May 24, 1938. W. J. SCHUTTE 2,118,740

CUTTING ATTACHMENT

Filed May 25, 1937 2 Sheets-Sheet 1

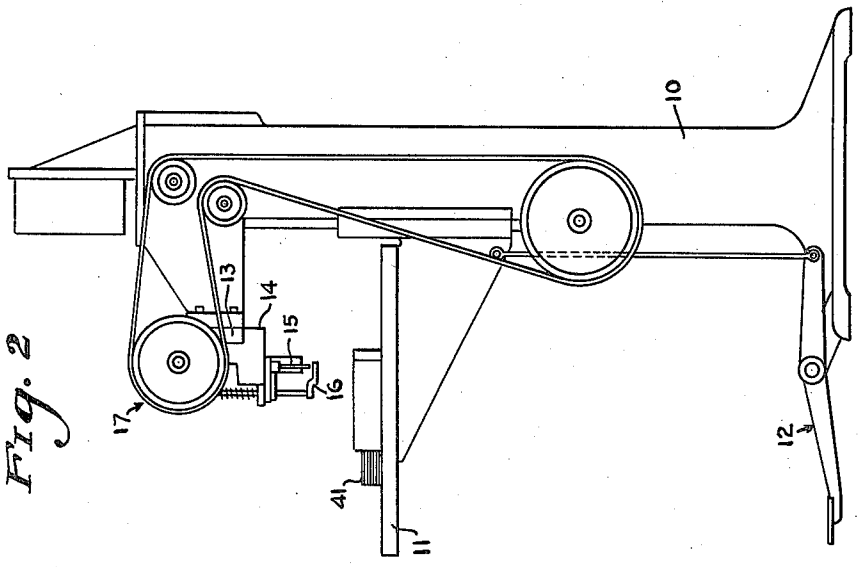


Fig. 2

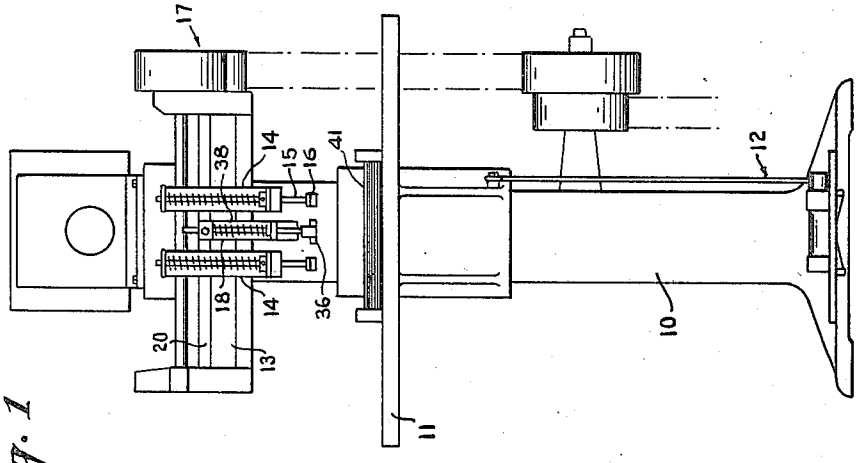


Fig. 1

William J. Schutte
INVENTOR

BY Victor J. Evans & Co.
ATTORNEYS

May 24, 1938. W. J. SCHUTTE 2,118,740

CUTTING ATTACHMENT

Filed May 25, 1937 2 Sheets-Sheet 2

Fig. 3

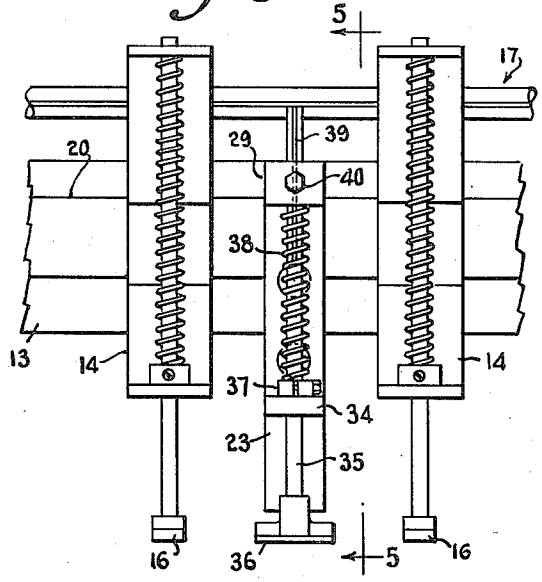


Fig. 4

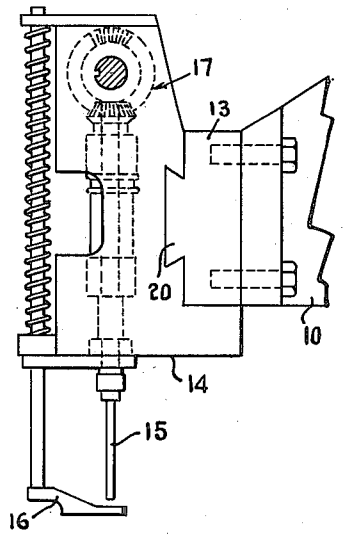


Fig. 5

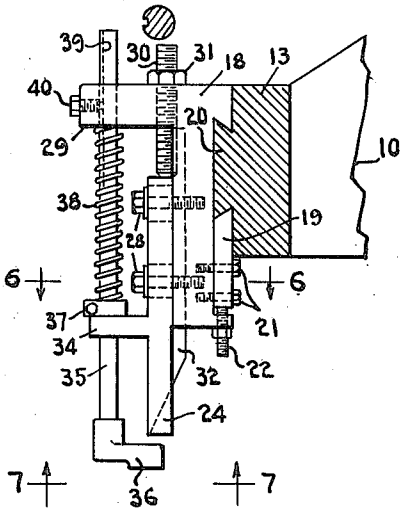


Fig. 6

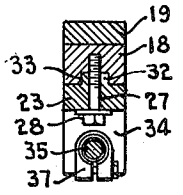


Fig. 8

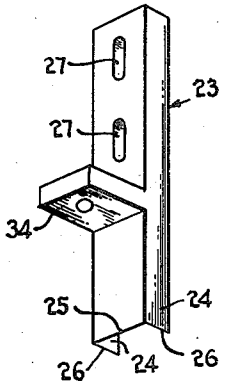


Fig. 7

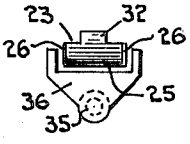
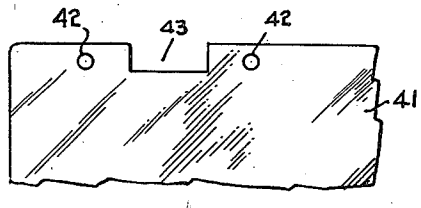


Fig. 9



William J. Schutte
INVENTOR

BY Victor J. Evans & Co.
ATTORNEYS

Patented May 24, 1938 2,118,740

UNITED STATES PATENT OFFICE

2,118,740

CUTTING ATTACHMENT

William J. Schutte, Paterson, N. J.

Application May 25, 1937, Serial No. 144,710

1 Claim. (Cl. 164—50)

This invention relates to a cutting device or attachment which may be used advantageously in conjunction with a paper drilling machine for the purpose of providing a stack of sheets with apertures, holes and notches for loose-leaf books and binders, and filing devices and the like.

The principal object of the invention is the provision of a cutter of the indicated character having the following advantages. It speeds up production; increases the output of a machine in a given time; and makes cleaner edges on the work.

With the foregoing and other objects in view the invention resides in the construction, operation and functions of the parts hereinafter described and illustrated in the accompanying drawings, in which:

Fig. 1 is a front view of a drilling machine selected to illustrate the invention shown applied thereto.

Fig. 2 is a side view of the machine.

Fig. 3 is a view illustrating the attachment of the invention in relation to a pair of drills on an enlarged scale, looking at the same from the front.

Fig. 4 is an end view of the arrangement of parts shown in Fig. 3.

Fig. 5 is a vertical section on line 5—5 of Fig. 3.

Fig. 6 is a section taken on the line 6—6 of Fig. 5.

Fig. 7 is a view of the lower ends of the presser foot and cutter, and looking in the direction indicated by the line 7—7.

Fig. 8 is a perspective view of the cutter detached; and

Fig. 9 is a plan of a portion of a sheet illustrating the character of the work performed by the attachment.

The cutting device or attachment is shown by way of example employed in conjunction with a paper drilling machine. This machine will now be briefly described. It includes a standard 10 on which is mounted for up and down movement a table 11. The up and down movement of the table 11 is effected by suitable means 12. The material to be operated on, such as sheets of paper in stacks, is arranged on the table 11 so as to move up and down with the latter. The standard 10 has secured thereto above the table 11 a cross rail 13. Drill assemblies 14 are mounted on the cross rail 13. The assemblies are identical and each includes a drill 15 and a presser foot 16, the latter serving to exert pressure on the stack of sheets as the stack is being drilled by the drills 15. The drills 15 are operated by driving mechanism generally designated 17.

The cutting device or attachment of the present invention is applied by way of example to the machine hereinabove briefly described. The device or attachment is mounted on the cross rail 13 between the drill assemblies 14, as shown most clearly in Figs. 1 and 3. It is to be understood that the invention may be in the form of standard equipment of a machine of the indicated character or may be in the form of an attachment therefor as shown in the present instance. The attachment includes a headstock consisting of two parts 18 and 19, respectively. The part 18 is rabbeted, and the part 19 is bevelled so as to accommodate the dove tail 20 on the cross rail 13. The part 19 is adjustable in order to be brought into and out of engagement with the dove tail 20. Bolts 21 carried by the part 18 and extending thru a slot in the part 19 serve to secure the part 19 in position to securely hold the headstock in adjusted position on the cross rail 13. An adjusting screw 22 serves to move the part 19 into and out of engagement with the dove tail 20 after the bolts 21 have been loosened. A cutter 23 is vertically adjustable on the part 18 of the headstock. The cutter 23 is of the chisel type modified by the provision of wings 24, thus providing a cutter with cutting edges 25 and 26, respectively, at right angles to each other in order to cut a notch of rectangular shape. The shank of the cutter 23 has longitudinal slots 27 therein which receive bolts 28 carried by the part 18 of the headstock. These bolts 28 serve to retain the cutter 23 in the desired position of adjustment with respect to the upper surface of the table 11 in its down position. The part 18 has a forwardly projecting extension 29. A thrust element 30 in the form of a screw is in threading engagement with the extension 29 and its lower end bears on the cutter 23 in order to take the strain off of the bolts 28 during the cutting operation. The thrust element 30 is held in adjusted position by a nut 31. In order to prevent the cutter from cocking out of a vertical position, it has a longitudinal rib 32 formed integral therewith which is received in a corresponding groove 33 in the headstock part 18, as clearly illustrated in Fig. 6. The cutter 23 has an apertured lug 34 formed integral therewith which serves as a guide in conjunction with the extension 29 for the rod 35 of a presser foot 36. The rod 35 has an adjustable collar 37 thereon which engages the lug 34 to limit the downward movement of the presser foot 36. A coil compression spring 38 surrounds the

rod 35 and the upper end thereof bears against the extension 29 and its lower end bears on the collar 37. The rod 35 has a longitudinal groove 39 therein which receives the inner reduced end of a screw 40 carried by the extension 29 in order to prevent the presser foot 36 from turning. The presser foot 36 is normally disposed below the cutting edges of the cutter 23, as shown most clearly in Fig. 5,

From the foregoing it will be apparent that with a stack of sheets 41 on the table 11, by pressing downwardly on the operating means 12, the table will be caused to move upwardly, and as a consequence two holes 42 in spaced relation will be drilled in the stack of sheets 41 by the drills 15 and a notch will be cut in the sheets at one edge by the cutter 23. This notch will be rectangular, as indicated at 43. By releasing pressure on the means 12, the table will move downwardly and the work, or in other words the drilled and cut sheets, may be removed.

It will be apparent that the cutter 23 may be adjusted vertically according to the number of sheets in the stack so that the cutting edge of the cutter will be on the same level with the cutting edge of the drills, thereby enabling the drilling and cutting to be done at the same time on stacks of paper up to 1½ to 2 inches high.

It is to be understood that this improvement is capable of extended application and is not confined to the exact showing of the drawings nor to the precise construction described and, therefore, such changes and modifications may be made therein as do not affect the spirit of the invention nor exceed the scope thereof as expressed in the appended claim.

What is claimed as new is:

In a cutting device comprising a relatively fixedly positioned headstock having a horizontally extending guideway on a face thereof, the improvement which comprises a block-like member, adjustable jaw elements carried on said member adapted to receive and engage with portions of said guideway whereby said member can be laterally moved thereon, means for moving said jaw elements whereby sliding movement of said member on said guideway can be controlled; a vertically adjustable cutter element mounted on said member by means including a vertically positioned rib formed on a portion of said element slidably receivable in and engageable with a slot formed in a face of said member whereby, during and subsequent to adjustment, the angle determined by said cutter element and said guideway is unchanged, said cutter element comprising a bar-like member terminating at one end in a cutting surface consisting of a pair of spaced essentially parallel knife edges positioned in a common plane intersecting a third knife edge at right angles; and means for slidably adjustably mounting a presser foot on said block-like member and said cutter element which comprises a pair of extensions, one formed on and projecting from said member and similarly on and from said element, said extensions having coaxial aligned openings formed therein, a presser foot rod slidably mounted in said openings and a spring-pressed collar mounted on said rod between said extensions normally tending to move said rod downwardly.

WILLIAM J. SCHUTTE.