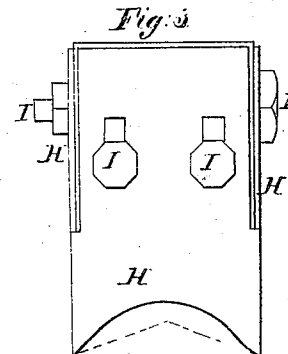
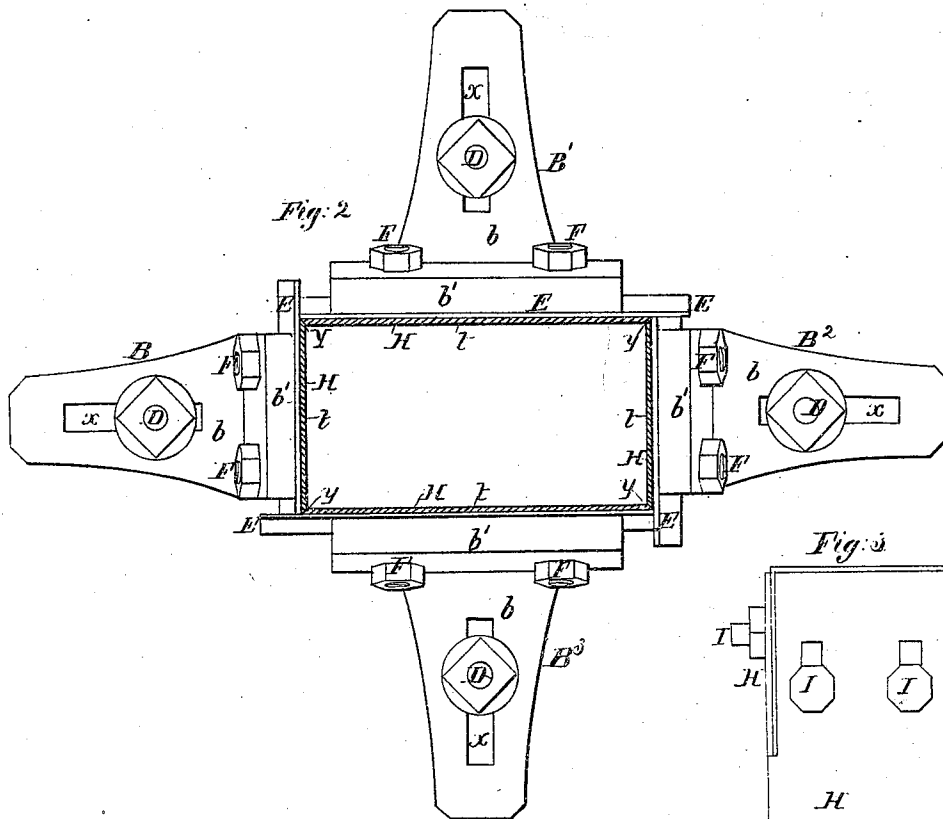
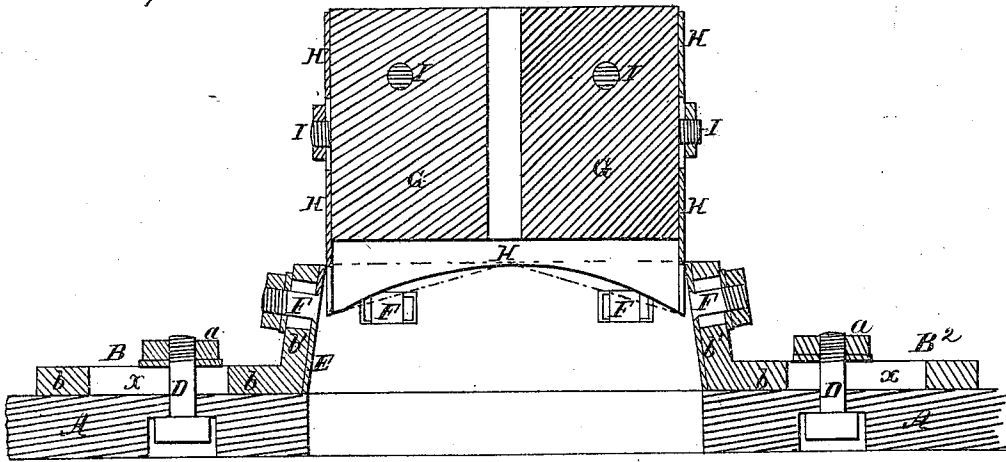


L. Knickerbocker
Mach. for Cutting Cardboard.
N^o 38750 *Patented Jun. 2. 1863.*



Witnesses;
Charles E. Foster
W. Albert Steel

Inventor;
Henry Howson
Atty. Gen. Knickerbocker

UNITED STATES PATENT OFFICE.

LAFAYETTE KNICKERBOCKER, OF PHILADELPHIA, PENNSYLVANIA.

APPARATUS FOR CUTTING CARD-BOARD.

Specification forming part of Letters Patent No. 38,750, dated June 2, 1868.

To all whom it may concern:

Be it known that I, LAFAYETTE KNICKERBOCKER, of Philadelphia, Pennsylvania, have invented certain Apparatus for Cutting Card-Board; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists of apparatus, fully described hereinafter, for cutting openings in card-board, such as the openings in the sheets of photographic albums, the apparatus being also applicable to the cutting of cards from sheets, the object of my invention being to sever the card-board with a shearing effect, so that the severed edges may be clean and well defined.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 represents a vertical section of my apparatus for cutting out card-board; Fig. 2, a plan view, and Fig. 3 an end view of part of the apparatus.

Similar letters refer to similar parts throughout the several views.

A represents the base-plate or table, which supports the stationary portion of the apparatus, and to this table are secured the four plates B, B', B², and B³, each plate consisting of the horizontal portion *b* and inclined portion *b'*. Each plate is secured to the table by a bolt, D, passing through an oblong slot, *x*, in the plate, so that the plate may admit of ready adjustment, and may be secured after adjustment by the nut *a* of the bolt.

To the inclined portion *b'* of each plate B is secured a steel plate, E, by a bolt, F, having a beveled head, adapted to a countersink in the steel plate, so that the outer end of the head of the bolt and surface of the plate may be in the same plane, the bolt passing through an oblong slot in the inclined portion *b'* of the plate B, so as to be adjustable vertically to a limited extent.

It will be seen on reference to Fig. 2 that the four steel plates E are arranged one at right angles to the other, so as to inclose an oblong space, one end of one plate projecting beyond the end of the adjacent plate, so that the dimensions of the space inclosed by the

steel plates may be increased or diminished at pleasure by simply adjusting the plates B.

G is an oblong block of hard wood or metal, to be attached to the platen of a press, or to any suitable mechanism, by means of which a vertical reciprocating motion may be imparted to the block, to each of the four sides of which is secured a steel blade by suitable bolts, which pass through oblong slots in the blades, so that the latter can be adjusted vertically.

The lower edge of each plate H is of the concave form represented in Figs. 1 and 3, (or it may be of the angular form represented by dotted lines,) and is beveled from the inside, so as to be reduced to a sharp cutting-edge.

The four blades combined must present an oblong figure, precisely similar in dimensions to the oblong space inclosed by the steel plates E, so that the four blades will fit accurately within this space, as seen in Fig. 1.

It should be understood that, though the above-described apparatus is applicable to the cutting of cards from pasteboard, it has been more especially designed with the view of cutting from the pages of photographic albums the spaces required for the reception of photographs.

When the block G, with its blades, is raised high enough above the upper edges of the steel plates E, the sheet of card-board is placed on the top of the latter plates.

As the block G descends, the four corners *y* formed by the blades will be the first to come in contact with the card board, owing to the concave lower edges of the blades, and the card-board will be cut first by these corners. As the block continues to descend, the cutting of the card-board is continued with a gradual shearing effect, the last cut being accomplished by the portions of the knives indicated by the letters *t t t t*, Fig. 2.

When the block G has descended to the position shown in Fig. 1, a piece of card-board of a form and dimensions corresponding with those of the space inclosed by the steel plates E must have been cut from the sheet, and the severed piece must fall through the opening in the table A.

It will be seen that the gradual shearing action of the concave edges of the blades H, moving as they do in intimate contact with the upper edges of the steel plates E, must in-

sure a uniform cut, and the edge of the opening formed in the sheet of card-board must be of that clear and well-defined character so desirable in photographic albums.

The form of the opening cut in the card-board may be varied—as, for instance, like the openings with arched tops formed in the sheets of some photographic albums—by making one of the end plates, E, at a corresponding arched form, the blade H, which acts in conjunction with the curved plate, being of course similarly formed.

I claim as my invention and desire to secure by Letters Patent—

1. Cutting openings in card-board by means of plates E, arranged to inclose a space of the desired form and dimensions of the opening, in conjunction with the reciprocating block G,

or its equivalent, and the blades H, arranged in a form corresponding to that of the space, when the cutting-edges of the said blades are made of a concave or angular form, as described, for the purpose specified.

2. The steel plates E, secured to the adjustable plates B, and arranged in respect to each other, as described, so that the space inclosed by the plates may be increased or diminished at pleasure, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

L. KNICKERBOCKER.

Witnesses:

HENRY HOWSON,
JOHN WHITE.