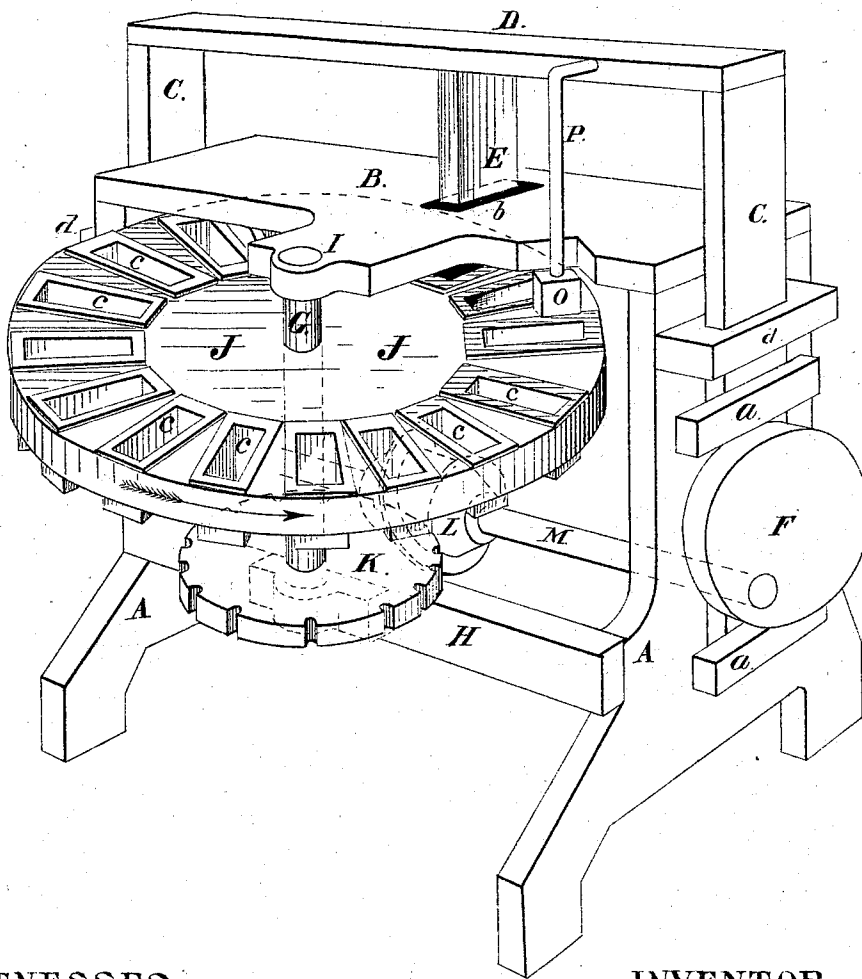


G. CONKLING, Jr.

Machines for Making Paper Boxes.

No. 150,940.

Patented May 19, 1874.



WITNESSES.

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GURDON CONKLING, JR., OF BROOKLYN, ASSIGNOR TO MAXFIELD BOX-MACHINE COMPANY, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR MAKING PAPER BOXES.

Specification forming part of Letters Patent No. 150,940, dated May 19, 1874; application filed January 2, 1874.

To all whom it may concern:

Be it known that I, GURDON CONKLING, Jr., of Brooklyn, Kings county, New York, have invented certain Improvements in Machines for Making Paper Boxes, of which the following is a specification:

My invention relates to machines for making paper boxes, in which the box is formed from a blank by means of a former and die, and introduced into a receiver the shape and size of the boxes, for holding the parts of the box together until the adhesive material to retain the parts is sufficiently dried; and the invention consists in a novel construction, combination, and arrangement of parts, which have for their object to improve the operation of the machine.

The drawing represents a perspective view of the parts of the machine embodying my improvements and immediately connected therewith.

A is the side frame; B, the table, which carries and supports the mechanism for gumming the blanks, picking them up, delivering them to the forming devices, &c. C C are two upright bars, which slide in the guides *d d*, and are connected at their upper extremities by the cross-bar D, from the under side of which, and midway of its length, projects the plunger E. This plunger has a reciprocating motion imparted to it by the eccentrics F, and at each descent it passes into the throat *b* in the table, in which throat are situated the dies for folding up the sides of the box. From the rear end of the table extends a bearing, I, and under this is a bar, H, secured to the side frames. These two bearings carry and support the perpendicular shaft G, near the upper extremity of which a wheel or disk, J, is secured at right angles to the shaft, and at the other or lower end of the shaft is keyed a disk, K, notched on its circumference, into which notches the worm L on the shaft M gears; and at each revolution of the shaft M (which also carries on its extremities the eccentrics F) the wheel J is rotated a short distance. This wheel J is, at its circumference, provided with a series of receivers, *c c c*, and each time the plunger E descends through the throat *b* and die it forms up a blank into a box, and

enters it into one of the receivers *c*. The wheel J turns from left to right, as shown by the arrow, and a box introduced into the receptacle immediately under the plunger E is carried around by the intermittent motion of the wheel till it is brought immediately under the ejector O, attached to the downwardly-projecting bar P, secured to the cross-bar D. Here the box, which is by this time sufficiently set to retain its form, is ejected from the receptacle *c* by a downward stroke of the ejecting-plunger O; and it will be observed that, the former E and the ejector O being on the same bar D, they descend together, the former to form up a blank into a box, and introduce it in the receptacle *c*, and the latter to eject the completed and dried box from the receptacle.

The receivers *c c* are made detachable from the wheel, so that different-sized series can be employed for different sized and proportioned boxes.

It will be understood that the proper relationship as to time must be observed in the construction of the machine, and the operation of forming and discharging a box will be as follows: The blanks are first properly gummed and delivered to nippers, which carry them over the mold or dies and hold them until the plunger descends and folds the sides of the box, and, passing it through the dies, introduces it into the receiver *c* below; the plunger is then withdrawn, and the operation repeated for successive boxes, and when the receivers with boxes come under the discharging-plunger O, their contents will be automatically removed. All these movements must be timed to each other by means of cams or other well-known means.

I claim—

1. In combination with a stationary mold or die and former, E, for forming the box, the disk-receiver, to take the boxes from the former and carry them forward to dry, constructed and operated substantially in the manner and for the purpose described.

2. The combination, with a fixed mold or die and former for forming the boxes, and a disk-receiver for receiving the boxes from the former, of a discharging-bar, to remove the

boxes from the receiver when dried, constructed and operating substantially as described.

3. The discharging-plunger O, so constructed with the former E and cross-head D that, while a box is formed and entered into the receiving-disk, a completed box shall be discharged from the receiver, substantially as described.

4. The combination, with the receiving-disk

J, of detachable receivers *c c*, constructed and operating substantially in the manner and for the purpose specified.

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Witnesses:

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