

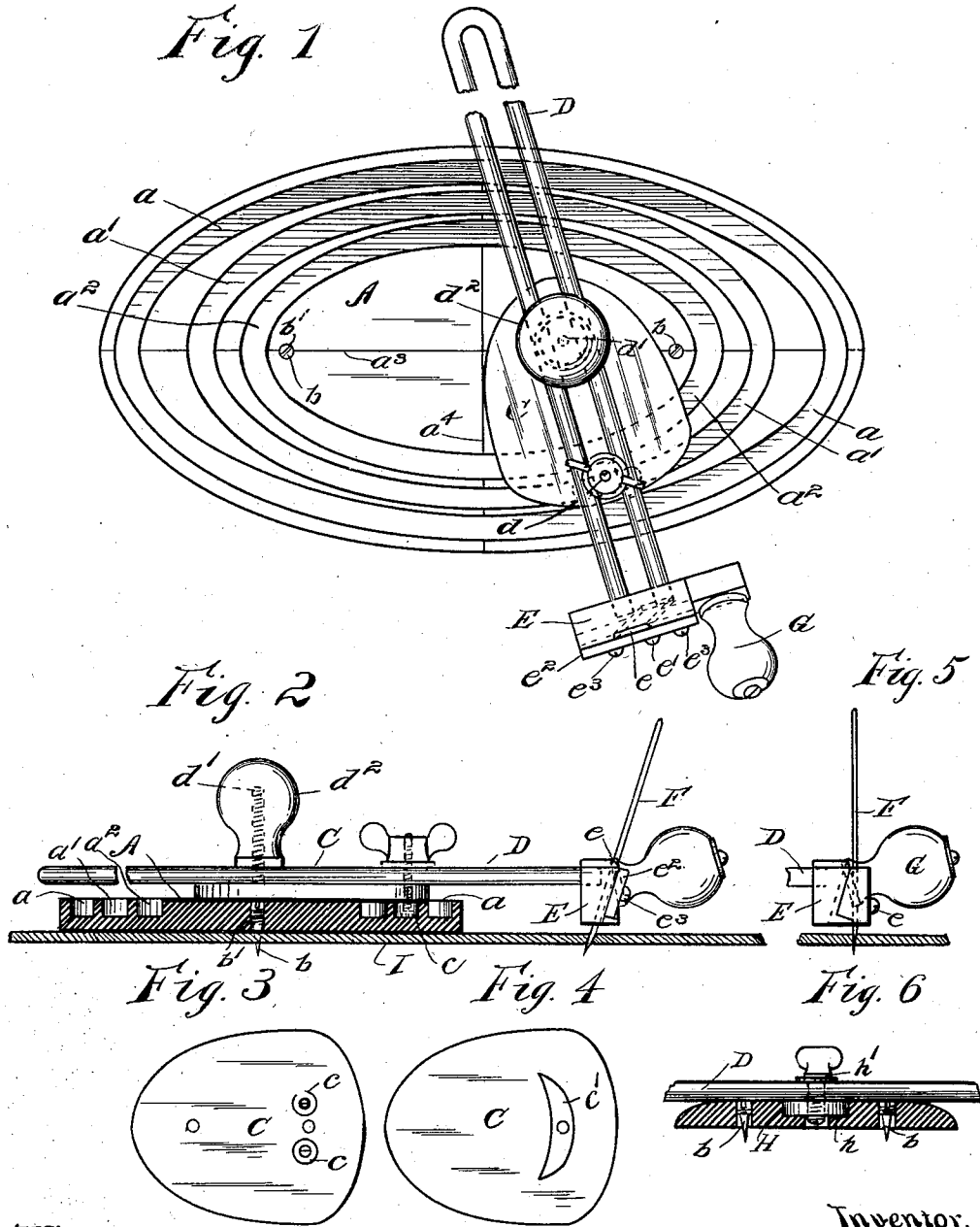
No. 701,828.

Patented June 10, 1902.

C. ARNOLD.  
MAT CUTTER.

(Application filed Nov. 4, 1901.)

(No Model.)



Witnesses:

*Roscoe A. Johnson.*

Inventor,

Charles Arnold

By *Glenn S. Noble*  
Att'y.

# UNITED STATES PATENT OFFICE.

CHARLES ARNOLD, OF CHICAGO, ILLINOIS, ASSIGNOR TO JOHN E. MACDONALD, OF CHICAGO, ILLINOIS.

## MAT-CUTTER.

SPECIFICATION forming part of Letters Patent No. 701,828, dated June 10, 1902.

Application filed November 4, 1901. Serial No. 81,039. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES ARNOLD, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Mat-Cutters, of which the following is a specification.

This invention relates to cutters used for general purposes, but more particularly for cutting out mats for pictures and the like. Its objects are to provide a device of this character which will cut out various forms, such as ovals and circles, which will be economical in construction, and which will be easily operated to do efficient work. It comprises the mechanism and various details which will be fully described hereinafter and illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of a device embodying this invention shown in operative position. Fig. 2 is a sectional elevation of the same. Fig. 3 is a bottom plan view of the traveling plate. Fig. 4 is a similar view showing a modified form of the same. Fig. 5 is a modified form of knife-holder. Fig. 6 is a detail of the circle-cutting attachment.

A represents a guide-plate of any suitable material, in which are formed the oval grooves  $a a' a^2$ , which may be, as shown, of dissimilar outline and of any desirable size. It is found convenient in practice to have a number of such plates of varying sizes to admit cutting a large variety of ovals with the same cutting mechanism. Lines  $a^3 a^4$  are marked across the top of the plate to indicate the long and short axis of the ovals for convenience in locating the same on the board to be cut. Holding-points  $b b$  are provided for securing the plate upon the board and are made adjustable by being threaded into tapped holes  $b' b'$  in the plate A.

C is a traveler-plate carrying the cutter-arm D. This plate rests upon the surface of the plate A and is guided in its movement thereon by two depending rollers  $c c$ , adapted to engage one of the grooves  $a a'$ , &c., and is so governed by them in its movement that the cutter-arm is always in a position substantially normal to the curve. Although preferable, these rollers may be dispensed with and a cam  $c'$  substituted, as shown in

Fig. 4. The cutter-arm D is shown as being formed of a bent wire or rod and is adjustably secured to the plate C by a set-screw  $d$  and a guide-screw  $d'$ , bearing a knob or handle  $d^2$ . At one extremity of the arm D is the knife-bearing block E, slotted at  $e$  to receive the knife F, which is securely held by a set-screw  $e'$  in the plate  $e^2$ , which is attached to the block by screws  $e^3$ . The slot is shown as being beveled in order to give the desired bevel to the cut-out in the mat; but I have shown in Fig. 5 a means for securing the knife in a vertical position and using the same block. A second knob or handle G is attached to the block E to operate and control the movement of the knife.

The attachment shown in Fig. 6 for cutting circles consists of the plate H, which is provided with the usual points for securing it on the mat and furnishes a pivot-bearing for the disk  $h$ , bearing the set-screw  $h'$ , which is adapted to engage with the cutter-arm D, as shown.

The invention is operated by securing the guide-plate in position upon the mat or board I, as shown in Fig. 2, with the traveler-plate engaging the desired oval groove and the cutter-arm adjusted for the size of oval required. The knife being set, the handles  $d^2$  and G are firmly grasped and the cutter-arm swung around thereby, always normal to the curve of the guide-oval, the knife meanwhile cutting out the desired oval in the mat. When circles are to be cut, the cutter-arm is detached from the traveler-plate and is secured to the pivot member shown in Fig. 6, when by simply revolving the knife the circle will be cut out of the mat.

It is readily seen that this invention may be applied for a variety of uses—as, for instance, cutting glass, in which case a glass-cutter is substituted for the knife—and it may also be varied in the details of construction without departing from the spirit thereof, which I do not wish to limit to the exact form shown; but

What I claim, and desire to secure by Letters Patent, is—

1. In combination, the guide-plate provided with oval grooves, a traveler-plate means for causing said plate to move in conformity with

said oval grooves and an arm rigidly secured to said traveler-plate.

2. A guide-plate provided with guide-grooves therein, a traveler-plate, rollers on  
5 said latter plate to engage said grooves, an arm rigidly and adjustably secured to said traveler-plate and carrying a cutter.

3. A guide-plate provided with grooves adjustable holding-points, a traveler-plate provided with rollers or equivalent means adapted  
10 to engage with said grooves, an arm ad-

justably secured to said traveler-plate, a slotted cutter-head on said arm, a knife adapted to engage with said slot, means for adjustably holding said knife and means, comprising a pair of handles, for operating said arm and cutter substantially as described. 15

CHARLES ARNOLD.

Witnesses:

J. E. MACDONALD,  
ROSCOE A. JOHNSON.