

G. BERGER.
PAPER CUTTING MACHINE.
APPLICATION FILED FEB. 17, 1912.

1,040,262.

Patented Oct. 8, 1912.

Fig. 1.

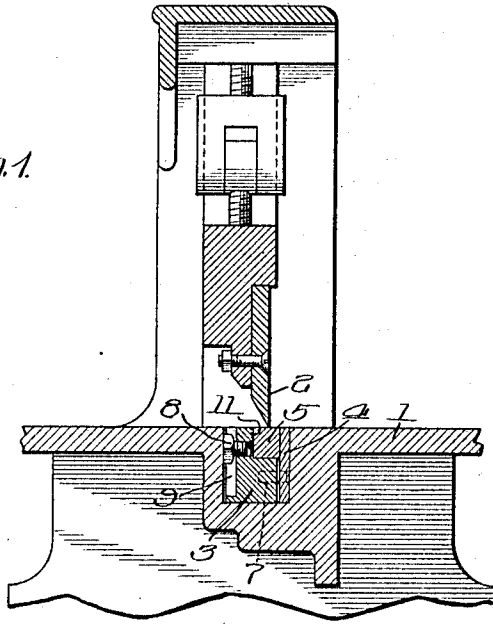


Fig. 2.

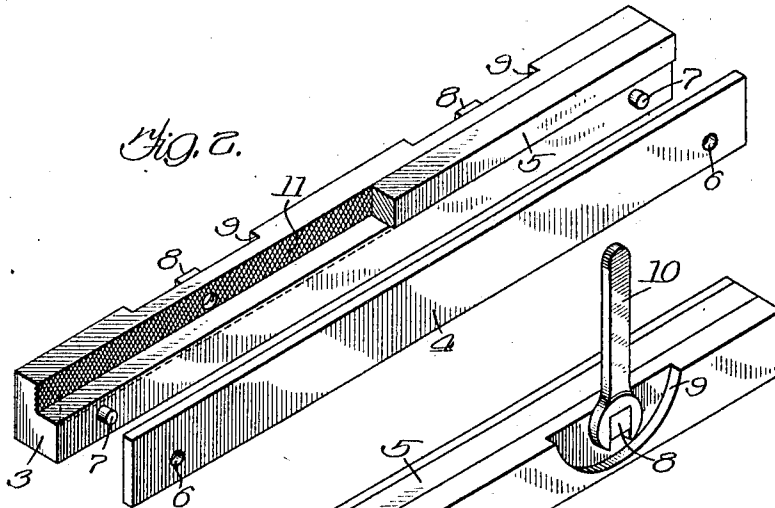
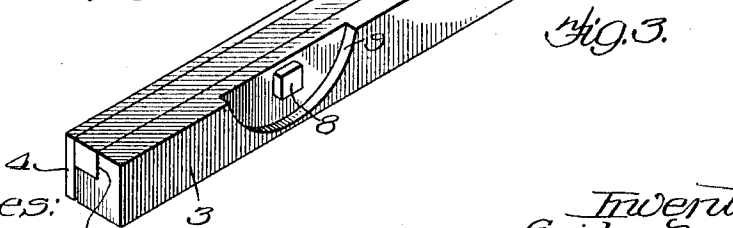


Fig. 3.



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UNITED STATES PATENT OFFICE.

GUIDO BERGER, OF TWO RIVERS, WISCONSIN, ASSIGNOR TO THE HAMILTON MANUFACTURING COMPANY, OF TWO RIVERS, WISCONSIN, A CORPORATION OF WISCONSIN.

PAPER-CUTTING MACHINE.

1,040,262.

Specification of Letters Patent.

Patented Oct. 8, 1912.

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To all whom it may concern:

Be it known that I, GUIDO BERGER, citizen of the United States, residing at Two Rivers, in the county of Manitowoc and State of Wisconsin, have invented a certain new and useful Improvement in Paper-Cutting Machines, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to paper cutting machines and has for its object the provision of an improved mounting and holding means or clamp for the cutting stick thereof, whereby said stick may readily be inserted in the machine and may readily be turned to present new surfaces to the cutting blade or may be removed for replacement, all without displacing the clamp from the machine bed that receives the clamp.

I afford access to the clamp operating means by an operating tool that may be passed downwardly into the clamp containing groove formed in the bed to tighten or loosen the stick as desired, while the holding clamp is within the groove.

My invention also has for its object the provision of improved means for preventing longitudinal creepage of the stick.

I will explain my invention more fully by reference to the accompanying drawing showing the preferred embodiment thereof, but to which embodiment I do not limit myself, and in which drawing—

Figure 1 is a vertical elevation in cross section of so much of a cutting machine as is necessary to an understanding of the invention; Fig. 2 is a perspective view showing elements of my improved clamp in separated relation, the cutting stick being shown partially by dotted lines in order to reveal some of the parts that would otherwise be hidden; and Fig. 3 is a perspective view showing a clamp operating tool in operating position.

Like parts are indicated by similar characters of reference throughout the different figures.

It will not be necessary to describe the cutting machine shown in Fig. 1 in its entirety as such a machine is well known by those skilled in the art. The paper or sheet supporting bed 1 of the machine is provided with a groove which extends crosswise of

the machine and is located in the plane of operation of the cutting blade 2. This groove is coextensive in depth with the depth of the two cutting stick clamping members 3 and 4 and is of a width which will permit these clamping members and the cutting stick 5 interposed therebetween freely to be received. The clamping member 3 has an upper corner portion thereof removed so as to permit the cutting stick 5, which is square in cross section, to be received therein so as to be substantially flush with the top surface of the bed 1. When the stick 5 is received within the clamping member 3 as snugly as possible, this stick slightly overhangs the clamping member 3 as indicated in each of the figures. One longitudinal vertical face of the stick is adapted to be clampingly engaged with the corresponding vertical face in the seat for the stick that is provided in the clamping member 3. The complementary longitudinal vertical face of the cutting stick 5 is adapted to be clampingly engaged by the clamping member 4 which is preferably in the form of a plate and which is provided with holes 6 that receive guide pins 7 projecting from the clamping member 3 whereby relative vertical displacement of the clamping members 3 and 4 is prevented whether said clamping members are loose or tight. As many bolts 8, forming part of the clamping structure, as may be desired are carried by and are in threaded engagement with the clamping member 3, the heads or outer ends of these bolts projecting into substantially vertical recesses 9 that are formed in the clamping member 3, the recesses 9 being located in the plane of operation of the bolt working tool 10 (Fig. 3). When the cutting stick is to be inserted or withdrawn, the bolt heads are moved inwardly; the bolt shanks being sufficiently short to prevent them from pressing upon the cutting stick. When the bolt heads are approached toward the clamping member 3, there is sufficient play between the clamping members 3 and 4 to permit of sufficient separation of these clamping members to allow the cutting stick 5 readily to be removed for replacement or to be turned so as to present a fresh face to the cutting blade 2, these operations being feasible without the removal of the clamp from the bed of the machine. When the cutting stick has been replaced or

turned the bolts 8 are rotated to move outwardly so as to have their heads or outer ends press against the vertical wall of the clamp receiving groove in the bed 1 that
 5 directly faces the bolt heads, whereby the clamping member 3 is moved against the cutting stick 5, the cutting stick is moved against the clamping member 4, and the clamping member 4 is pressed against the
 10 vertical face of the clamp receiving groove that is opposite the face of such groove that is engaged by the bolt heads, so that the clamp as an entirety, as well as the cutting stick, is held within the groove that receives
 15 it by the clamp operating means 8 interposed between the clamp and the machine bed 1.

While the recesses 9 are formed in the clamping member 3, I do not wish to be limited to this detail of construction, nor do I wish to be limited to the precise form of cutting stick holding clamp illustrated.

The clamp members between which the cutting stick is disposed are desirably made
 25 of steel so as to overcome breakage which was hitherto common in the body pieces that were hitherto made of wood and which were weakened by bolts and nuts embedded therein. One of the clamping members, say the
 30 clamping member 3, has its vertical face which is pressed against the cutting stick provided with a knurled or roughened surface as indicated at 11 in Figs. 1 and 2, whereby longitudinal creepage of the cutting
 35 stick is prevented without the objectionable bending over of an end of one of the clamping members, as was done hitherto.

The advantages of my invention as compared with the prior devices will be readily
 40 appreciated by those skilled in the art and need not be set forth in detail.

While I have herein shown and particularly described the preferred embodiment

of my invention I do not wish to be limited to the precise details of construction shown 45 as changes may readily be made without departing from the spirit of my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent the following:— 50

1. A cutting machine having a groove in its material supporting bed and located in the plane of operation of the cutting blade; a clamp having two members, one being movably supported within said groove; a
 55 cutting stick disposed between said clamp members; and clamping bolts carried by and in threaded engagement with the movable one of the clamp members and whose outer ends press against a wall of the clamp receiving groove, the bolt carrying clamp member being substantially vertically recessed where the bolts are located to permit of the passage of an operating tool into engagement with the bolts. 60

2. A cutting machine having a groove in its material supporting bed and located in the plane of operation of the cutting blade; a clamp having two members, one being movably supported within said groove; a
 65 cutting stick disposed between said clamp members; and clamping bolts carried by and in threaded engagement with the movable one of the clamp members and whose outer ends press against a wall of the clamp receiving groove, there being spacing where the bolts are located to permit of the passage of an operating tool into engagement with the bolts. 75

In witness whereof, I hereunto subscribe 80 my name this 14th day of February A. D., 1912.

GUIDO BERGER.

Witnesses:

FRANK J. MOSELER,
 CHARLES KRAUSE.