No. 848,187. PATENTED MAR. 26, 1907.

G. MEYERS.

CUTTER.

APPLICATION FILED JAN. 13, 1905.

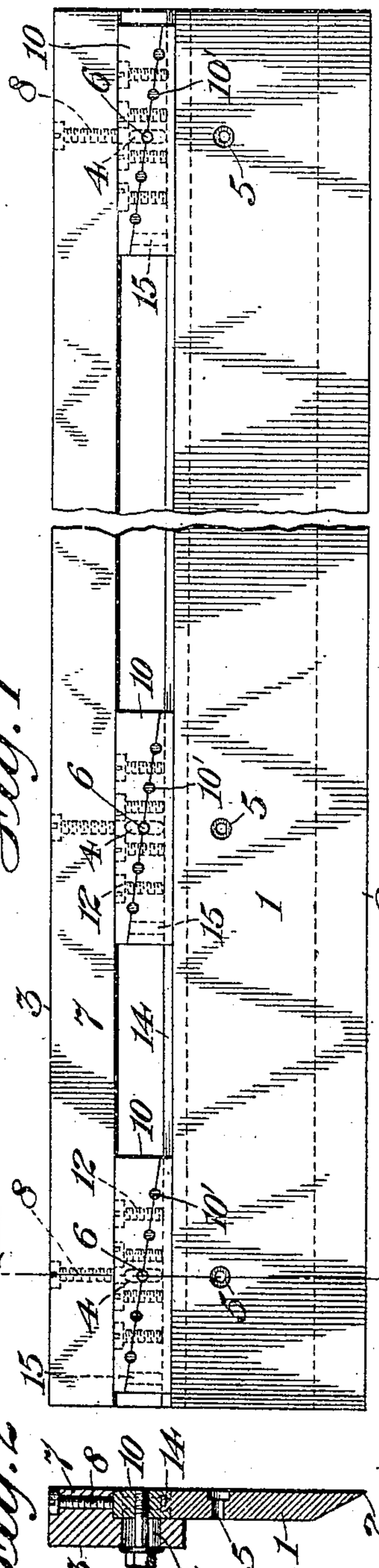

Fig. 1

Fig. 2

Fig. 4

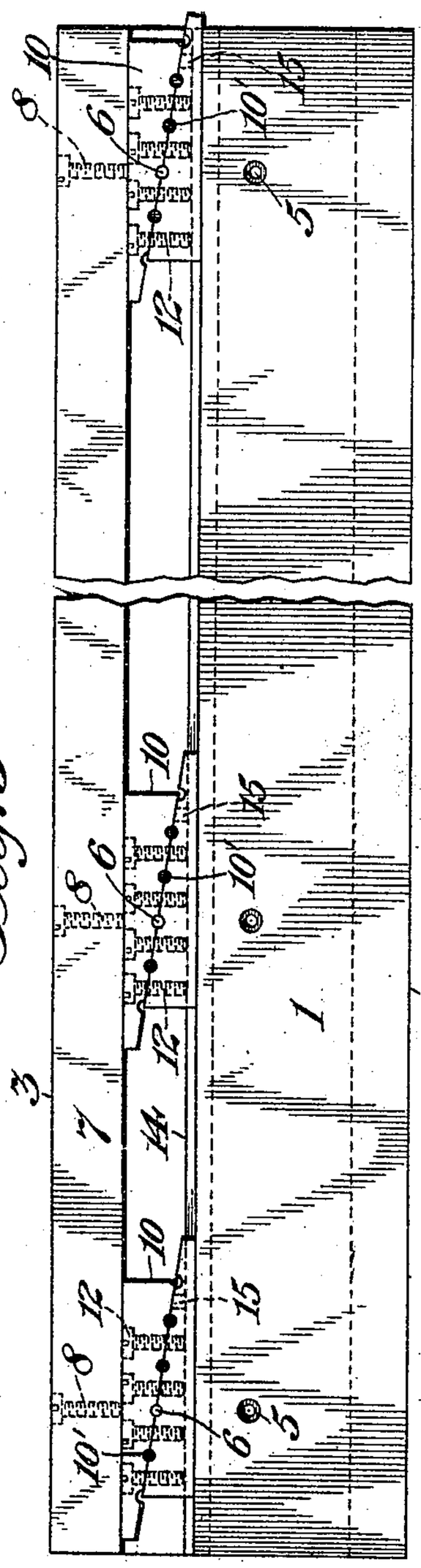

Fig. 3

Witnesses
Chas. J. Clagett
E. W. Faith

Inventor
Geo. Meyers
By his Attorney
Chas. H. Dorsey

UNITED STATES PATENT OFFICE.

GEORGE MEYERS, OF NEW YORK, N. Y.

CUTTER.

No. 848,167. Specification of Letters Patent. Patented March 26, 1907.

Application filed January 13, 1905. Serial No. 240,868.

To all whom it may concern:

Be it known that I, GEORGE MEYERS, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Cutters, of which the following is a specification.

This invention relates to improvements in cutters, and more particularly to improvements in that class of cutters adapted for use in connection with paper-cutting machines. A cutter of this class usually comprises a cutter-bar and a cutter-blade, the latter being detachably connected with the cutter-bar in a manner to have a certain limited vertical adjustment relatively thereto for the purpose of providing for the wear of the cutter-blade, which is quite rapid, because of the necessity of frequent grinding to keep the same sharp. After a cutter-blade has been worn to the extent of the said limited adjustment provided it has heretofore been customary in some instances to provide for the further use of the cutter-blade by fixedly attaching a plate or block thereto at its upper or blunt edge, so as to substantially restore its original width, and thereby provide for its further use and adjustment, the said attached block being provided with perforations to receive the usual fastening-screws by which the cutter-blade is connected with the cutter-bar. In the use of such block, however, it has been necessary that the block should be so connected with the cutter-blade as to support the latter in proper position relatively to its coöperating parts, and also that the fastening-screw perforations with which it is provided should be properly spaced to receive the fastening-screws. For these reasons it has been necessary that considerable care be exercised in the making of the blocks and in the attachment of the same to the cutter-blade, and because of this the use of the blocks has been rendered more or less objectionable.

Having in mind the foregoing facts, it has been the object of my present invention to provide an improved means for use in connection with a cutter whereby the cutter-blade may be rendered serviceable to its full extent and without any of the attendant objectionable features hereinbefore referred to.

To this end the invention consists in the novel features of construction and combinations of parts, as hereinafter set forth in detail, and pointed out in the claims.

Referring now to the accompanying drawings, forming part of this specification, Figure 1 is a rear side view of a cutter embodying my invention. Fig. 2 is a vertical cross-section through line 2 2 of Fig. 1. Fig. 3 is a view similar to Fig. 1 showing a different adjustment of the parts, and Fig. 4 is a detail view to be hereinafter referred to.

Similar reference characters in the different figures of the drawings indicate like parts.

In said drawings, 1 indicates a cutter-blade of usual construction, the same being in the form of a long flat bar having a beveled cutting edge 2, and 3 indicates a cutter-bar, to which the cutter-blade is adapted to be detachably connected, the said cutter-bar and cutter-blade each being provided with a plurality of transverse perforations (indicated at 4 and 5, respectively,) for the reception of fastening-screws 6, by which the cutter-blade is detachably connected to the cutter-bar. As a means for providing for the vertical adjustment of the said cutter-blade relatively to the cutter-bar the perforations 4 in the cutter-bar are made vertically elongated, and the cutter-bar is provided with an offset portion 7 above the upper edge of the cutter-blade for the reception of adjusting-screws 8, which are arranged to bear at their lower ends against the said upper edge of the cutter-blade. With this described construction and arrangement of parts, which is a usual one, a lowering of the cutter-blade as it becomes worn may be effected by loosening the fastening-screws 6, turning down the adjusting-screws 8, and then again tightening the said fastening-screws. After the fastening-screws 6 have reached the lower ends of the perforations 4 in the cutter-bar, however, the limit of adjustment has been reached, and provision for further use and adjustment of the cutter-blade therefore becomes necessary if the said blade is not to be discarded.

In accordance with my invention in one form thereof I make provision for the further use of the cutter-blade by connecting therewith at its upper or blunt edge a plurality of perforated blocks 10, each having a sliding dovetailed connection with the blade and being arranged with a space between each other whereby they may be independently adjustable in a direction lengthwise of the blade, so as to be capable of being readily positioned thereon to bring their perforations into registry with the perforations in the cutter-bar

and be entered by the fastening-screws 6, the said blocks and cutter-blade being adapted to be held in stationary adjusted position relatively to each other by suitable fastening means—such, for instance, as the set-screws 12. In this manner the cutter-blade may be again rendered serviceable and made capable of being used up an additional length equal to the increased width of bar provided by the blocks 10, which latter are adapted to be connected with the cutter-bar and be adjusted relatively thereto by means of the fastening-screws 6 and adjusting-screws 8 in the same manner as hereinbefore described with respect to the cutter-blade proper.

An important feature of the sliding dovetailed connection between the blocks 10 and the cutter-blade is the fact that it enables the blocks to be readily positioned to receive the fastening-screws 6 and also enables the cutter-blade to be adjusted longitudinally of the cutter-bar, if so desired.

As shown in the drawings, the dovetailed connection between the cutter-blade and the blocks 10 is effected by means of a dovetail projection 14 on the upper edge of the cutter-blade entering a counterpart groove in the blocks, as clearly shown in Fig. 2, although it will be understood that the location of the said dovetail and groove may be reversed on the respective parts, if so desired.

As a means for providing a further vertical adjustment of the cutter-blade I have divided the blocks 10 on a diagonal line into two sections, whereby one may be shifted relatively to the other to either increase or lessen the vertical width of the blocks. When thus divided, I provide the blocks with a plurality of perforations 10′ for the reception of the fastening-screws 6, which perforations are herein shown as being located at the contiguous edges of the two sections of the blocks with a part thereof in each section, so that when one section is shifted on the other to increase the width of the block, as shown in Fig. 3, the movement of the section should be at least equal to the distance between two of the perforations, so that parts of the perforations in one section will be caused to again register with parts in the opposite section, as shown, and such shifting of the two sections of the blocks relatively to each other to increase the width of the blocks may be continued until only one complete perforation is retained between the two sections, which perforation is necessary for the reception of the fastening-screw 6. The positive registration of the parts of the perforations in the opposite sections of the blocks is assured by the screws 12, which fasten together the two sections of the blocks within openings 15 therein.

What I claim is—

1. The combination with a cutter-bar having a plurality of perforations therein, of a cutter-blade, a plurality of perforated blocks having an adjustable sliding connection with said cutter-blade at the upper or blunt edge thereof and being arranged with a space between each other, means for holding each of said blocks in stationary adjusted position relatively to the cutter-blade, and means for detachably connecting each of the said blocks with the cutter-bar through the perforations of the respective parts.

2. The combination with a cutter-bar having a plurality of perforations therein, of a cutter-blade, a plurality of perforated blocks having an adjustable sliding dovetailed connection with said cutter-blade at the upper or blunt edge thereof and being arranged with a space between each other, means for holding each of said blocks in stationary adjusted position relatively to the cutter-blade, and means for detachably connecting each of the said blocks with the cutter-bar through the perforations of the respective parts.

3. The combination with a perforated cutter-bar, of a cutter-blade, a perforated block connected with said cutter-blade at the upper or blunt edge thereof and being diagonally divided with one section thereof movable relatively to the other whereby the width of the block may be adjusted, means for adjustably securing together the two sections of the block, and means for detachably securing the block in connection with the cutter-bar through the perforations of the respective parts.

4. The combination with a perforated cutter-bar, of a cutter-blade, a perforated block having an adjustable sliding dovetailed connection with said cutter-blade at the upper or blunt edge thereof and being diagonally divided with one section thereof movable relatively to the other whereby the width of the block may be adjusted, means for adjustably securing together the two sections of the block, and means for detachably connecting the block with the cutter-bar through the perforations in the respective parts.

Signed at New York, in the county of New York and State of New York, this 11th day of January, A. D. 1905.

GEORGE MEYERS.

Witnesses:

CHAS. F. DANE,

E. M. FAITH.