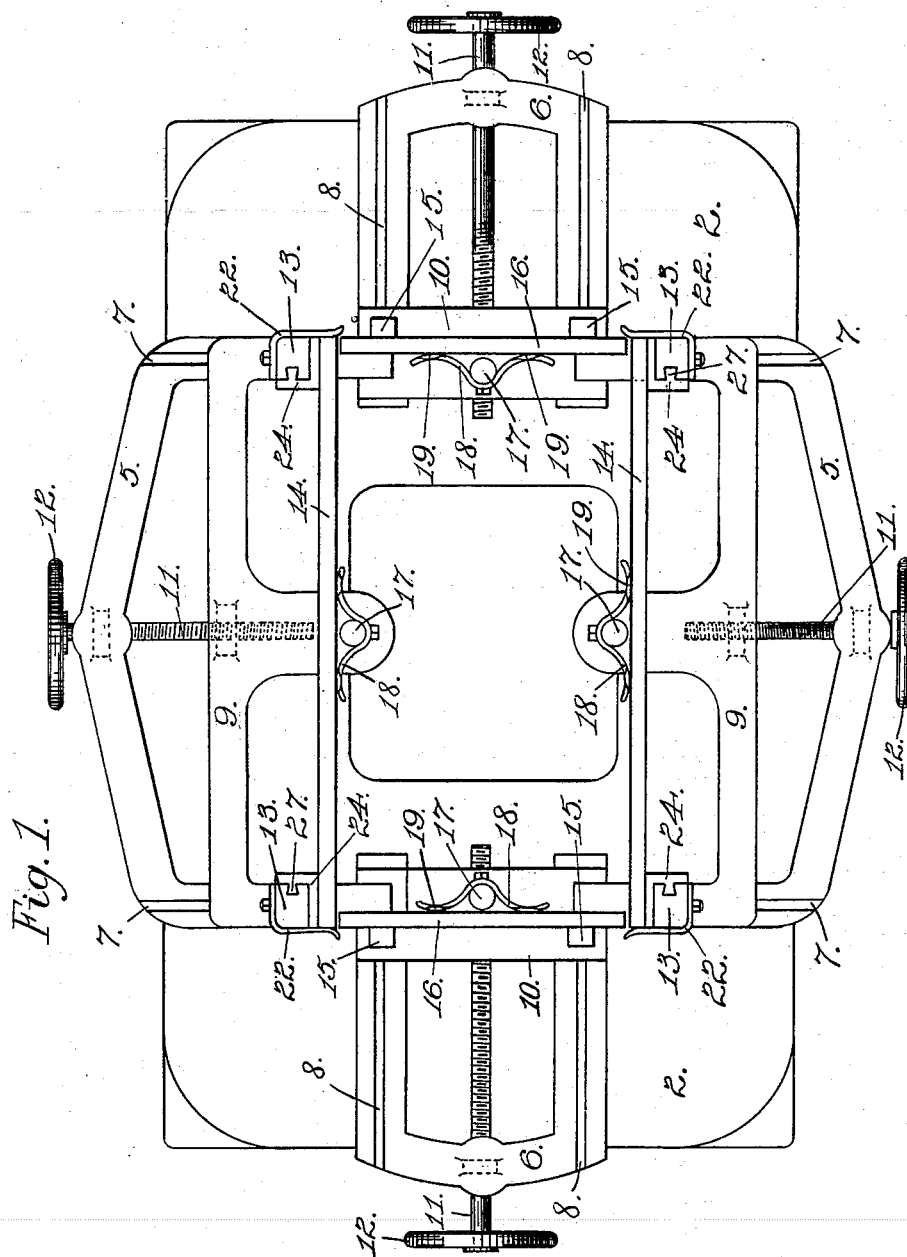


C. CRISTADORO.
BOX PRESSING MACHINE.

(Application filed May 5, 1894.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses:-
F. V. Brabury.
W. C. Swift.

Inventor:
Charles Cristadoro.
per: T. D. Martin
Attorney.

C. CRISTADORO.
BOX PRESSING MACHINE.

(Application filed May 5, 1894.)

(No Model.)

2 Sheets—Sheet 2.

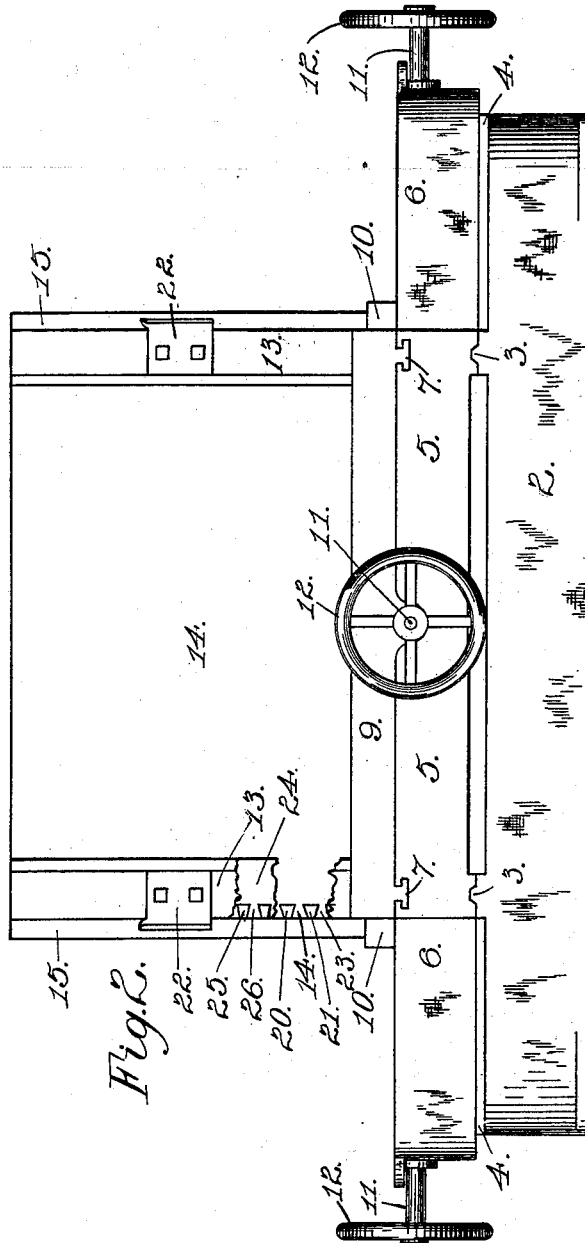


Fig. 2.

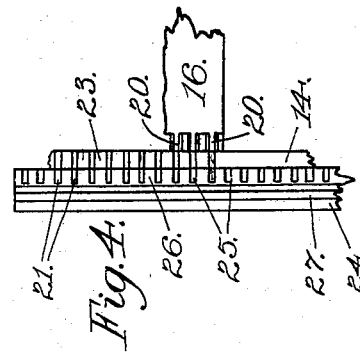


Fig. 4.

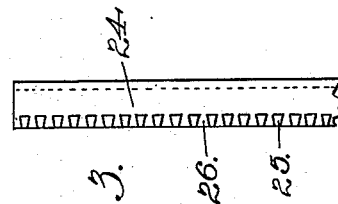


Fig. 3.

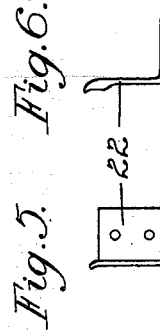


Fig. 5. Fig. 6.

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UNITED STATES PATENT OFFICE.

CHARLES CRISTADORO, OF ST. PAUL, MINNESOTA.

BOX-PRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 650,146, dated May 22, 1900.

Application filed May 5, 1894. Serial No. 510,136. (No model.)

To all whom it may concern:

Be it known that I, CHARLES CRISTADORO, of St. Paul, Ramsey county, Minnesota, have invented certain Improvements in Box-Pressing Machines, of which the following is a specification.

My invention relates to improvements in "box-pressing machines," so called, its object being to provide improved means for holding the pieces of the box in proper position and alinement for being closed together; and to this end it consists in providing spring-clamps for engaging and pressing the box-pieces against the stops for holding them in position, and in also providing spring-clips for engaging the ends of the side pieces to hold them from longitudinal displacement, and in providing suitable pressure-plates or other supports for the mortised ends of the side pieces to prevent breaking of the portions between the mortises when the tenons on the end pieces are forced into the same.

My invention further consists in the construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of my improved machine. Fig. 2 is a side elevation of the same. Fig. 3 is an inside elevation of a portion of one of the pressure-plates. Fig. 4 is an end elevation of the same having the portions of a side and end of a box as they would appear before being pressed together, and Figs. 5 and 6 are an end elevation and plan view of one of the end spring-clamps.

In the drawings, 2 represents the frame of the machine, having the transverse tracks or guides 3 and the similar longitudinal tracks or guides 4, on which slide the side and end carriages 5 and 6, as driven by power suitably applied thereto for closing together the box-pieces. Upon the transverse and longitudinal guides or tracks 7 and 8 in the tops of the carriages 5 and 6 are mounted the side and end box-piece holders 9 and 10, adjusted to the length of said pieces by the screws and hand-wheels 11 and 12. The holders 9 are provided with vertical end posts 13 for supporting the side box-pieces 14 and holding them from outward displacement. Similar posts 15 are arranged upon the holders 10 for

supporting the box end pieces 16. These pairs of posts are arranged with their inner faces exactly parallel, so as to hold the pieces 14 and 16 of the box in a quadrilateral position, and on the inside of each pair of posts, and preferably midway between them, are the posts 17, which are provided with spring-clamps 18, having their tops 19 slightly out-turned, so that the box-pieces may be guided down between the posts and there held against the outer posts by the pressure of the springs. The end pieces 16 have their ends formed with tenons 20, while the side pieces 14 have corresponding mortises 21 in their ends to receive the tenons. It is therefore necessary that the mortises in the ends of the side pieces 14 shall be exactly in line with the corresponding tenons, so that the tenons can exactly enter them. To accomplish this, I arrange on the posts 13 the spring-clips 22, which are so arranged as to engage the ends of the side pieces when in position and hold them exactly in line with the end pieces.

In order to support the portions 23 between the mortises 21 on the ends of the side pieces to prevent their being broken or enlarged by the tenons 20 on the end pieces 16, I arrange on the posts 13 the pressure-plates 24, having notches 25 and intermediate portions 26, corresponding to the mortises 21 and portions 23 of the side pieces. These plates are preferably held in place on the post by means of dovetail ribs 27, fitting in corresponding vertical grooves in the posts 13. This makes it possible to remove a pressure-plate and substitute another of different-sized mortises or notches to suit different classes of work.

In operation an opposite pair of box-piece holders are arranged in exactly proper position for the length of the box to be formed and the second pair of holders are arranged in position to receive the pieces which stand just beyond or outside of the ends of the other pieces. (See Fig. 1.) The holders being in this position, the end and side pieces are placed therein and held by the spring-clamps. That pair of the carriages the holders on which support the box-pieces having mortises in their ends are then driven in either by hand-wheels or other suitable power, (not shown,) causing the tenons upon the end pieces to enter the mortises in the side pieces and the

pieces to be closed tightly together, when they are removed from the machine and other pieces substituted for repeating the operation.

5 I claim—

1. In a box-pressing machine, the combination with the clamping mechanism, of the standards for the outer support of the box-pieces and the spring-clips engaging the ends
10 of the mortised pieces and holding their mortises in alinement with the tenons of the other pieces.

2. In a box-pressing machine, the combination with the clamping device, of the standards carried thereby and serving as outer supports for the ends of the box-pieces, the spring-fingers adapted to bear upon the inner face of said box-pieces, the spring-clips engaging the
15 ends of the mortised pieces, the standards for said mortised pieces being correspondingly mortised whereby the walls between the mortises thereof serve as supports for the portions between the mortises of the box-piece.

3. In a device of the class described, the combination with the pair of oppositely-arranged adjustably-fixed clamps adapted to carry the tenoned pieces of stock, of the pair of oppositely-arranged traveling clamps
20 standing at right angles with the first-named clamps and adapted to carry the mortised

pieces of stock, the stock-supporting standards, and the spring-clips secured to and partially surrounding said standards, standing with their faces in line with the stock-pieces in the fixed clamps, and adapted to bear upon
35 the ends of the stock-piece in the clamp whereby the mortises therein are guided into engagement with the tenons upon the other stock-pieces.

4. In an apparatus of the class described, the combination of the adjustably-fixed clamps carrying the two opposite tenoned stock-pieces, and the traveling, oppositely-arranged clamps adapted to carry the mortised stock-pieces, the stock-supporting standards upon
40 said last-named clamps, the socketed faceplates upon said standards corresponding with the mortises in the stock-piece, the spring-clips secured to, and partly surrounding said standards, and projecting beyond
50 the fixed clamps, and in line with the pieces carried thereby, and adapted to bear upon the ends of the mortised stock-piece.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES CRISTADORO.

Witnesses:

T. D. MERWIN,
H. S. JOHNSON.