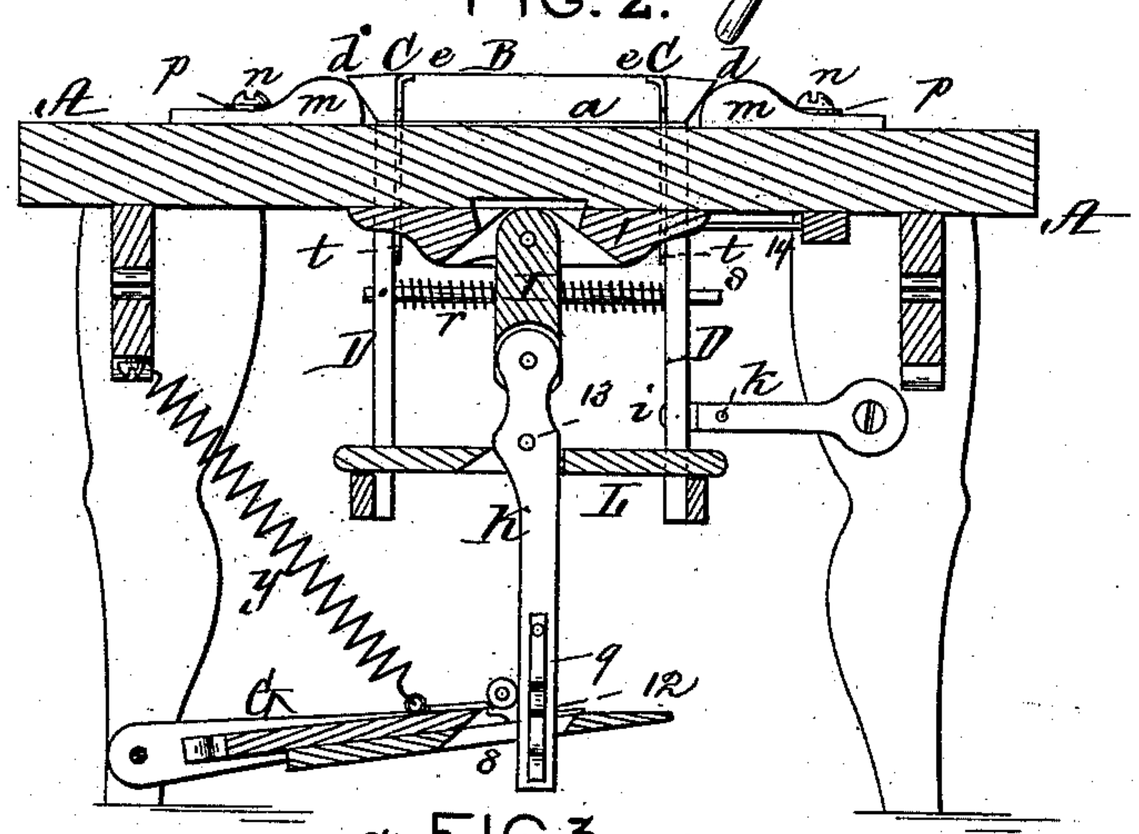
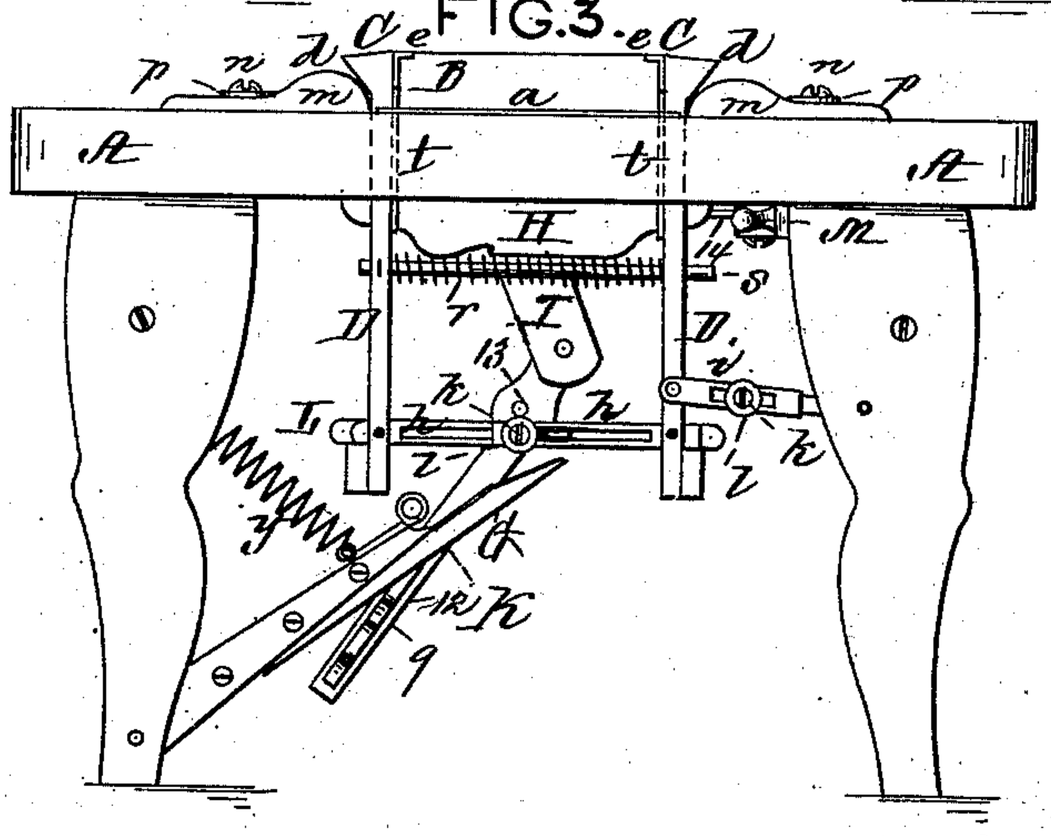


FIG. 3.



WITNESSES

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2 Sheets—Sheet 2.

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Machine for Finishing Box-Heads.

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FIG. 4.

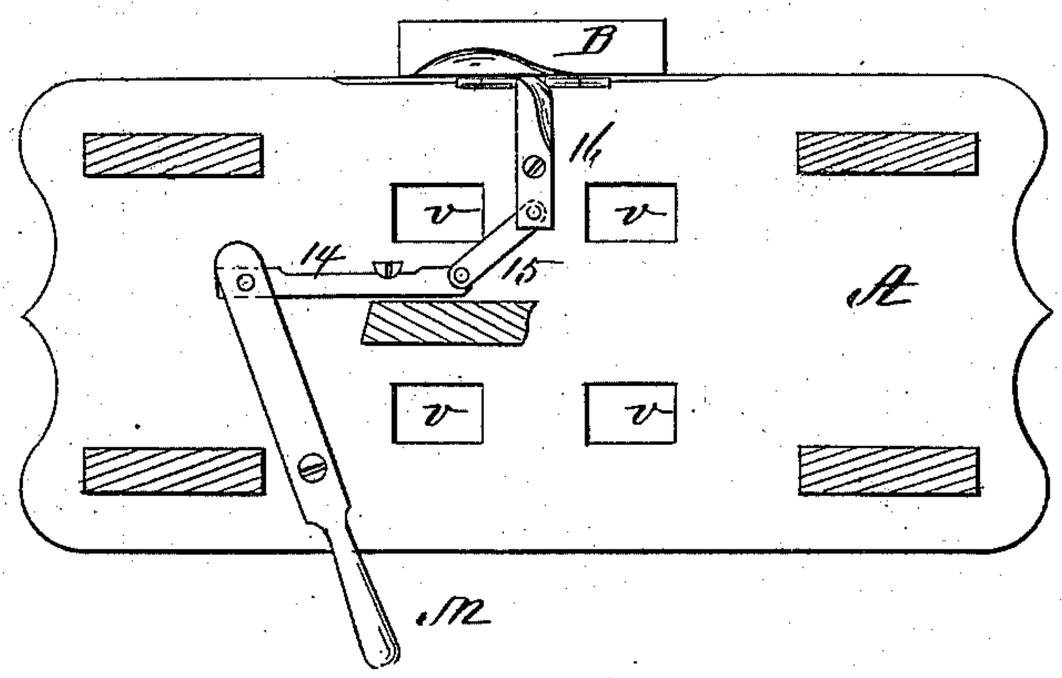


FIG. 5.

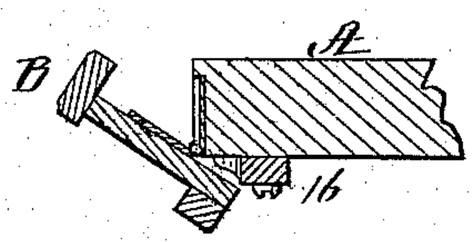


FIG. 6.

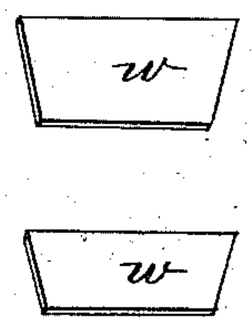
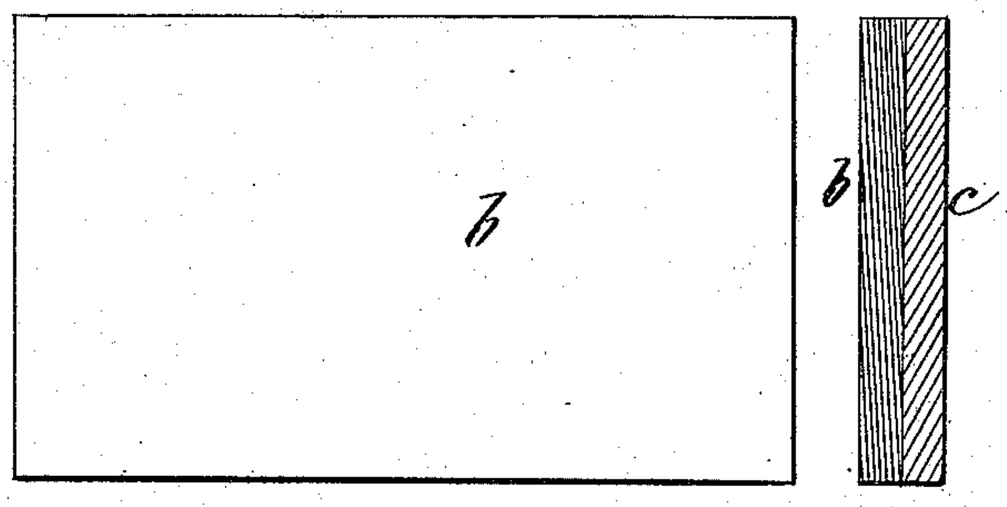


FIG. 7.



WITNESSES

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UNITED STATES PATENT OFFICE.

NATHAN L. SEELYE, OF MONTAGUE, MICHIGAN, ASSIGNOR TO WILLIAM F. TEMPLE, JR., OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR FINISHING BOX-HEADS.

Specification forming part of Letters Patent No. **222,083**, dated November 25, 1879; application filed April 14, 1879.

To all whom it may concern:

Be it known that I, NATHAN L. SEELYE, of Montague, in the county of Muskegon and State of Michigan, have invented a Machine for Finishing Box-Heads, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan of my machine for making box-heads. Fig. 2 is a longitudinal vertical section through the center of the same. Fig. 3 is a side elevation. Fig. 4 is a plan of a portion of the under side of the machine; Fig. 5, a local transverse section on the line *x x* of Fig. 1; Fig. 6, detail to be referred to; Fig. 7, plan and section of a box-head made in accordance with my invention.

In the construction of boxes for holding and transporting curtain-rolls and other articles it is desirable that the head of each box be of greater thickness than the side, and consequently the stock employed for this purpose should be thicker than that used for the sides.

The object of my invention is to enable me to make such box-heads from short pieces of stock remaining from cutting up boards employed in making the sides, and of the same width thereof; and my invention consists in an organized machine for facilitating the placing and holding of the pieces to form the head of box while being nailed together and clinched, two pieces of stock of the same width as that used for the sides and of the required length, with the grain of the wood running preferably in different directions, being held on a bed or table, against a guide within a pair of clamps, in a convenient position for fastening them together by nails driven through and clinched, by which construction I am enabled to utilize much of the stock which has previously been considered unfit for this purpose.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents a table, within the top of which is secured a metal bed-plate, *a*, upon which are placed two pieces of board, *b c*, which are left from cutting up the sides, and of the same width thereof, these two pieces *b c* being intended to form the box-head, the direction of the grain of the wood of one piece, *b*, running at an angle with that of the other piece, *c*.

The two pieces *b c* are pressed up against a hinged guide or stop, B, to bring their ends flush with each other, while the sides of these pieces are brought exactly in line and held firmly between two transverse metallic clamps, C C, secured to the enlarged heads *d* of two pairs of upright holders, D D, each clamp being provided at its top with a flange, *e*, which catches over the edge of the side of the box-head and gripes it while nails are being driven down through the two pieces and clinched on the under side by striking against the metal bed-plate *a*.

The clamps C C are made adjustable to and from each other at their lower ends to accommodate stock of different widths by means of slotted plates *h i*, screws *k*, and washers *l*, and are made adjustable at their upper ends by slotted cleats *m*, screws *n*, and washers *p*. Each cleat *m* slides in a recess, *q*, in the top of the table, and its inner end and top are rounded off and serve as a bearing for the outer surface of the enlarged head of its upright clamp-holder D, a spiral spring, *r*, surrounding a horizontal rod, *s*, being placed between opposite clamp-holders a little below the top of the table to press them out into contact with the heads of the adjustable slotted cleats *m*. The clamps C C can also be adjusted to accommodate stock of different thicknesses by means of screws passing through slots (not shown) in the lower upright portions, *t*, which secure the clamps to their holders D D. The metal bed-plate *a*, and also the top of the table thereunder, are cut away at *v*, forming openings, in which the clamp-holders are moved to and from each other in the operation of adjusting them for stock of different widths, the openings *v* in the bed-plate being provided with sectional pieces *w* of different

sizes to be placed therein during the different positions occupied by the clamp-holders D, by which construction a continuous firm bearing is afforded at all points for the two pieces of stock placed on the bed-plate to form the box-head. G is a treadle, the outer end of which is pivoted in the two legs of a pair at one end of the table, a spiral spring, *y*, being attached to the treadle for keeping it up in the position seen in Fig. 3 when the clamps are not in use. The treadle is brought down against the resistance of the spring *y* to depress the clamps and cause them to advance against the sides of the two pieces *b c*, and also to enable the flanges *e* of the clamps to catch over and hold them down squarely in position while the nails are being driven through and clinched by mechanism now to be described.

Secured to the under side of the table A is a cleat, H, to which is pivoted the upper end of a link, I, to the lower end of which is pivoted the upper end of a long arm, K, which projects down through a horizontal block, L, connecting the lower ends of the two pairs of holders D D, and thence through a slot, 8, in the inner end of the treadle, the lower end of this arm K being provided with a flat spring, 9, so bent as to form a shoulder, 12, which serves to limit the motion of the inner end of the treadle. When two pieces, *b c*, of the stock cut off from that to make the sides are placed (with their grain running in different directions) upon the bed-plate *a* and with their ends abutting against the guide or stop B at one end of the clamp C C, the latter are brought forward to embrace the sides of the pieces *b c*, and the flanges *e e* of the clamps are brought down to hold them by depressing the treadle G with the foot till the edge of the slotted opening in the inner end of the treadle catches over the shoulder 12 of the flat spring 9 on the arm K, which operation straightens and holds the arm down, and with it draws down the two pairs of clamp-holders with their clamps, the upper end of the arm K being provided with a pin, 13, passing through it, which is brought down into contact with the upper surface of the horizontal connecting-block L, whereby the required pressure is exerted to enable the clamps to hold the stock on the bed-plate *a* while the nails are being driven and clinched.

After the two pieces forming the box-head are properly secured together, as above described, the right hand of the operator presses outward against a lever, M, connected by a series of levers, 14, 15, and 16, with the lower end of the hinged guide or stop B, thereby releasing the latter and allowing its top to fall by its gravity away from the edge of the top of the table, simultaneously with which the foot presses in the flat spring 9, thus releasing the treadle, and through its connections the two clamps C C, leaving the finished head, Fig. 7, unconfined in a position to be ejected by the entrance of two other pieces, *b c*, to form the next head.

I claim—

1. In combination, the table A, bed-plate *a*, adjustable clamps C C, and hinged stop B, against which abuts the ends of the pieces forming the head of the box, constructed to operate substantially in the manner and for the purpose described.

2. The sliding slotted cleats *m* and slotted plates *h i*, in combination with and for adjusting the clamp-holders D D, whereby they are made to approach or recede from each other to adjust the clamps C C into position for receiving box-heads of different widths, substantially as shown and described.

3. In combination with the clamps C C and their holders D D, the spring-treadle G, arm K, with its spring-catch and pin 13, the link I, and connecting-block L, constructed to operate substantially in the manner and for the purpose specified.

4. The levers M, 14, 15, and 16, in combination with and for operating the hinged guide or stop B, as and for the purpose described.

5. The removable sections *w*, of varying sizes, in combination with and adapted to close the openings *v*, of varying sizes, as and for the purpose set forth.

Witness my hand this 8th day of April, 1879.

NATHAN L. SEELYE.

In presence of—

A. Z. MASON,

ANSEL F. TEMPLE.