

E. C. NORTHRUP.
BOX NAILING MACHINE.
APPLICATION FILED JUNE 7, 1911.

1,037,299.

Patented Sept. 3, 1912.

2 SHEETS—SHEET 1.

Fig. 1.

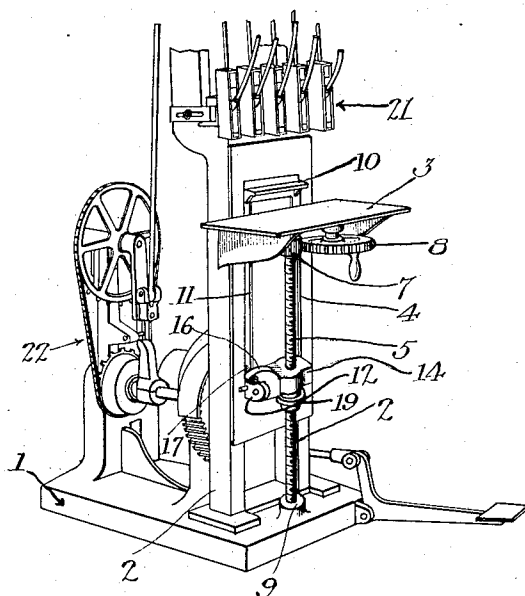


Fig. 4.

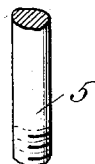


Fig. 2.

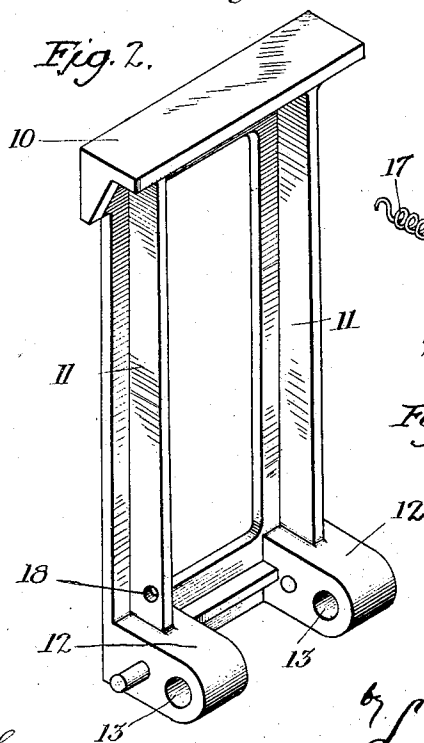


Fig. 3.

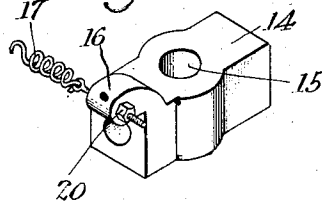
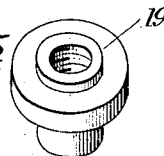


Fig. 5.



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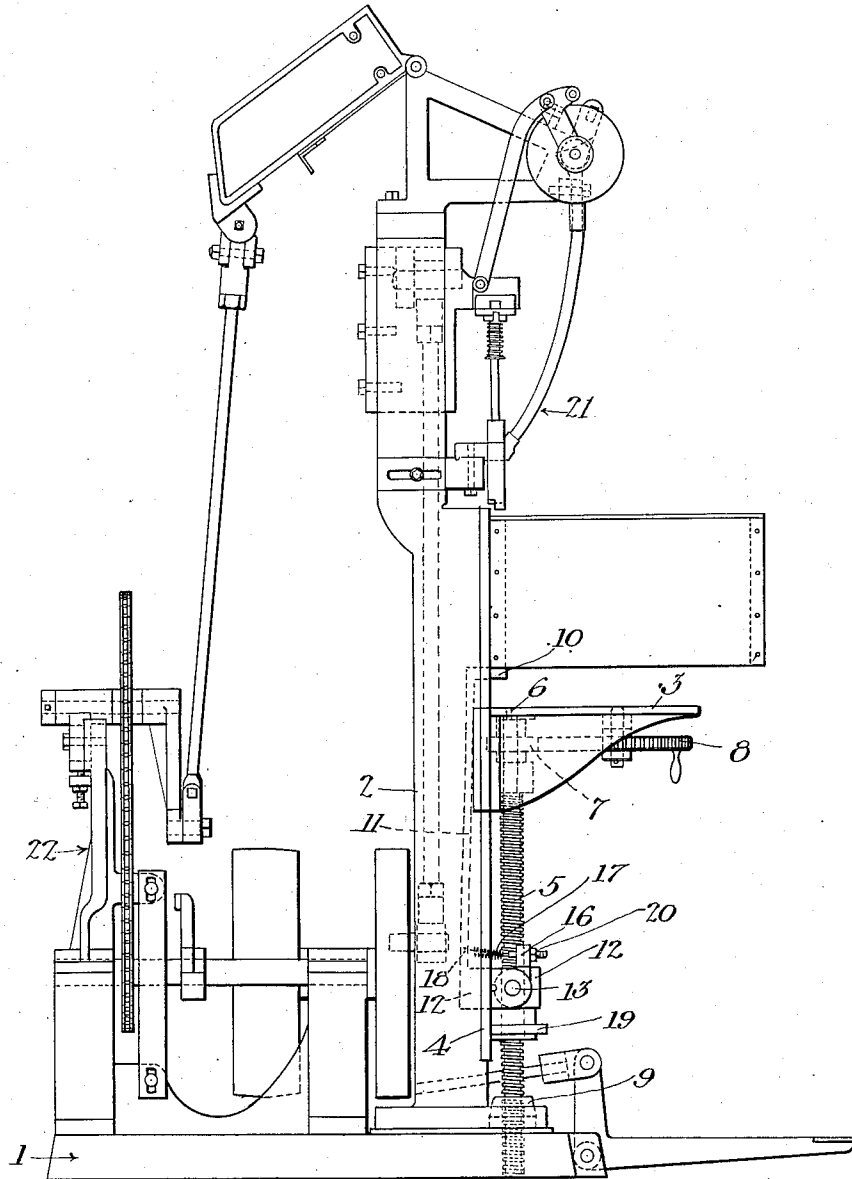
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2 SHEETS—SHEET 2.

Fig. 6.



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UNITED STATES PATENT OFFICE.

ELMER C. NORTHRUP, OF SAN FRANCISCO, CALIFORNIA.

BOX-NAILING MACHINE.

1,037,299.

Specification of Letters Patent.

Patented Sept. 3, 1912.

Application filed June 7, 1911. Serial No. 631,860.

To all whom it may concern:

Be it known that I, ELMER C. NORTHRUP, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Box-Nailing Machine, of which the following is a specification.

This invention relates to box-making machines and the main object of the present invention is to provide a second table, or box rest, which is so constructed that it may be instantly moved into or out of box supporting position. Thus when nailing the sides, the regular table will be used, and the second table will be swung out of supporting position and will not interfere with the box or the nailing operation. After the sides have been nailed the second table is instantly swung into position, and supports the box while the bottom is being nailed. It is thus possible with one machine, to perform the operation of nailing both the sides and bottoms.

Referring to the drawings: Figure 1 is a perspective view of the lower portion of the machine constructed with my second table. Fig. 2 is a perspective view, on a larger scale, of the second table. Fig. 3 is a perspective of the sliding block. Fig. 4 is a perspective of the vertical screw. Fig. 5 is a perspective of the nut. Fig. 6 is a side elevation of the machine showing the position of the second table, and position during the operation of nailing the bottom.

1 designates the base of the machine, with standards 2.

3 is the regular table, or box rest, which is used to support the box while the sides are being nailed, this table being mounted to slide on vertical ways 4, on standards 2. A vertical screw 5 supports the table 3 and also another table to be described, the upper end of the screw being journaled at 6 in the table 3. A pinion 7 is secured on the upper end of the screw 5, and meshes with a gear 8, which is journaled under the table 3, and is adapted to be rotated by hand to revolve the screw 5, the lower end of the screw being threaded in a non-revoluble nut 9 which is secured in the base 1, whereby the table 3 may be raised or lowered when the hand gear 8 is operated.

10 designates the second table which is supported by legs 11, with feet 12 which are pivoted at 13 to a sliding pivot block 14

shown in detail in Fig. 3, and having a smooth bore 15, which slides over the screw 5. The legs 11 lie between the standards 2, and the table 10 projects forward from the standards 2 when the table 10 is in supporting position as shown in Figs. 1 and 6, and when in this position the table 10 lies above the table 3, so that the table 3 does not interfere with the proper placing of the box on the table 10 during the nailing of the bottom. When the sides are being nailed the table 10 is pushed back so that it does not project in front of the standards 2, and the box then rests upon the table 3. The table 10 does thus not interfere with the box during the nailing of the sides.

The block 14 has a lug 16, to which is secured a coil tension spring 17, the other end of the spring 17 being secured at 18 to one of the legs 11, and the table 10 is thus yieldingly held in supporting position. Thus in the operation of nailing the sides, the box is placed on the regular table 3 and pushed back against the face of the ways 4, the table 10 readily yielding backward as the box is moved into nailing position. When the box is withdrawn for nailing the bottom the table 10 is automatically moved into protruding position ready to support the box, and the box is then placed thereon with its bottom uppermost ready for the nailing of the bottom, in the position shown in Fig. 6. Block 14 is supported by a threaded hand wheel 19 on the screw 5, and by adjusting the hand wheel 19, the height of the table 10 may be regulated to the exact point desired. When the regular table 3 has been set in the proper position, and the second table 10 has been set in proper position it is obviously not necessary to change the setting of the machine as the second table 10 yields when the box is moved into nailing position on the regular table 3 for nailing the sides, and the table 10 automatically moves into supporting position when permitted to do so by moving back the box from it. The tension of the spring 17 may be regulated by the nut 20.

21 designates the nailing mechanism in general, and 22 designates the mechanism for driving the machine, the detailed construction of which is immaterial to the present invention.

What I claim is:

1. In a box nailing machine, a main

frame, a regular table vertically movable thereon, a vertical screw for regulating the height of the regular table, a block slidable over said screw, legs pivoted to said block, a
5 second table supported by said legs above the first table.

2. In a box nailing machine, a main frame, a regular table vertically movable thereon, a vertical screw for regulating the
10 height of the regular table, a block slidable over said screw, legs pivoted to said block, a second table supported by said legs above the first table, a spring between said block
15 and a leg for yieldingly holding the second table in nailing position.

3. In a box nailing machine, a main frame, a regular table vertically movable thereon, a vertical screw for regulating the
20 height of the regular table, a block slidable over said screw, legs pivoted to said block, a second table supported by said legs above the first table, a nut on said screw below said block for adjusting the height of said

block to vary the position of the second table.

4. In a box nailing machine, a main frame, a regular table vertically movable thereon, a vertical screw for regulating the height of the regular table, a block slidable over said screw, legs pivoted to said block, 25
30 a second table supported by said legs above the first table, a nut on said screw below said block for adjusting the height of said block to vary the position of the second table, said screw being journaled at its
35 upper end in the regular table, a pinion on said screw, and a hand gear below the regular table, meshing with said pinion.

In testimony whereof, I have hereunto set my hand at San Francisco, California, this 40
29th day of May 1911.

ELMER C. NORTHRUP.

In presence of—

GREG S. McEVERS,
D. B. RICHARDS.