

(No Model.)

M. E. CHILDS.
MACHINE FOR PROVIDING PICTURE MATS WITH OVULAR OR ELLIPTICAL
OPENINGS.

No. 553,278.

Patented Jan. 21, 1896.

Fig. 1.

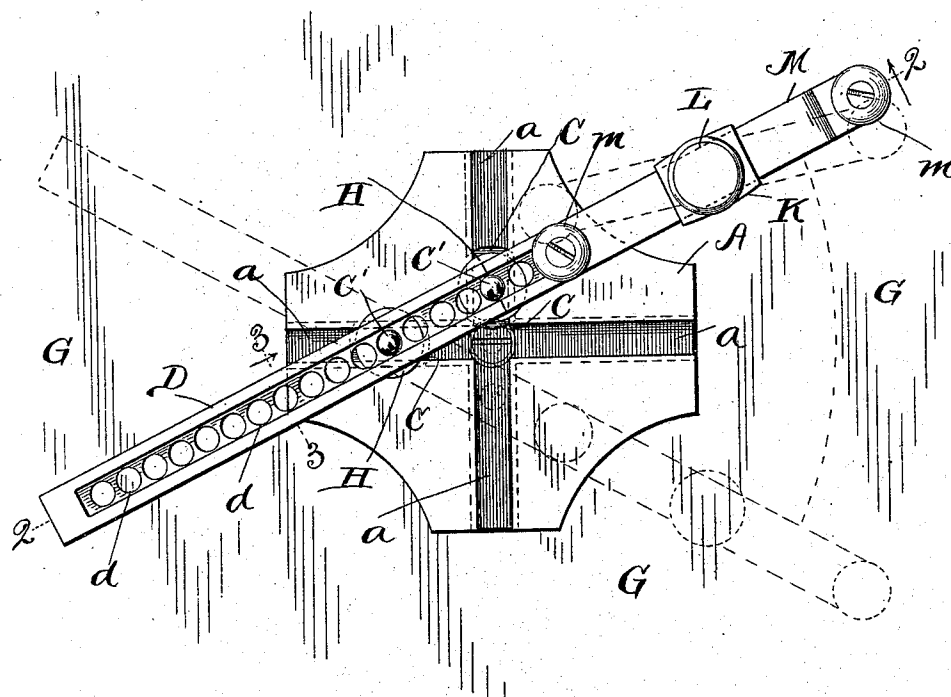


Fig. 2.

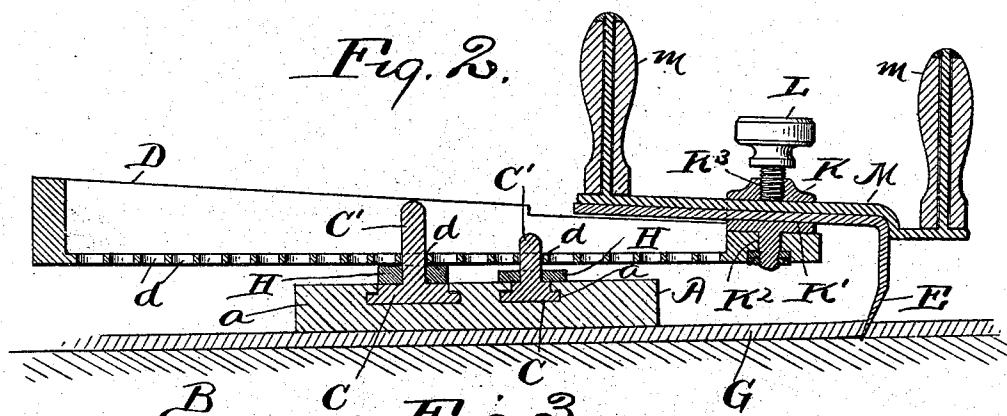


Fig. 3.



Witnesses.
E. B. Gilchrist
[Signature]

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Merrick E. Childs
By M. D. Seppelt & Co.
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UNITED STATES PATENT OFFICE.

MERRICK E. CHILDS, OF WEST-LIBERTY, IOWA.

MACHINE FOR PROVIDING PICTURE-MATS WITH OVULAR OR ELLIPTICAL OPENINGS.

SPECIFICATION forming part of Letters Patent No. 553,278, dated January 21, 1896.

Application filed September 11, 1894. Serial No. 522,698. (No model.)

To all whom it may concern:

Be it known that I, MERRICK E. CHILDS, of West Liberty, in the county of Muscatine and State of Iowa, have invented certain new and useful Improvements in Machines for Providing Picture-Mats with Ovular or Elliptical Openings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in machines for providing picture-mats with ovular or elliptical openings, the object being to construct a simple and durable machine for the purpose indicated—a machine that is capable of cutting different sizes of holes and that has means whereby the cutting-edge of the knife or cutter can at all times be retained in alignment with the ovular or elliptical cut to be made in the mat-board.

In the accompanying drawings, Figure 1 is a top plan of a machine embodying my invention. Fig. 2 is an elevation in section on line 2 2, Fig. 1. Fig. 3 is a section through bar D on line 3 3, Fig. 1.

The machine comprises a metallic plate A adapted to be secured upon a board or table B, which plate is provided with two slide-ways *a a* arranged at right angles to each other, said ways crossing each other at their central portion, and being open at their ends to accommodate the introduction of slides C C that are adapted to operate in said slide-ways. Slides C C are each provided with an upright post C' that engages a hole *d* in knife-bearing bar D, said bar being provided with a series of holes *d* arranged at short intervals lengthwise of the bar.

E designates the knife or cutter borne by and at one end of bar D, and the knife is secured to the bar in any approved manner.

The arrangement of parts is such that the knife or cutter borne by bar D, during the sweep of the latter in the operation of the machine, shall cut an ovular or elliptical hole in the mat-board G placed upon the table. The series of holes *d* with which the knife-bearing bar is provided renders the latter adjustable to enable the machine to cut larger or smaller holes in the mat-board.

A washer or collar H is shown mounted upon each post C' above plate A, the washer or collar upon the post located farther from the knife-bearing end of bar D engaging the opposing surfaces of bar D and the respective slide, (see Fig. 2,) whereas the collar on the post located nearer to the knife-bearing end of bar D is not as thick and does not engage said bar, and holes *d* in the bar are somewhat larger in diameter than posts C', by which features of construction the knife-bearing bar is capable of being tilted somewhat vertically to enable the knife or cutter to enter the mat-board a greater or less distance, as desired. The knife-bearing bar is preferably U-shaped in cross-section, as shown in Fig. 3, and holes *d* extend through the bottom or central member of said bar, and said central member, of course, not having such thickness as would interfere with the vertical play afforded to the knife-bearing bar. One of posts C' extends upwardly far enough into bar D to prevent any great lateral play of the knife-bearing bar.

An important feature of my invention consists in pivotally securing the knife or cutter to the knife-bearing bar in such a manner that the knife or cutter is capable of being moved laterally to enable the cutting-edge of the knife or cutter at all times during the operation of the machine to be retained in alignment with the ovular or elliptical cut to be made in the mat-board.

A preferable construction is shown in Fig. 2, wherein the shank of the knife or cutter extends through a hole K' in a clip or block K pivotally connected at K² to the knife-bearing bar, and the shank of the knife is adjustable endwise to bring the cutting-edge farther from or nearer to the adjacent end of the knife-bearing bar, and the knife or cutter is secured in the desired adjustment by means of a thumb-screw L that engages a correspondingly-threaded hole K³ in the clip or block K and engages a handle-bearing plate M that extends through hole K' and rests upon the shank of the knife or cutter, said plate being provided at each end with a handle *m*. Members E, K and M are secured together by means of thumb-screw L and are turned by means of handles *m* as required to

adjust the position of the cutting-edge of the knife or cutter relative to the line of cutting during the operation of the machine.

Referring again to collars H, I would remark that the collar that affords bearing for the central portion of the knife-bearing bar, and that is located farthest from the knife-bearing end of the bar, has such height or thickness as to locate the aforesaid bar the desired distance above plate A, and that the interposition between plate A and knife-bearing bar of the other collar H that is located nearer to the knife-bearing end of the bar is simply for the purpose of limiting the downward tilt of said end of the knife-bearing bar, and, of course, is not as thick as the washer that affords bearing for said bar, so as to accommodate a limited vertical tilting movement of the knife-bearing bar, but not as much play as the bar would have if said stop-forming washer or collar were not provided.

What I claim is—

1. In a machine for providing picture-mats with ovular or elliptical openings, the combination with the knife or cutter-bearing-bar, a clip K pivotally supported, as at K², from and at or near one end of said bar, a knife or cutter having its shank extending through

and suitably secured to the clip, and means for turning the clip upon its axis, substantially as and for the purpose set forth.

2. In a machine for providing picture-mats with ovular or elliptical openings, the combination with the knife or cutter-bearing-bar, a clip K pivotally supported, as at K², by and at or near one end of said bar and provided with a hole K', knife or cutter having its shank extending through said hole, handle-bearing-plate M extending through the same hole and resting upon the shank of the knife or cutter, a screw for securing the knife or cutter and handle-bearing-plate within the clip, and suitable means for guiding the knife-bearing-bar in the operation of the machine to cause an ovular or elliptical cut to be made in the mat-board, all arranged and operating substantially as shown, for the purpose specified.

In testimony whereof I sign this specification, in the presence of two witnesses, this 13th day of August, 1894.

MERRICK E. CHILDS.

Witnesses:

C. H. DORER,

L. WARD HOOVER.