No. 684,035. Patented Oct. 8, 1901.

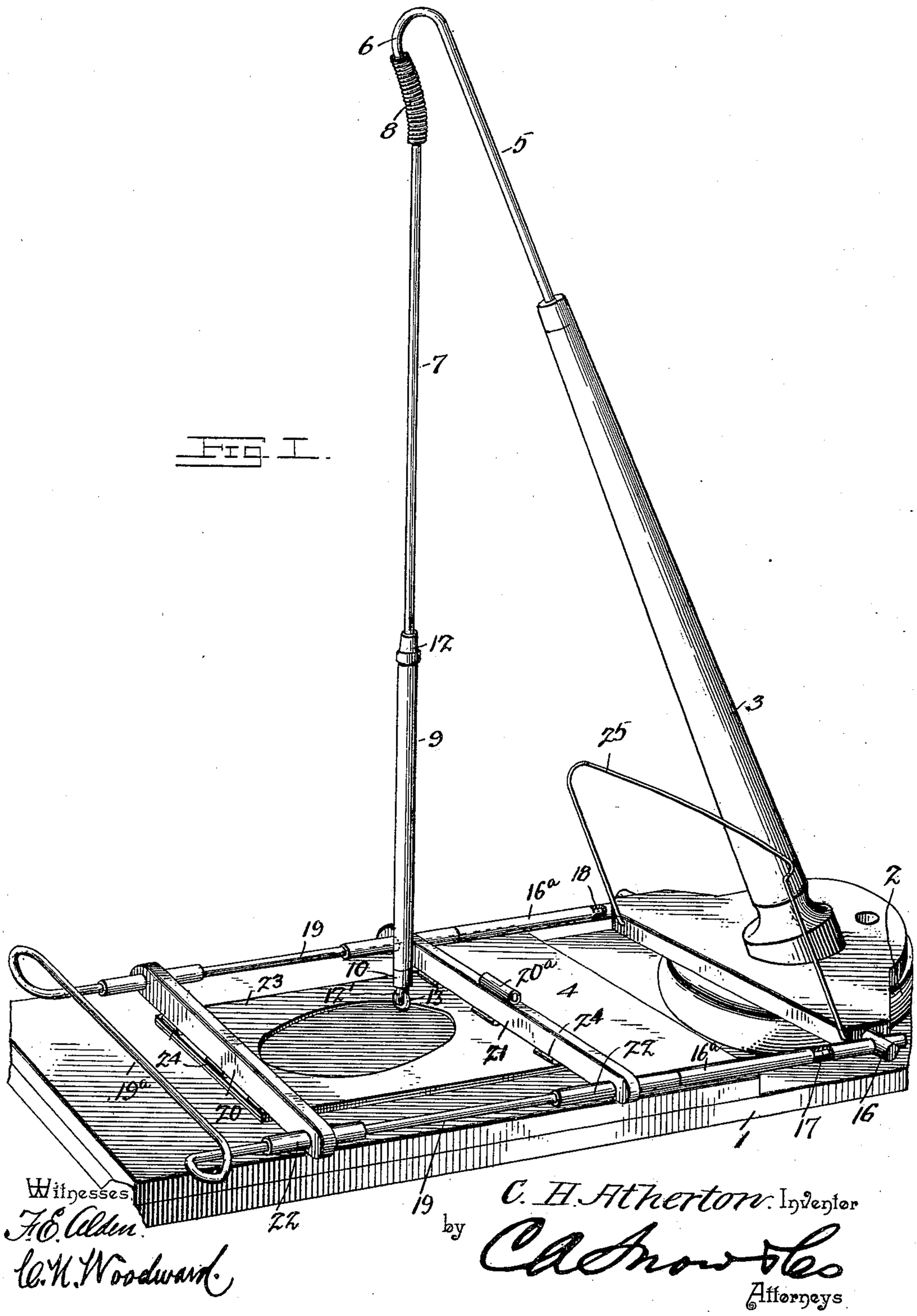
C. H. ATHERTON.

PICTURE AND PICTURE MAT FORM HOLDER AND CUTTER.

(Application filed June 8, 1901.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



Witnesses:
F. E. Alden.
C. H. Woodward.

C. H. Atherton. Inventor
by Church & Church
Attorneys

No. 684,035. Patented Oct. 8, 1901.

C. H. ATHERTON.

PICTURE AND PICTURE MAT FORM HOLDER AND CUTTER.

(Application filed June 8, 1901.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 5.

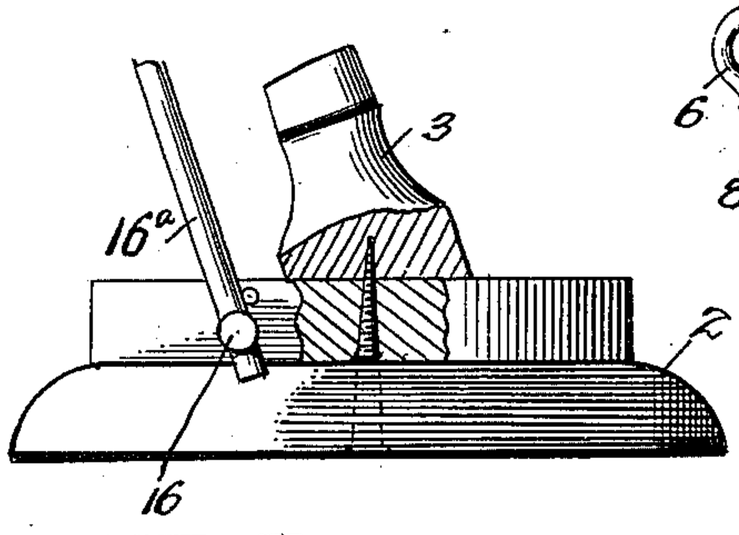
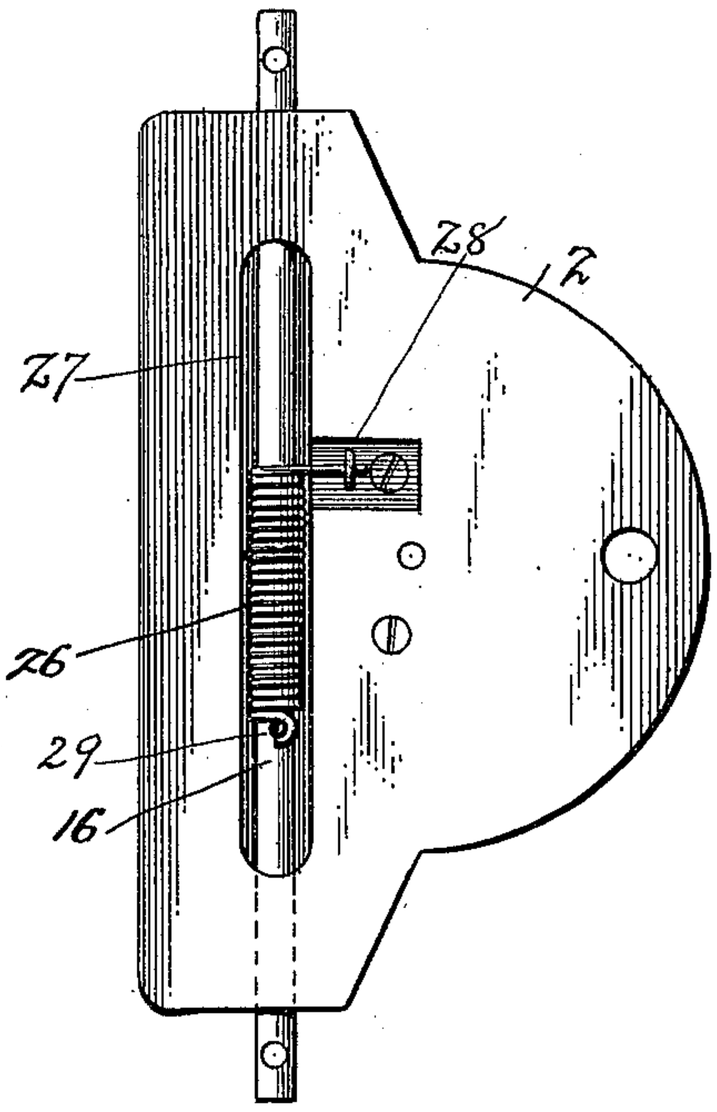


Fig. 4.



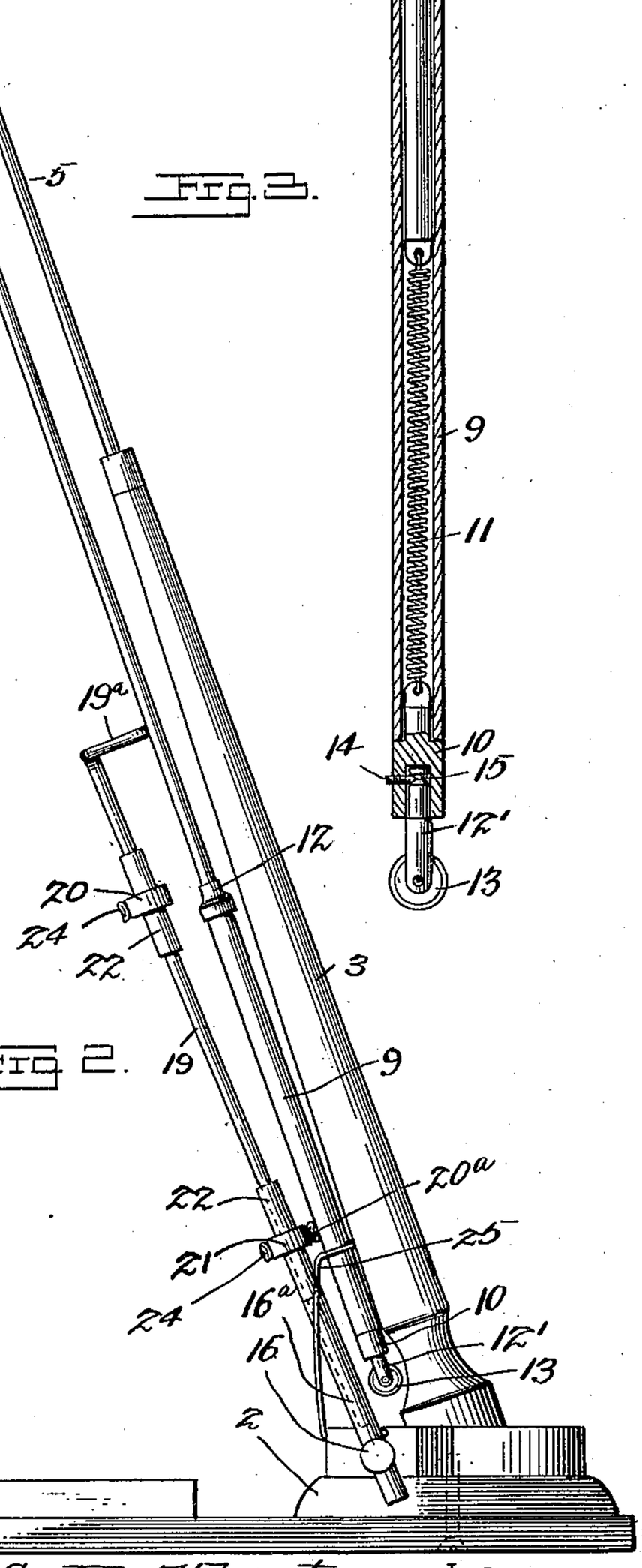


Fig. 2.

Fig. 3.

Witnesses
F. E. Aldew.
C. K. Woodward

C. H. Atherton. Inventor
by C. A. Snow & Co.
Attorneys

UNITED STATES PATENT OFFICE.

CLARENCE HARRISON ATHERTON, OF REED CITY, MICHIGAN.

PICTURE AND PICTURE-MAT-FORM HOLDER AND CUTTER.

SPECIFICATION forming part of Letters Patent No. 684,035, dated October 8, 1901.

Application filed June 8, 1901. Serial No. 63,826. (No model.)

To all whom it may concern:

Be it known that I, CLARENCE HARRISON ATHERTON, a citizen of the United States, residing at Reed City, in the county of Osceola and State of Michigan, have invented a new and useful Picture and Picture-Mat-Form Holder and Cutter, of which the following is a specification.

This invention relates to devices for holding the forms for picture-mats and pictures and for cutting the mats and pictures and for similar purposes; and it consists in the construction, combination, and arrangement of parts, as hereinafter shown and described, and specifically pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the apparatus complete. Fig. 2 is a side elevation of the apparatus folded up or out of use. Fig. 3 is an enlarged sectional detail of the adjustable operative end of the cutter-bar. Fig. 4 is an enlarged bottom plan view of the base of the device. Fig. 5 is an enlarged side view of the base and the lower end of the standard.

This device is capable of being applied to a variety of uses, such as cutting mats for pictures or cutting pictures or other similar articles into any irregular shape for which a pattern may be provided.

The device may be set upon any kind of a support 1, such as a stand or table, or upon a counter or other convenient place.

2 is a base fixed to the support 1 and having a standard 3 rising therefrom at an incline, as shown.

Supported upon the support 1, adjacent to the base 2, is a cutting-board 4, of any convenient size and which should be larger than the largest mat which it is designed to employ the device to cut. The upper part of the standard is preferably formed of a rod 5, having its upper end curved downwardly, as at 6.

7 is a rod connected by its upper end to the lower end of the curved end 6 of the standard by a flexible connection, such as a section of flexible shafting 8 or other suitable device, to permit the free end of the rod 7 to be moved about in all directions.

Encircling the lower or free end of the rod 7 and slidable thereon is a tubular sleeve 9. In the bottom of this sleeve is fitted loosely a plug 10, the plug being connected to the lower end of the rod 7, by a coiled spring 11 within the sleeve, as shown. By this means the plug 10 will be held in position in the lower end of the sleeve and the sleeve held normally in its upward position and capable of being moved downward upon the rod 7.

At the upper end of the sleeve 9 will be arranged a soft-rubber collar 12, adapted to engage the rod 7 and form a yieldable check or retarder to regulate the movement between the sleeve and rod and prevent the too free or too rapid action of the spring 11. In the bottom of the plug 10 is revolubly secured a stud 12′, and in the bottom of the stud is pivoted a cutting-wheel 13, as shown more clearly in Fig. 3. The stud 12′ may be secured revolubly in any desired manner, but preferably by a set-screw 14 in the plug 10 engaging a groove 15, encircling the stud 12 within the plug 10. The stud is thus free to revolve in the plug, but will remain connected therewith.

Journaled transversely through the base 2 is a shaft 16, and connected to the ends of this shaft outside the base are the lower ends 17 and 18 of a U-shaped frame, consisting of side bars 19 and upper or transverse member 19^a, the member 19^a being bent upward, as shown. Sections of tubing 16^a are secured in the ends of the shaft 16 to receive the ends 17 and 18 of the side bars 19, so that the side bars are connected slidably to the shaft, so that the frame may be adjusted with relation to the shaft 16 to lengthen or shorten it, when required, to adapt the frame to the size of the pattern of the mat to be cut.

Slidably disposed transversely on the side members 19 of the U-frame are two bars 20 and 21, each arm being preferably connected to a short section of tubing 22, which engages the bars 19, so that an extended bearing-surface is provided for the cross-bars to cause them to retain their positions relatively parallel upon the U-frame. These transverse bars 20 and 21 are to serve as holders to retain the pattern 23 for the mat in position upon the cutting-table 4 and will preferably be provided with small sections of rubber or felt 24 to render the holder slightly yieldable, so that the pattern will be held uniformly at all points.

25 is a wire loop-shaped guard-frame, preferably curved at the top and designed to form a stop to the rod 7 and its sleeve 9 when in their upward or folded position, as shown in Fig. 2.

Means will be provided for maintaining the U-frame in its upward position, as in Fig. 2, when not in use, and such a means is shown in Fig. 4, consisting of a coiled spring 26, encircling the shaft 16, within a recess 27 in the base 2, one end of the spring being attached to the base at 28 and the other end attached to the shaft 16 at 29. By this means the force of the spring is exerted to keep the shaft turned so as to keep the U-frame and its attachments normally in their upper or closed position, as in Fig. 2.

A strip of soft rubber or felt 20^a will preferably be attached to the cross-bar 21 to engage the sleeve 9, when the device is in its folded position, to protect the parts and prevent the abrasive contact of cross-bar 21 and the sleeve 9.

When thus constructed, the operation is as follows: The proper metal pattern 23 and the sheet or sheets of material from which the mats are to be formed having been placed in position upon the cutting-board 4, the U-frame is forced down, with the bars 20 and 21 adjusted to rest upon the edges of the pattern 23 outside the opening in the pattern, as shown in Fig. 1. The U-frame is held down upon the pattern by the pressing down with one hand upon the cross-bar 19^a, which is bent upward, as before mentioned, to afford a convenient grip, and the sleeve 9 forced downward with the other hand until the cutting-wheel 13 is in contact with the paper to form the mat at the inner rim of the opening in the pattern. Then by running the cutting-wheel around with its side against the inner edge of the pattern the material will be cut through and the mat completed. As many sheets may be cut at the same time as the capacity of the wheel will permit. Thus a very simple, convenient, and quick-acting device is produced, which can be employed to cut any number of mats of as many sizes and forms as there are patterns provided and of any form or configuration required, as the swivel arrangement of the cutting-wheel permits the wheel to follow all the curves of the pattern and cuts the mat exactly like the pattern outline. When the mat is cut, the U-frame and the sleeve 9 are simply released, when the spring 26 will automatically turn the U-frame into its upward position, as shown in Fig. 2, carrying the cutter-wheel bar with it and holding the cutter-wheel bar pressed against the supporting-loop 25. The loop 25 serves an important purpose in this connection, as it effectually prevents the swinging cutter-wheel bar from being thrown past the standard; but the cutter-wheel bar will always readily and automatically find its proper position centrally of the loop by reason of the curved form of the latter. It will be noted also that the ends 25^a of the loop 25 are curved to a still greater extent to more fully control the lateral movements of the cutter-wheel bar.

What I claim as new is—

1. A device of the class described comprising a base, a fixed support located above the base, a bar provided with a cutting device, and a flexible connection supporting the bar and suspending the same from the support and adapted to permit the bar to have a rotary swinging movement, substantially as described.

2. A device of the class described comprising a fixed standard, a flexible connection depending from the top of the standard, and a bar provided with a cutting device and supported by the flexible connection, whereby it is adapted to have a rotary movement, substantially as described.

3. A device of the class described comprising a fixed base or support, an inclined standard rigidly connected with the base or support, a flexible connection depending from the top of the standard, and a bar supported by the flexible connection and provided with a cutting device, substantially as described.

4. A device of the class described comprising the flexible shafting 8 depending from a suitable support, and a bar suspended from and supported by the flexible shafting and provided with a cutting device, substantially as described.

5. In a device of the class described, a pattern for the mat to be formed, a stationary standard adjacent to said pattern and inclined with its upper end substantially in vertical alinement with the center of said pattern, a bar having a cutting device in its lower end and flexibly coupled by its upper end to the upper end of said standard whereby it is adapted to have a rotary movement at one side of the standard, substantially as shown and described.

6. In a device of the class described, a pattern for the mat to be cut, a standard adjacent to said pattern, a bar having a cutting-wheel in its lower end and flexibly connected by its upper end to the upper end of said standard, and having a rotary swinging movement at one side of the standard and means connected to said standard for holding said pattern and the material for the mat while being cut, substantially as shown and described.

7. In a device of the class described, a pattern for the mat to be cut, a standard adjacent to said pattern, a bar having a cutting device in its lower end and flexibly connected by its upper end to the upper end of said standard whereby it is capable of a rotary swinging movement at one side of the latter, and means for holding said pattern and the material for the mat while being cut, substantially as shown and described.

8. In a device of the class described, a standard, a bar having a sleeve slidably disposed

with relation to one end of said bar, a spring disposed to maintain said sleeve in its upward position, a cutter device attached to the lower end of said sleeve, and means for flexibly connecting the upper end of said bar to the upper end of said standard whereby the bar is capable of a rotary swinging movement at one side of the standard, substantially as shown and described.

9. In a device of the class described, a bar flexibly connected by its upper end to a fixed support, a sleeve slidably disposed with relation to the free end of said bar, a plug in the lower end of said sleeve and having a cutting device in the outer end, and a spring connecting said plug and the free end of said bar, substantially as shown and described.

10. In a device of the class described, a bar flexibly connected to a fixed support at one end, a sleeve having a cutter device at one end and slidably disposed with relation to the free end of said bar, and a yieldable collar upon said sleeve and engaging said bar, substantially as shown and described.

11. In a device of the class described, a standard, a bar having a cutting device at one end and connected flexibly to the upper end of said standard, a pattern for the mat to be cut, a folding frame pivotally connected to said standard and adapted to support said pattern while the mat is being cut, substantially as shown and described.

12. In a device of the class described, a standard, a bar having a cutting device at one end and connected flexibly to the upper end of said standard, a pattern for the mat to be cut, a folding frame pivotally connected to said standard and adapted to support said pattern while the mat is being cut, and means whereby said folding frame may be automatically returned to and supported in its upward position, when not in use, substantially as shown and described.

13. In a device of the class described, a pattern for the mat to be cut, and a holder-frame pivotally supported at one end and adapted to be folded down in engagement with said pattern, and means whereby said folding frame may be automatically returned to and supported in its upward position when not in use, substantially as shown and described.

14. In a device of the class described, a table or platform, a shaft horizontally disposed with relation to said platform, frame supported by said shaft, and means engaging said shaft and adapted to maintain said frame in its upward position, substantially as shown and described.

15. In a device of the class described, a standard, a frame pivotally united to said standard, transverse bars slidably disposed upon the side members of said frame, a pattern for the mat to be cut and adapted to be held in place by said bars, and a bar flexibly united by one end to said standard and having a cutting-wheel in its free end, substantially as shown and described.

16. In a device of the class described, a table or platform, a holding-frame pivotally engaged at one end by said platform, bars slidably disposed with relation to said frame, and a pattern for the mat to be cut upon said platform in position to be engaged by said bars, substantially as shown and described.

17. In a device of the class described, a table or platform, a shaft horizontally disposed with relation to said platform, a frame consisting of parallel side members and transverse end members and adjustably connected to said shaft, whereby said frame may be lengthened or shortened, substantially as shown and described.

18. In a device of the class described, a table or platform, a frame having parallel side members and supported at one end with relation to said platform, tubular sections slidably disposed upon said side members, and bars connected by their ends to said tubular sections, whereby said bars are maintained in their relative parallel positions upon said side frame, substantially as shown and described.

19. In a device of the class described, a standard, a pattern-holding frame pivotally connected by one end to said standard, means whereby said frame may be yieldably maintained in its upward position, a bar having a cutting device at one end and flexibly connected by the other end to the upper end of said standard, and a guard-loop disposed to limit the rearward movement of the free end of said bar, substantially as shown and described.

20. In a device of the class described, a table or platform, a shaft horizontally disposed with relation to said platform, tubular sections in the ends of said shaft, a pattern-holding frame having parallel side members slidably engaging said tubular sections, substantially as shown and described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

CLARENCE HARRISON ATHERTON.

Witnesses:

LOU B. WINSOR,

ERNEST KING.