E. E. Clarke.

Pasteboard Cutting Mach.

No. 46,522. Patented Feb. 21, 1865.

Fig. 1.

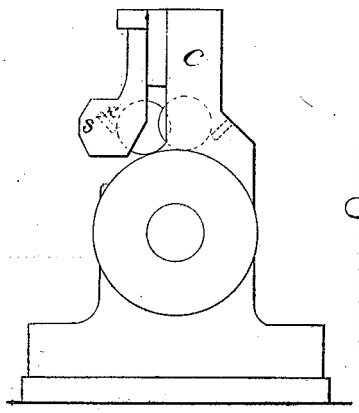


Fig. 2.

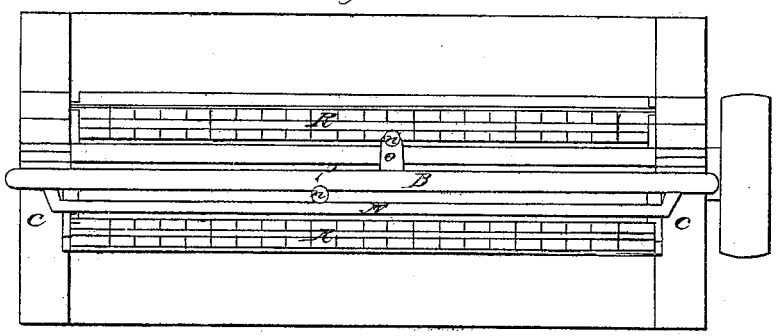


Fig. 3.

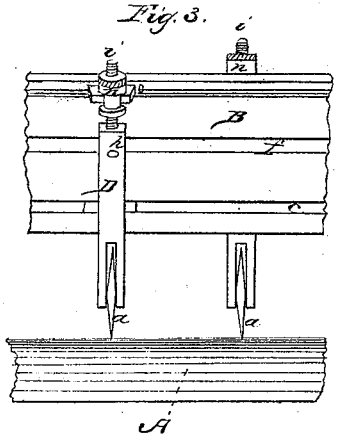


Fig. 4.

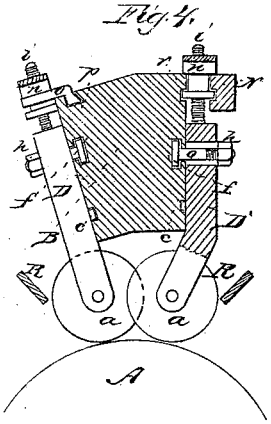


Fig. 5.

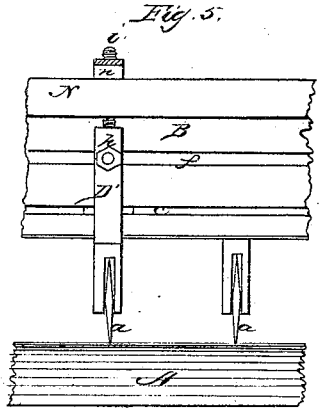


Fig. 6.

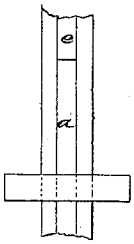


Fig. 8.

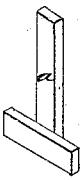
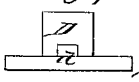


Fig. 7.



Witnesses.

S. R. Dickson

John E. Earle

Inventor:

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UNITED STATES PATENT OFFICE.

ELIZUR E. CLARKE, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO FRANKLIN N. CLARKE, OF SAME PLACE.

MACHINE FOR CUTTING PASTEBOARD FOR BOXES.

Specification forming part of Letters Patent No. 46,522, dated February 21, 1835.

To all whom it may concern:

Be it known that I, E. E. CLARKE, of New Haven, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Machine for Cutting Pasteboard for Boxes; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, when taken in connection with the accompanying drawings and the letters of reference marked thereon, and which said drawings constitute part of this specification, and represent, in—

Figure 1, an end view; Fig. 2, a plan or top view; Figs. 3, 4, and 5, sectional views of parts enlarged, and in Figs. 6 and 7 detached parts still more enlarged.

In the several figures the same letters and characters indicate the same parts.

My invention relates to improvements in the manner of holding and adjusting the cutters in the machine for cutting pasteboard for boxes, for which Letters Patent were issued to me bearing date the 3d day of March, 1857, and in even date herewith I have filed another application for other improvements.

My invention consists, first, in a new mode of constructing cutters without the employment of a cutter-stock, by combining with a cutter-bar having two side grooves and one top groove a cutter-holder slotted or grooved vertically for adjustment on a binding-bolt, and a horizontally-sliding stud made in the form of a cross or T, + T, so that the head or horizontal part is embedded and moves in the groove in the bar, while the vertical part is located and moves in the groove in the cutter-holder, together with sliding fork and collar-nut; secondly, in a cutter with its several parts the same as the next above referred to, but whose adjustment is effected by a third groove in the side of the cutter-bar, a corresponding groove being made in a horizontal beam or cap attached to the cutter-bar at its two ends so as to form a suitable space between for the groove of the screw-nut; thirdly, in the manner hereinafter described of suspending or placing a rule or scale in a suitable position in relation to the edges of the cutters for the purpose of accurately measuring and guiding in the horizontal adjustment of the same.

To enable others skilled in the art to make and use my improvements, I will proceed to describe the construction and operation of the same.

A is the cutter-roll; B, the cutter-beam, supported at each end by standards C C.

I represent in Fig. 4 two cutter-holders, one, D, straight and inclined, the other, D′, bent, in order to bring the cutters *a a* into the proper position on the cutter-roll, but am not confined to either form, as both may be straight and inclined, as D, or both bent, as D′, or either one inclined and the other bent, it only being a matter of change in the form of the beam.

To fasten the cutter-holders to the beam I make a groove, *c*, in the sides of the beam, into which I place a T-shaped guide, *d*. (See Figs. 6 7 8.) The tail of the T lies upon the side of the beam, and projects wholly therefrom. I make a groove, *e*, in the cutter-holder D, (see Figs. 6 and 7,) to fit and set over the tail of the guide *d*. This keeps the cutter-holder perpendicular. I make a second groove, *f*, T-shaped, into which I set the head of a bolt, *g*. The said bolt extends out through a slot in the cutter-holder D. I turn a nut, *h*, onto the bolt and down hard upon the cutter-holder, which binds the holder securely to the beam, and when I wish to change the position of the cutter I loosen the nut *h* and slip the cutter-holder, and with it the bolt *g* and guide *d*, to the position desired, and again turn down the nut to secure the holder in that position.

To raise or lower the cutter, as it is required to do to partially or entirely cut through the pasteboard, I form a screw, *i*, upon the top of the cutter-holder, and on the said screw I place a nut, *n*, its upper edge milled for convenience in turning, and I make a groove around the said nut, which sets into a forked piece, *o*, (see Fig. 4,) projecting from the beam and held in a dovetail groove, *p*, on the beam, so that the said fork *o* may be moved freely along the beam. By turning the nut *n* down upon the screw the nut will rest upon the fork *o*, and consequently draw the cutter-holder up, or, if to force the holder down, reverse the operation; or, as shown for the adjustment of the cutter-holder D′, Fig. 4, I make the nut *n* the same as I have described for the holder D, but instead of the fork I make a groove in the beam, forming the lip *r* to fit the groove in

the nut, and place a bar, N, constructed with a similar groove and lip, outside of the nut and parallel with the beam. By turning the nut, as before described, to adjust the holder D the same results, will be accomplished.

For convenience of adjusting the cutters for cutting different widths, I place measures R, (see Figs. 2 and 4,) supported in proper guides, *s*, upon one side, and guides on the standards to support the one upon the other side. (See Fig. 1.) This arrangement brings the measures very near the cutter, so that they may be set with the utmost accuracy.

The graduated scale or rule may be placed on top of the cutter-bar, and, for the purpose of accurately measuring the distances between the cutters, the cutter-stocks may be provided with index-marks or pointers.

Having fully described my invention, what I claim therein as new and useful, and desire to secure by Letters Patent, is—

1. The method of holding and adjusting the cutter without the employment of the cutter-stock by combining with the cutter-bar, having two side grooves and one top groove, a cutter-holder slotted or grooved vertically for adjustment on a binding-bolt, and horizontally-sliding cross or T stud, together with the horizontally-sliding fork and collar-screw for the vertical adjustment of the cutters, substantially as set forth.

2. The attachment to the cutter-bar of the parallel or horizontal beam or cap set at a distance apart to admit of the groove of the screw-nut, in combination with grooves in both the said cutter-bar and beam to admit of the collar of the screw-nut, the whole being arranged for operation substantially as set forth.

3. The mode herein described of locating and holding a rule or scale in its proper relation with respect to the cutters by combining with the cutter-bar and uprights brackets or the equivalents thereof in the manner substantially as hereinbefore shown and described.

ELIZUR E. CLARKE.

Witnesses:

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