2 Sheets—Sheet 1.

C. T. BRANDON.

NAILING-MACHINES.

No. 195,696. Patented Oct. 2, 1877.

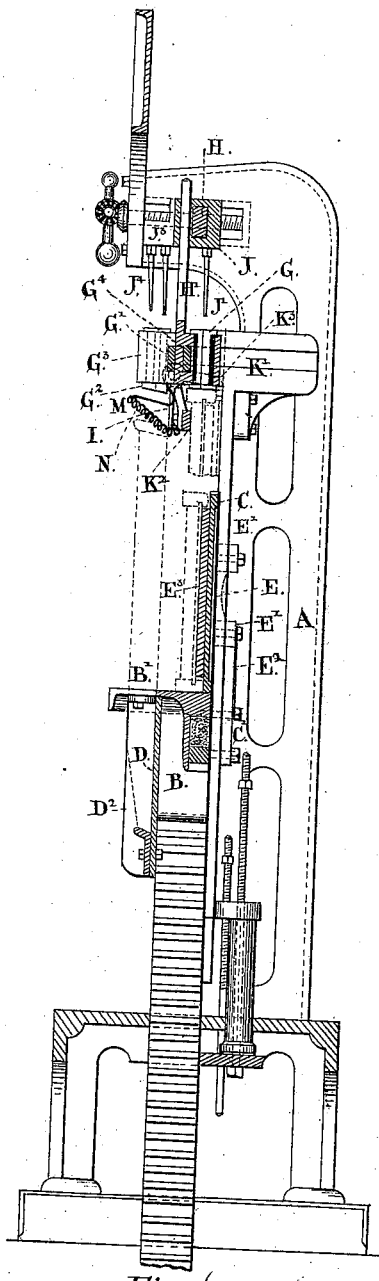


Fig. 1.

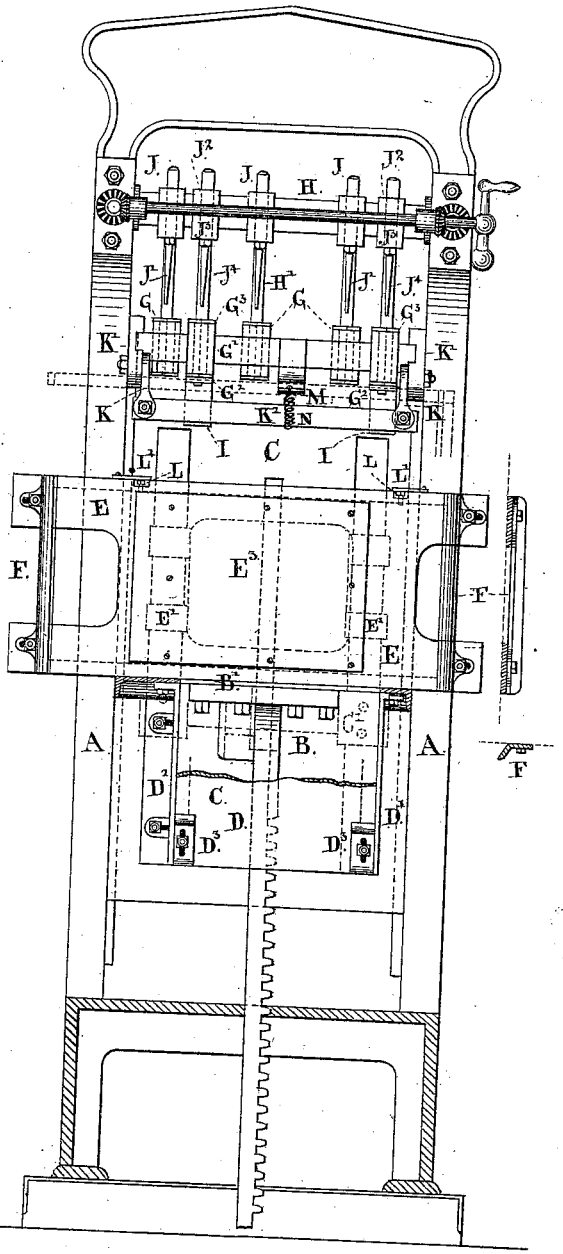
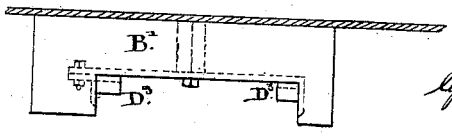


Fig. 2.

Fig. 3.



Witnesses:

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D. Whitehead.

Inventor:

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2 Sheets—Sheet 2.

C. T. BRANDON.

NAILING-MACHINES.

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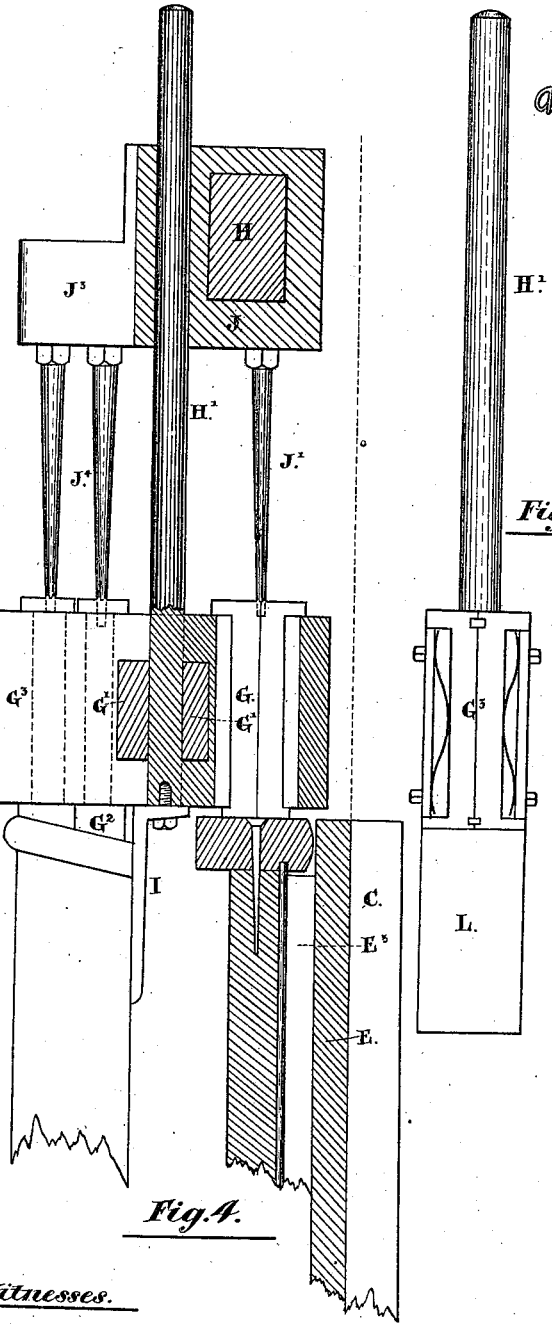

Fig. 4.

Fig. 5.

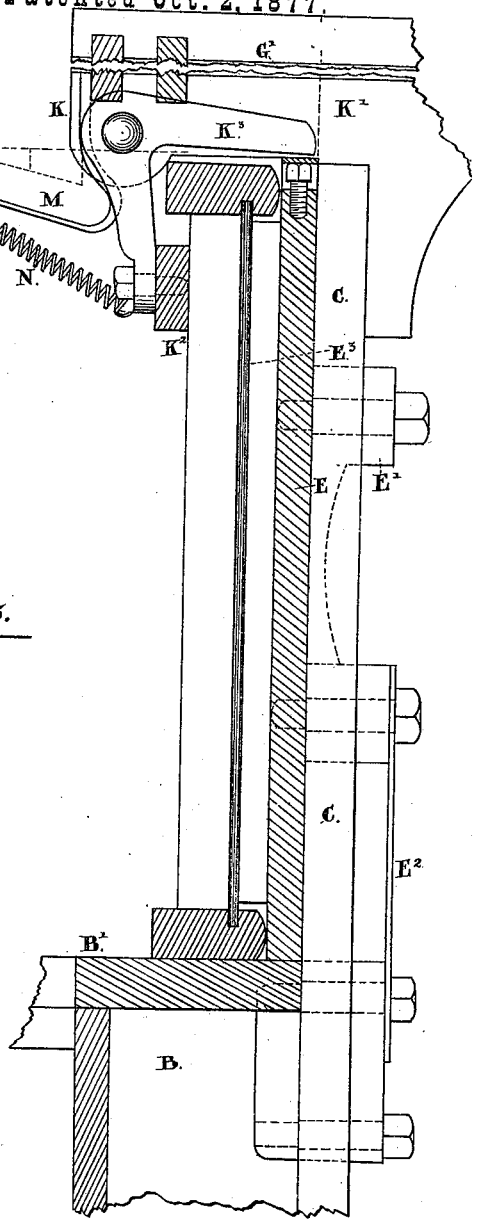

Fig. 6.

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UNITED STATES PATENT OFFICE.

CHARLES T. BRANDON, OF TORONTO, ONTARIO, CANADA, ASSIGNOR OF ONE-HALF HIS RIGHT TO JAMES SAURIN McMURRAY AND THOMAS RICHARD FULLER, OF SAME PLACE.

IMPROVEMENT IN NAILING-MACHINES.

Specification forming part of Letters Patent No. **195,696**, dated October 2, 1877; application filed June 14, 1877.

To all whom it may concern:

Be it known that I, CHARLES THOMAS BRANDON, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, mechanic, have invented certain new and useful Improvements in Nailing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, and to the letters of reference marked thereon, and forming a part of this specification.

My invention has relation to certain alterations on and additions to a machine now used extensively for nailing boxes, and known as "Beard's Box-Nailing Machine;" and my improvements have for their object the adapting of the said machine for the purpose of nailing wash-boards.

In the accompanying drawings, Figure 1 is a cross-section, and Fig. 2 a front view, of a machine adapted for the purpose of nailing wash-boards. Figs. 3, 4, 5, and 6 are details of several of the working parts.

A is the frame of the machine, constructed in all respects in the usual manner, and of the ordinary materials; and here it may be explained that the mode of driving and the operation of the hammer and punches is the same as in the ordinary box-nailing machine.

B is the hammer, to which the table B′ is bolted; and C is the sash, connected thereto, in the usual way, by the blocks C′. The table is reduced in width, in comparison with the ordinary table of the box-machine, and is also notched out to a suitable depth and width to receive the wash-board when standing upright on its legs.

D is a face-plate, fastened to the under side of the table in front of the hammer-rack, and provided with a fixed side flange, D^1, and an adjustable side flange, D^2. D^3 are adjustable beveled stops, bolted in the face of the plate D, which stops receive the feet of the wash-board when it is in an erect position. E is a cast-iron "form," resting on the top of the table, a working connection therewith being made by the sliding block E^1 and strap E^2. E^3 is a wooden filling-piece, screwed to the face of the form by screws, and arranged to fill up the space between the metal of the wash-board and the rounded face of the legs when the wash-board is laid on one side and pressed up against the form. On the ends of the form adjustable beveled gage-pieces F are fitted, for the purpose of enabling the wash-board to be placed in exact position for nailing. G G^3 are the die-boxes, single and double, as required, fitted on the bars G^1 G^4, and connected to the traversing punch-bar H by rods H′, in the usual way. The under faces G^2 of the dies are beveled to correspond with the bevel on the cap of the wash-board, in order to hold the cap on the right angle for nailing. I are the stop-brackets, fastened to the under side of the die-boxes G^3, for the purpose of supporting and guiding the wash-board in an erect position while the cap is being nailed on. J are the single punch-blocks, of the ordinary construction, to which the punches J^1 are attached, in the usual manner. J^2 are double punch-blocks, fitted with a projecting arm, J^3, on the under side of which, at a proper distance from the face of the sash, the punches J^4 are attached. The points of these punches are set on the same bevel as the cap of the wash-board, in order that the nails may be driven equally.

It will be observed that the arrangement of the bars G^1, die-boxes G^3, and punch-blocks, with projecting arms J^3, constitutes a distinct working combination, altogether independent from the ordinary bar, die-boxes, and punch-blocks, and performs a separate class of work—viz., nailing on a bevel, but operated by working parts of the machine common to both. This feature is peculiarly valuable, as the variety of work capable of being done by the machine is largely increased without interfering with its ordinary work.

K K are two arm-clamping irons pivoted on the front end of the brackets K^1. The front ends are connected by a bar, K^2, and the rear arms K^3 are arranged to act in combination with set-screws L, placed on the top of the form E. These set-screws are sunk in a recess cut in the edge of the form, and a pressure-spring, L′, is placed over them, for the double

purpose of preventing the shock of the blows loosening the screws, and in order that the arms K^3 may strike fairly on the form. By raising or lowering these screws the amount of pressure on the form may be regulated.

M is a spring cap holder, fastened in a central position on the front bar G^1. This holder is arranged toreceive the capping-piece of the wash-board, and hold it in position during the process of nailing.

N is a spiral spring extending from the point of the holder to the pressure-bar K^2. The office of this spring is to draw the said bar forward after each stroke of the hammer, clear of the position of the wash-board on the upward stroke.

In operation the legs, back, and zinc are received by the operator from a clamping-machine in the relative position to each other that they are to occupy when nailed together. The whole combination is then laid in a horizontal position on the table B′, with the zinc face in contact with the filling-piece E^3, and the beveled top of the legs hard against one of the gage-pieces F, as shown by dotted lines in Figs. 1 and 2. The board in the position thus described is adjusted to receive the nails in their proper places. The upward stroke of the hammer, in the ordinary way, completes the nailing of one side, with the exception that just before the nails are driven the pressure-bar K^2 is forced against the back of the board by the contact of the arms K^3 with the form, and clamps the parts firmly together, thus binding the zinc in the grooves of the legs. The other leg is nailed by reversing the board and repeating the operation.

After the legs are nailed the board is placed in an erect position, the feet resting upon the beveled stop-pieces D^3, with the rounded face to the front.

The face of the plate D is so arranged in relation with the punches and die-boxes, that when the wash-board is placed in the position shown by dotted lines the nails will be driven in their proper places. The capping-piece is slipped on the spring-holder M and pressed against the stop-brackets I before the hammer rises, the beveled lower face of the dies holding it firmly at the proper angle.

Having now described the parts and operation of my improvements, I wish it to be distinctly understood that I make no claim to any portion of the box-nailing machines described and claimed in the several patents of Beard; but

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

1. The face-plate D, provided with the side flanges D^1 and D^2, and adjustable beveled stops D^3, in combination with the hammer B, arranged and operating substantially as shown and described.

2. The form E, provided with the adjustable gage-pieces F F and filling-piece E^3, substantially as specified.

3. In combination with the form E and hammer B, the sliding blocks C′ E^1 and strap E^2, substantially as shown and described.

4. The pivoted clamping-irons K K, with pressure-bar K^1, in combination with the form E, provided with the adjustable set-screws L and springs L′, substantially as and for the purpose specified.

5. The dies G^3, finished with a beveled face on the under side to correspond with cap of the wash-board, as shown and described.

6. The stop-brackets I, in combination with the die-boxes G^3, substantially as shown and described.

7. The spring cap-holder M, in combination with the beveled dies G^3 and stop-brackets I, as and for the purpose set forth.

8. The punch-blocks J^2, provided with the projecting arm J^3, and fitted with the punches J^4, whose points are finished on a bevel to correspond with the cap, in combination with the double die-boxes G^3, substantially as shown and described.

9. The combination of the spring cap-holder M, spring N, and pressure-bar K^1, substantially as shown and described.

10. The combination of the hammer B with face-plate D and notched table B′, form E, sash C, clamping-irons K, die-boxes G and G^3, and punch-blocks J and J^2, arranged and operating substantially as shown and described.

C. T. BRANDON.

Witnesses:

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GEO. A. AIRD.