No. 623,000. Patented Apr. 11, 1899.

F. ERKENBRECK.

TOOL FOR TRIMMING PAPER.

(Application filed Jan. 7, 1898.)

(No Model.)

Fig. 1.

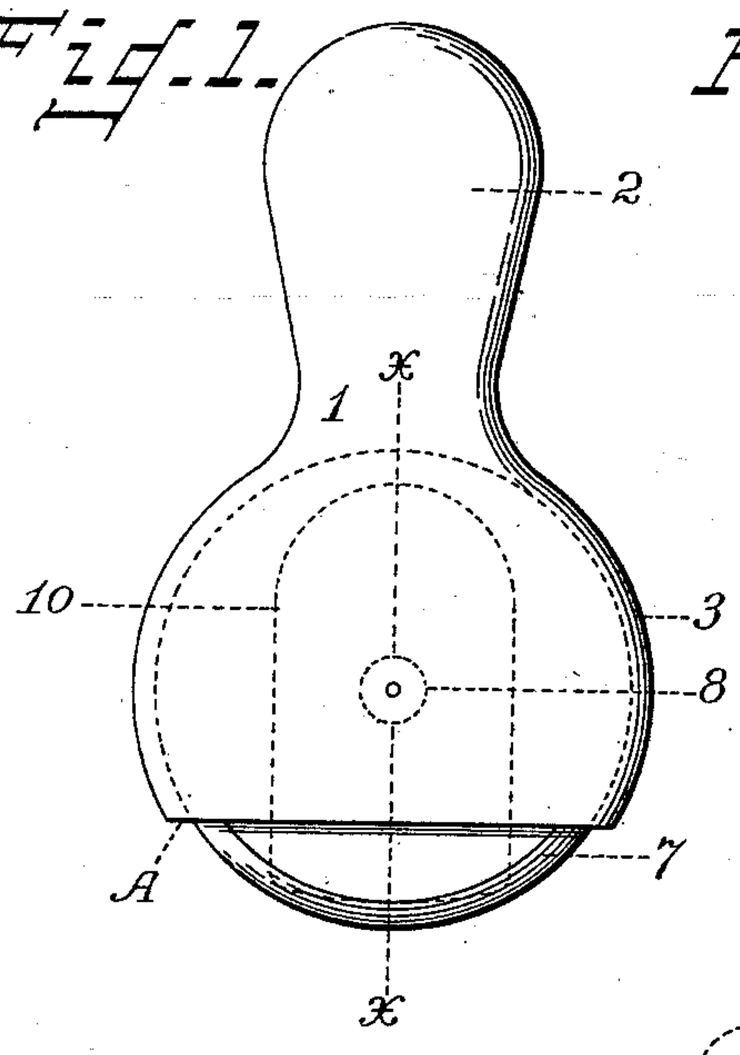


Fig. 2.

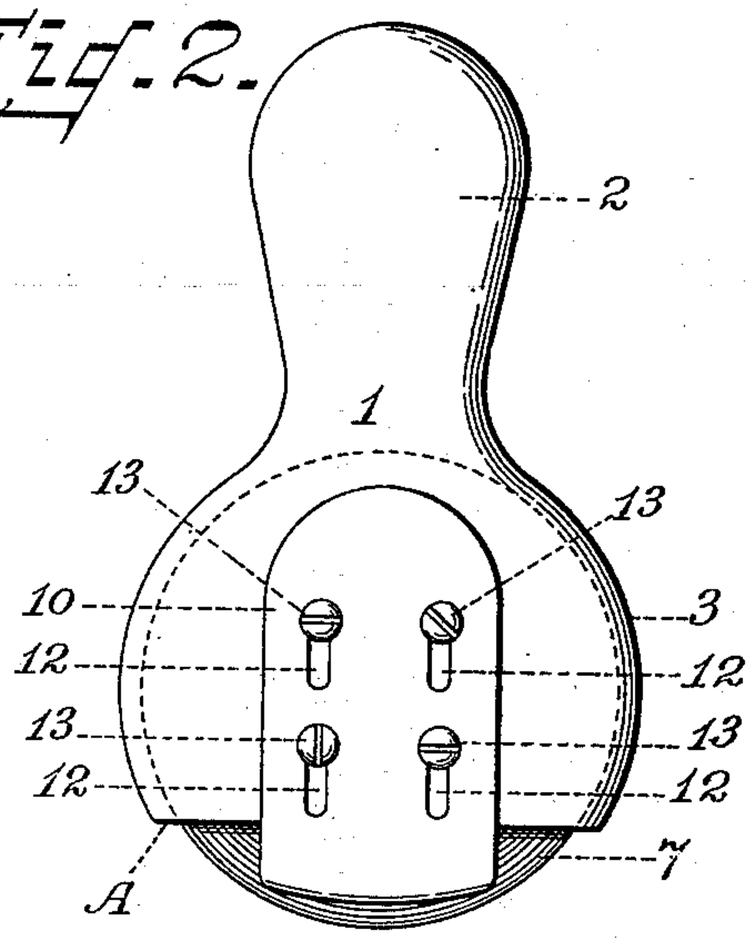


Fig. 3.

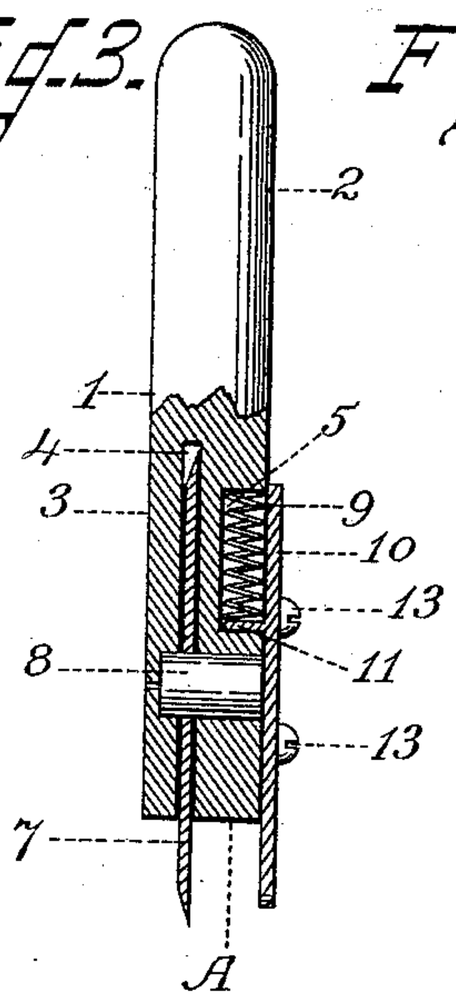


Fig. 4.

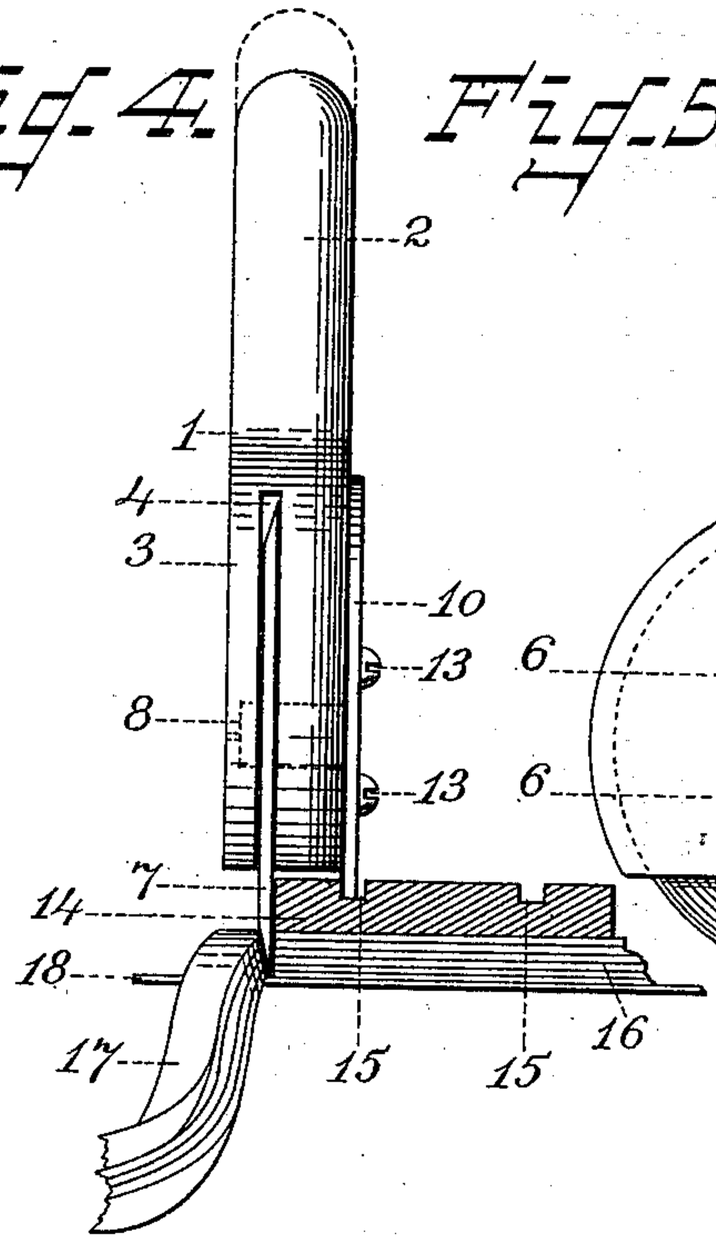
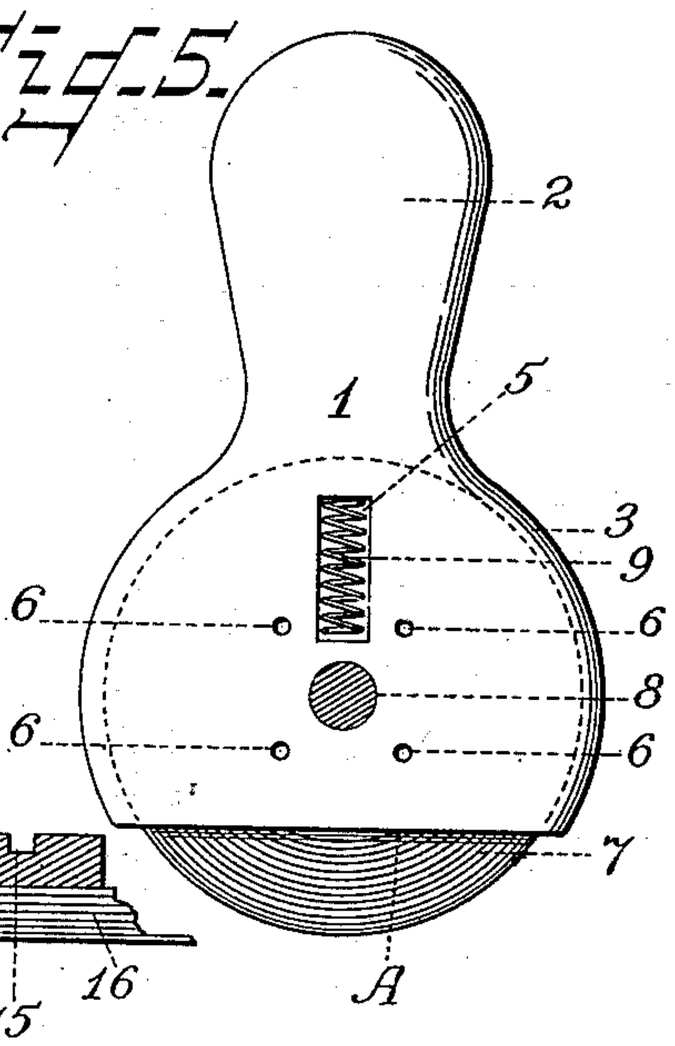


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

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TOOL FOR TRIMMING PAPER.

SPECIFICATION forming part of Letters Patent No. 623,000, dated April 11, 1899.

Application filed January 7, 1898. Serial No. 665,880. (No model.)

To all whom it may concern:

Be it known that I, FRANK ERKENBRECK, a citizen of the United States, residing at the city of Auburn, county of Cayuga, State of New York, have invented a new and useful Improvement in Cutting-Tools, of which the following is a specification, reference being had to the accompanying drawings, on one sheet, making part of this specification.

My invention relates to improvements in cutting-tools which are used in the trimming and cutting of the edges of wall-papers, window-shades, and like materials, and has for its object the affording of a convenient and compact hand cutting-tool which may be readily and effectually operated and carried about the person.

I attain my object by the combination and constructive arrangement of parts shown in the accompanying drawings, in which—

Figure 1 is an elevation of what I call the "cutting side" of my improved cutting-tool. Fig. 2 is an elevation of the guide-plate side of the same. Fig. 3 is a vertical section taken on the dotted line *x x* of Fig. 1. Fig. 4 is an edge view of my cutting-tool as it appears when being operated on several thicknesses of material; and Fig. 5 is an elevation of the guide side of said cutting-tool, but with the guide-plate removed therefrom.

In the several views similar figures and letters refer to similar parts throughout.

In Fig. 1, 1 is a carrying-piece which carries the several parts of the mechanism constituting my cutting-tool. It is extended vertically into a handle 2, by means of which the said cutting-tool is held and operated, and at its bottom part it is formed into a circular flattened head 3, which is squared off at the lower end to serve as a rest or stop, as plainly seen at A.

The head 3 has formed near one side thereof the channel 4, as shown in Figs. 3 and 4, in which is carried a cutting-disk 7. In this connection it may be proper to say it will be observed that the head 3 is formed somewhat larger in diameter than the cutting-disk 7, so that the edge of the latter is only exposed at its point of operation, which is below the squared-off portion A of the said head 3, and the hand of the operator is thus preserved from accidental injury.

The cutting-disk 7 is carried on a pintle 8, on which it is free to rotate, said pintle 8 being held at its ends in bearings formed in the vertical center of the head 3 and on either side of the channel 4. It will be evident that the cutting-disk 7 may be fixed on the said pintle 8, which may rotate in ball-bearings or simple bearings provided in the head 3 for that purpose; but I have confined myself to the simpler mode of construction, as shown, as being equally effective and less complex.

On that side of the head 3 which is in opposition to the cutting side of the same—or, in other words, on the guide-plate side of the head 3, as seen in Fig. 5—and immediately over the bearing of the pintle 8 is formed a seat 5, (see Figs. 3 and 4,) in which is carried a spring 9, which may be constructed after the spiral form, as shown, or otherwise, as deemed most effective. The upper end of the spring 9 operates against the upper end of the seat 5, and the lower end of the said spring 9 rests upon and is operated against a lug 11, formed on the guide-plate 10, hereinafter described.

On the guide side of the head 3 is carried the guide-plate 10, the object of which will presently be seen. The guide-plate 10 may be of any ornamental pattern in its outlines; but I have deemed it best to show it in as simple form possible and as seen in the drawings. It is provided with the slots 12 12 12 12, arranged on either side by twos, as shown, in order to assure its uniform action and to prevent binding in its up and down movements when the cutting-tool is being operated. Through the said slots 12 12 12 12 are passed the screws 13 13 13 13 into the holes 6 6 6 6, provided on the head 3, in the position shown. By this means the guide-plate is held in its working place against the head 3 and the spring 9, thus assuring the latter of its place, and through its slots 12 12 12 12 is free to move vertically on the shanks of the screws 13 13 13 13, as already noted.

The inner side of the guide-plate 10 is provided with a lug 11, as shown in Fig. 3, on which the bottom of the spring 9 rests when

the several parts of the cutting-tool are assembled in place for operation. It will be seen that the operative length of the slots 12 12 12 12 in the guide-plate 10 is practically coincident with the exposed portion of the cutting-disk 7 below the squared-off part A of the head 3, which arrangement serves to render the cutting-tool more positive in its operative functions. It will also be noted that the bottom end of the guide-plate 10 is formed in the arc of a circle. This form is given to prevent the abrasion of such parts as it may come in contact with when being operated. A small roller or rollers might be pivoted to the bottom of the guard-plate for the same end; but I have not deemed it expedient to show such.

In operating my cutting-tool I make use of a "straight-edge" 14, which is furnished at either side with grooves 15 15 throughout its length, which latter may be indefinite. The said grooves are placed at such distance from the edges thereof that the space between the outer side of the grooves and the edges of the said straight-edge shall be but a trifle less than the distance between the inner side of the guide-plate 10 and the inner side of the cutting-disk 7, thus allowing the cutting-tool to ride freely thereon as the bottom of the guide-plate passes in one of the grooves and guiding the tool as the process of cutting goes on.

The number 16 in Fig. 4 represents several thicknesses of paper. 17 represents the edges of paper being cut off, and 18 stands for a zinc or other soft metallic sheathing provided on the table, board, or bench on which the material is placed for cutting.

Having thus described the several parts of my improved cutting-tool in detail, I will further set forth the operation of the same. When it is desired to cut and trim one or several pieces of material, the approximate line of excision of the said material is adjusted on the zinc sheathing provided on the operator's board, bench, or table. The straight-edge is laid with the edge thereof upon the desired cutting-line. The bottom end of the guide-plate 10 is then placed in the groove 15 nearest the line of cutting, as shown in Fig. 4. The operator now, grasping the handle 2 of the cutting-tool, proceeds to move the latter in a forward direction and at the same time exerts a pressure upon the whole mechanism, which causes the cutter-disk to rotate and cut its way through the material to the zinc sheathing, which preserves the edge of the said cutting-disk from being dulled. The movements may be repeated forward or backward, as deemed expedient, until the trimming is completed. During the process of cutting the downward pressure of the operator upon the cutting-tool causes the lug 11 of the guide-plate 10 to press against the bottom end of the spring 9, thus assuring the engagement of the said guide-plate 10 with the groove 15 of the straight-edge 14, with the obvious result of keeping the cutting-disk 7 in constant alinement with the edge of the straight-edge, while by its rotation it cuts its way rapidly, cleanly, and vertically through the material as desired.

In Fig. 4 the dotted arc at the top end of the handle is intended to represent the first position of the cutting-tool prior to the operation of cutting.

Having thus described my invention in its several parts and the mode of operating the same, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In a cutting-tool the combination of the carrying-piece 1, having the vertically-extended handle 2, the head 3, having the channel 4, formed near one side, the seat 5, carrying the spring 9, on the opposite outer side, and carrying the pintle 8, in bearings on its vertical center line on which rotates the cutting-disk 7, and also having its bottom end squared off as at A, for a rest or stop; with the guide-plate 10, having the slots 12, 12, 12, 12, arranged and formed therein as shown and through which pass the screws 13, 13, 13, 13, and also having the lug 11, operating against the bottom end of the spring 9, substantially constructed and operated in the manner and for the purpose herein specified and shown.

In witness whereof I have hereunto set my hand, at Auburn, in the county of Cayuga and State of New York, this 5th day of January, A. D. 1898.

FRANK ERKENBRECK.

Witnesses:
E. R. SANFORD,
HARRY M. PLATT.