

I. L. G. RICE.
PAPER CUTTING MACHINE.

No. 109,249.

Patented Nov. 15, 1870.

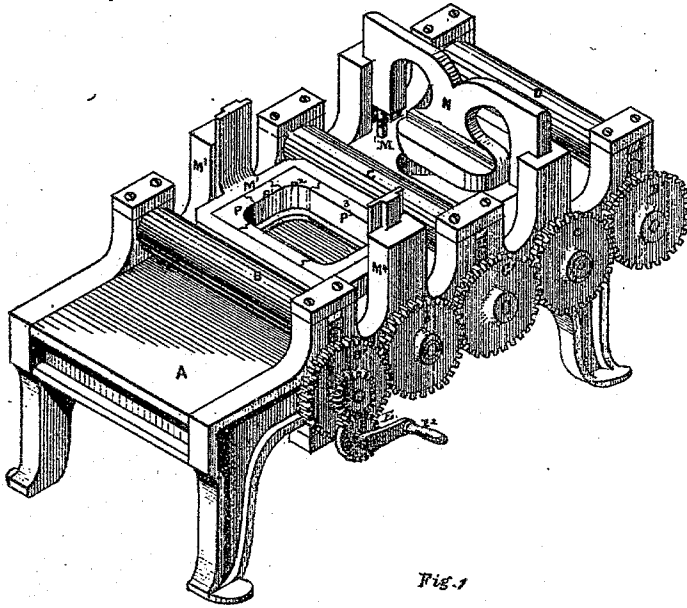


Fig. 1

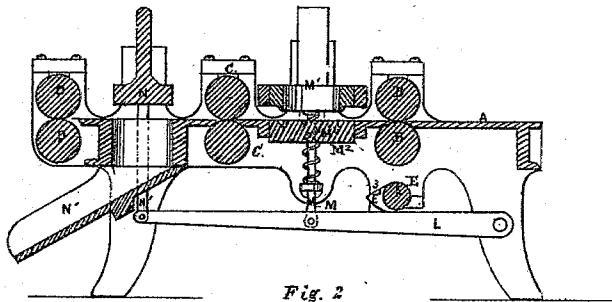


Fig. 2

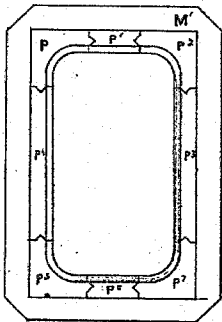


Fig. 3.

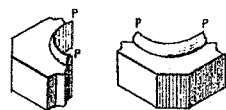


Fig. 4.

Fig. 5.

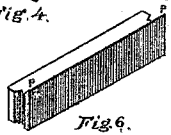


Fig. 6.

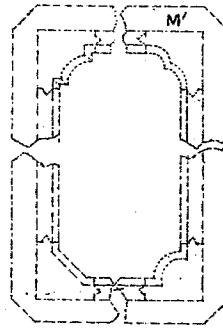


Fig. 7

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Letters Patent No. 109,249, dated November 15, 1870.

IMPROVEMENT IN PAPER-CUTTING MACHINES

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

I, ISRAEL L. G. RICE, of Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Cutting Cards, of which the following is a complete specification.

Nature and Object of the Invention.

The nature of my invention consists—

First, in the combination of a movable frame with a set of cutting-dies, each die having a knife-edge, which forms a part of the design to be cut. When a complete set of the dies is inserted in the frame, then the combined knife-edges form the design or outline which cuts the card. As these dies may be made interchangeable, it is evident that with a few sets of them a great variety of different-shaped cards may be cut.

Second, in the general arrangement and combination of the operating parts of the machine.

Description of the Drawing.

Figure 1 is a perspective view of the entire machine.

Figure 2 is a vertical section of the same.

Figure 3 is a plan, showing the under side of the cutting-frame and dies.

Figures 4, 5, 6 show, in perspective, parts of the cutting-dies as they appear when out of the frame.

Figure 7 is a plan of the frame in which dies of different designs are indicated by dotted lines.

General Description.

A represents the general frame of the machine, to which all of operating parts are attached.

B B, C C, D D are sets of feeding-rollers, arranged as shown, and driven by the train of gears B' b, C' c, D'.

The shaft E, fig. 2, may be driven by a crank, E', or by any suitable device.

This shaft E carries two cams, E', one of which is shown at fig. 2.

These two cams operate the levers L, one of which is shown at fig. 2.

M', figs. 1, 2, 3, and 7, is a frame for holding the cutting-dies P P' P'' P''', &c., fig. 3, and moves up and down in the slides M'' M''', fig. 1.

Motion is given to the cutting-frame M' by the rods M, fig. 2, which serve to hold the block upon which the cutting-dies work.

This block may be arranged so as to be movable, and to admit being suited to the form required by the cutting-dies.

N is a plunger, which is also operated by the levers L, it being connected to them by the rods N, fig. 2.

This plunger N serves to push out the card after it has been cut, and to send it into the slide N'.

The die-frame M is made of any suitable material, and in any desirable form, and is provided with screws S S S S, &c., or with some suitable device for fastening in the dies P P' P'' P''', &c.

In figs. 4, 5, and 6, I have shown some of the cutting-dies, the cutting-edges up.

The knife-edges of these dies are made of unequal height, so that they may cut shearingly.

In fig. 7 I have represented parts of the cutting-frame and dies of different styles to show some of the varieties that may be used in composing a cutting-die.

Claim.

I claim as my invention—

The combination consisting of the holding-frame M' and the interchangeable cutting-dies P P', &c., arranged substantially as described, and for the purpose set forth.

ISRAEL L. G. RICE.

Witnesses:

WILLIAM EDSON,
E. A. NICKERSON.