

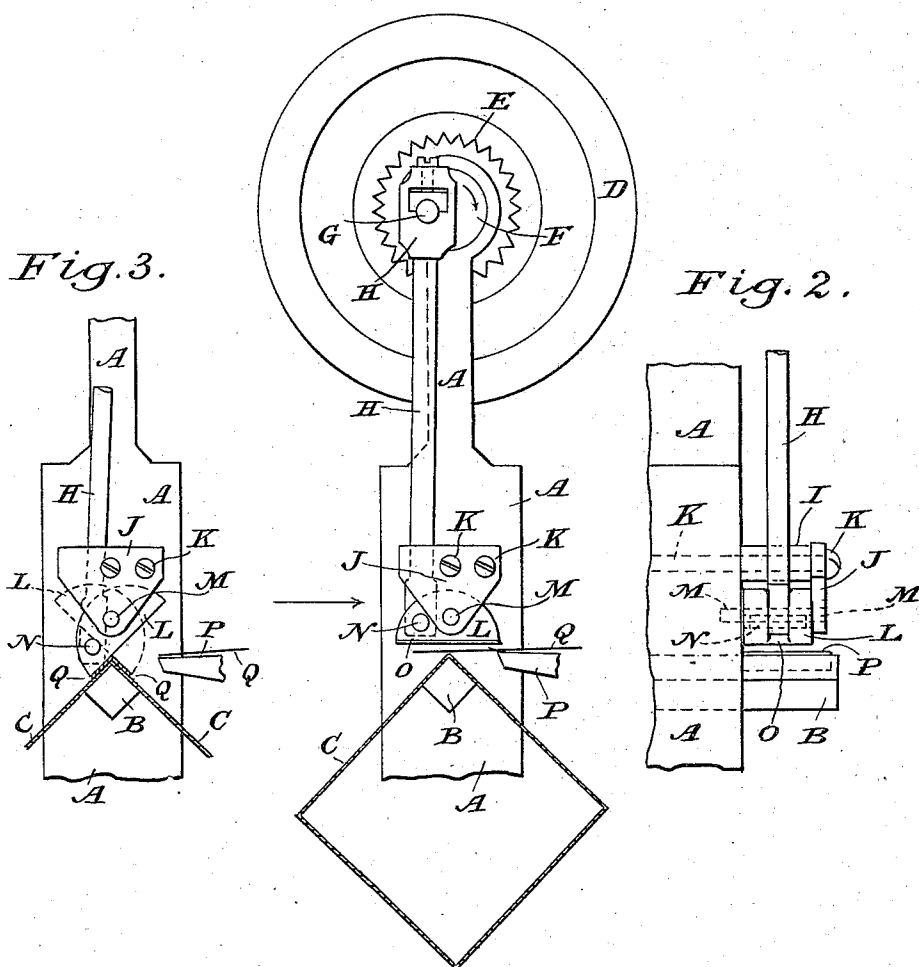
(No Model.)

H. INMAN.
BOX STAYING MACHINE.

No. 555,814.

Patented Mar. 3, 1896.

Fig. 1.



Witnesses:

E. B. Bolton
E. Simpson

Inventor:

Horace Inman

By Phillips Abbott

his Attorney

UNITED STATES PATENT OFFICE.

HORACE INMAN, OF AMSTERDAM, NEW YORK.

BOX-STAYING MACHINE.

SPECIFICATION forming part of Letters Patent No. 555,814, dated March 3, 1896.

Application filed January 23, 1896. Serial No. 576,538. (No model.)

To all whom it may concern:

Be it known that I, HORACE INMAN, a citizen of the United States, and a resident of Amsterdam, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Box-Staying Machines, of which the following is a specification.

My invention relates to improvements in box-staying machines; and it consists, generally stated, in the peculiar construction, arrangement and operation of those parts of the machine whereby the staying-strip is severed from the reel or ribbon and attached to the corners of the boxes.

In order that the general construction and operation of the machine may be more fully understood, I refer to United States Letters Patent, granted to me on the 9th day of April, 1895, No. 537,205, my present invention being applicable to a machine constructed and arranged as the machine therein described is; and I will, in this present application, illustrate and describe those parts only which specially appertain to it.

Referring to the drawings, Figure 1 illustrates an elevation of the parts of the machine immediately involved in this invention. Fig. 2 illustrates a sidewise elevation taken in the direction of the arrow in Fig. 1. Fig. 3 illustrates a diagrammatic sketch showing the rocking pressure-block and its two positions when in operation, one in dotted and the other in full lines.

In the drawings I do not illustrate the complete frame of the machine or of any of the mechanism, excepting that immediately involved in the invention, because they may be variously constructed, and also because, as above stated, the form shown in my Patent No. 537,205 may be taken as an example.

A represents a part of the frame; B, the anvil or support for the corner of the box; C, the box; D, the main driving-wheel; E, the clutch device; F, the main driving-shaft. All of these parts are or may be of any desired construction.

G is a wrist-pin set eccentric upon the shaft F.

H is a connecting-rod with which the wrist-pin G engages by means of a suitable journal-box, as shown.

I (see Fig. 2) is a square plate or block of metal having a triangular-shaped plate J fastened by screws K to its front end or side. These screws pass through the plate J, through the block I and enter the part A of the frame, as shown in Fig. 2, thus rigidly holding these parts in proper position.

L is what I call the "pressure-block," rocking transversely to the corner of the box. It turns on a pivot or axis M, which passes through the plate J, through the block L and enters the frame of the machine, as likewise shown in Fig. 2, and the connecting rod or pitman H is pivoted to this tilting block by a pin N, which passes through its lower end, and also engages with a lug formed on the side of the block, or, preferably, works in a recess made therein.

O is a steel plate fastened to the under side of the tilting block L. Its right-hand edge (see Fig. 1) is highly tempered and sharpened into the form of one blade of a shears.

P is the fixed blade of the shears, which is rigidly attached to any suitable part of the machine.

Q (see Fig. 1) represents the stray-strip, which is fed from any suitable source of supply in any of the ways now well known.

The operation of the apparatus is as follows: The timing of the machine is such that when it comes to rest the rocking block L also attains the position shown at Fig. 1, in which its under side is horizontal. The operator now picks up a box or cover blank and places the corner thereof over the apex of the anvil B in the usual manner. Thereupon the pedal or other starting-lever being operated, the machine feeds the stay-strip forwardly over the edge of the stationary knife P and thence over the upwardly-presented box-corner. Immediately after this feeding operation the shaft F commences its rotation in the direction of the arrow, (see Fig. 1,) whereupon the rocking block E is tilted into the position shown in dotted lines in Fig. 3, and as the sharp cutting-edge of the steel plate O on the under side of the block sweeps across the cutting-edge of this stationary blade P the engagement of the two edges act as a shears and severs the projecting portion of the stay-strip, and the engagement between the under side of the plate O and the cut-off piece of the

stay-strip is sufficient to maintain that cut-off piece in proper position, especially as the adhesive material or the dampness, if moisture alone be employed on the stay-strip to
 5 soften the adhesive material previously applied, tends to hold the severed piece in position over the corner of the box. The rocking block continuing to rock in the direction indicated, presses one-half of the stay-strip
 10 firmly down upon one side of the box-corner, as shown in Fig. 3, and the arrangement of the parts is such that its final pressure exerted upon the stay-strip is very great, so as to secure firm permanent tension of the stay-
 15 strip to the box-corner. When this has taken place, the rod II is shifted over to the other side of the shaft having passed the upper center, and as the shaft continues to revolve it rocks the block L in the opposite direction,
 20 whereby the other—to wit, the left hand—end of the block is, in turn, brought down firmly upon the opposite side of the corner of the box, in its passage pressing the remaining half of the stay-strip firmly down upon said op-
 25 posite side of the corner, repeating practically the operation first described. The parts then return to their normal position, as shown in Fig. 1, and the machine is allowed to come to rest, whereupon the box is shifted, presenting
 30 another corner which is likewise stayed by a repetition of the above operations.

I do not limit myself to the details of construction shown and described, since it will be evident to those who are familiar with
 35 this art that modifications may be made therein and still the essentials of my invention be employed.

I claim—

1. The combination in a box-staying machine, of a support for the corner of the box,
 40 a rocking block located above said support and means to rock the block transversely to the support, for the purposes set forth.

2. The combination in a box-staying machine, of a support for the corner of the box,
 45 a rocking block located above said support, means to rock the block transversely to the support, and means to sever the stay-strip, for the purposes set forth.

3. The combination in a box-staying machine, of a support for the corner of the box,
 50 a rocking block located above said support, a cutting device attached to the block and which moves with it, a stationary cutter located adjacent to the path thereof, and means
 55 to rock the block transversely to the support, for the purposes set forth.

4. The combination in a box-staying machine, of a support for the corner of the box,
 60 and a rocking block actuated by the machine, which presses the stay-strip first on one side of the corner of the box, and then upon the opposite side, for the purposes set forth.

5. The combination in a box-staying machine, of a support for the corner of the box,
 65 and a combined rocking block and cutter which severs the stay-strip and presses it on one side of the corner of the box, and then upon the other side thereof, for the purposes set forth.

6. In a box-staying machine, the combination of a combined rocking block and cutter,
 70 a stationary cutter adapted to engage with said first-named cutter, a support for the corner of the box, and means to rock the block to first sever the stay-strip and press it on
 75 one side of the corner of the box and then upon the other, for the purposes set forth.

Signed at New York, in the county of New York and State of New York, this 17th day
 80 of January, A. D. 1896.

HORACE INMAN.

Witnesses:

PHILLIPS ABBOTT,
 E. SIMPSON.