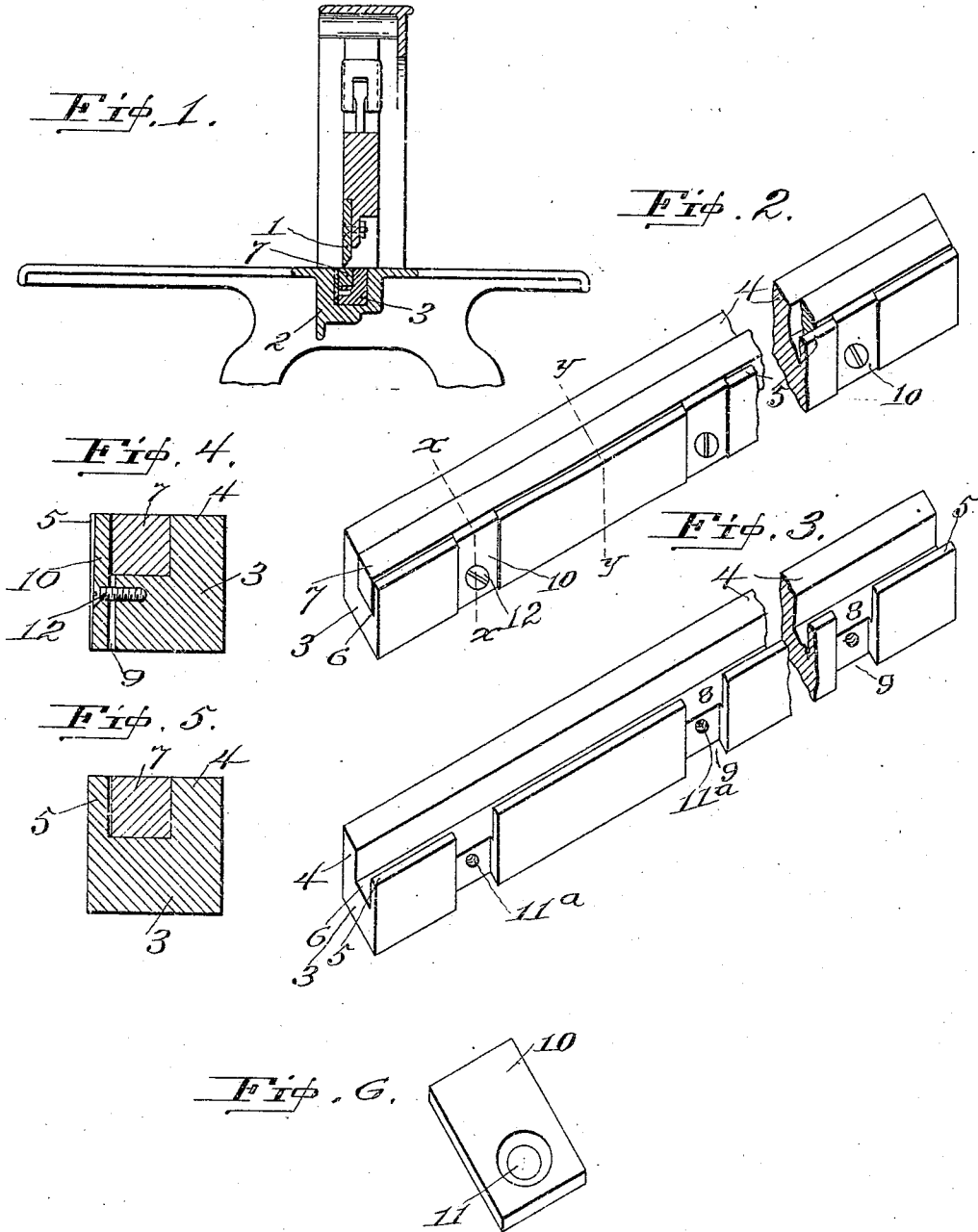


B. M. HELM.
CUTTING STICK FOR PAPER CUTTING MACHINES.
APPLICATION FILED SEPT. 25, 1909.

958,395.

Patented May 17, 1910.



Witnesses
Wm. E. Volk, Jr.
C. J. Beech

Inventor
Bruce Monroe Helm,
By W. H. Wills,
Attorney

UNITED STATES PATENT OFFICE.

BRUCE MONROE HELM, OF HAGERSTOWN, MARYLAND.

CUTTING-STICK FOR PAPER-CUTTING MACHINES.

958,395.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed September 25, 1909. Serial No. 519,584.

To all whom it may concern:

Be it known that I, BRUCE M. HELM, a citizen of the United States, residing at Hagerstown, in the county of Washington and State of Maryland, have invented certain new and useful Improvements in Cutting-Sticks for Paper-Cutting Machines, of which the following is a specification.

This invention relates to the class of cutters and bed-blocks, and pertains especially to sticks employed in guillotine paper cutting machines.

The object of the invention is to provide a paper cutting stick having certain novel and peculiar construction and arrangement of parts as will lengthen the life of its use, and permit its being operated expeditiously.

A further object of the invention is to provide, in a paper cutting stick, a novel and peculiar device for screw clamping an impact strip therein so that such strip may be placed, removed and renewed without injury to the clamps, the clamping screws or the stick.

I am aware that various devices have been employed for holding a cutter strip or block to the bed of paper cutting machines, certain of such devices comprising a plate and screw-bolts extending through the plate and through the strip holder and provided with nuts for clamping the strip to the holder. The device to be hereinafter described will be found to overcome certain objections and disadvantages of such other devices commonly employed.

The invention consists in the novel construction and arrangement of parts and resides essentially in a series of independent clamping plates throughout the length of the holder, each of the plates being operated on the strip by a set-screw.

In the accompanying drawings forming part of this application: Figure 1 is a sectional view of a guillotine paper cutter partly broken away showing the application of the invention. Fig. 2 is a perspective view of my cutting stick, partly broken away, in condition to be applied to a cutting machine. Fig. 3 is a similar view with the strip and plates removed. Fig. 4 is an enlarged cross-section on the line $x-x$ Fig. 2. Fig. 5 is a similar view on the line $y-y$ Fig. 2. Fig. 6 is a perspective view of one of the clamping plates.

The same reference numerals denote the

same parts throughout the several views of the drawings.

The cutting machine is of the usual guillotine type, having a cutting blade or knife 1, and a grooved or slotted bed 2 in which is fitted my improved cutting stick.

The cutting stick consists of a metal holder 3, having an abutting flange 4 and a flange 5, between which flanges is formed a space or groove 6, for a cutting strip or wooden bar 7 against which the edge of a knife strikes in the cutting operation.

The flange 5 has a series of slots 8 through it, and such slots extend through this side of the holder 3 so as to form a recess 9 for the clamping plates 10. The clamping-plates 10 have a countersunk hole 11 and they are thinner than the depth of the recesses 9 and the flange 5, so that they will set within the outer face of this flange and this face of the holder for the purpose of keeping them out of contact with the bed 2 when the stick is secured in the bed-groove. The recesses 9 are provided with a screw-hole 11^a, which does not extend through the metal holder, but is only of sufficient depth to accommodate set-screws 12.

It will be observed that the strip 7 is slightly narrower than the groove 6, and that the recesses are deeper than the thickness of the flange 5, that is, the recesses extend slightly into the base of the groove 6, so that the strip 7 may project over the edge of the recesses, for the purpose of having the clamping plates engage this side of the strip 7 in advance of their engagement with the face of the recess. This arrangement leaves a slight clearance between the flange 4 and the strip 7, and when the plates are screwed into clamping position they hold the strip against the abutting flange 4 and permit a slight expansion of the strip under undue pressure of the knife. This arrangement of the clamping plates also permits the strip to be placed and removed by simply loosening the set-screws and without removing the plates therefrom or from the recesses.

While the invention is specially applicable to paper cutting machines, it may be employed in a like capacity on or in connection with other machines having a reciprocating cutter or knife, the cutting edge of which necessitates a bed-stick.

Having thus described my invention what

I claim as new and desire to secure by Letters Patent is:

1. A cutting stick for paper cutting machines, comprising a holder having side flanges forming a groove, a strip or bar fitting the groove, one of such flanges having slots, clamping plates fitting the slots, and means for operating the plates for clamping the strip against the other flange.
2. In a cutting stick for paper cutting machines, the combination, with a grooved holder having side slots and recesses, and a cutter-strip loosely fitting the slot, of clamping plates operated in the recesses and through the slots to clamp the strip, and suitable set-screws for operating the plates against the strip in advance of their being secured in the recesses.
3. In a cutting stick for paper cutting machines, the combination, with a holder having flanges forming a groove, one of said flanges having slots extending from recesses in the side of the holder, and a cutter strip fitting the groove with a clearance between it and the flanges, of clamping plates operated in the recesses and through the slots for clamping the strip against the other of said flanges, and means for holding the plates in position.

4. In a cutting stick for paper cutting machines, the combination, with a holder having a longitudinal groove and recesses in one side thereof below the groove, and slots extending from the recesses through one side of the groove, and a cutter-strip for the groove, of means for clamping the strip in the groove comprising plates fitting the recesses, and set-screws for working the plates through the slots in a clamping operation.

5. In a cutting stick for paper cutting machines, the combination, with a holder having a longitudinal groove and provided with recesses extending from one side of the holder into the base of the slot, slots extending from the recesses through this side of the holder, and a cutter-strip in the groove and overhanging the recesses, of clamping-plates fitting the recesses, and set-screws extending through the plates and into the holder for operating the plates in the recesses and slots.

In witness whereof I hereunto set my hand in the presence of two witnesses.

BRUCE MONROE HELM.

Witnesses:

EDNA A. McKENZIE,
MARY BLACK.