

(No Model.)

A. S. BOGART & J. J. NESMITH.
BACK GAGE FOR PAPER CUTTING MACHINES.

No. 507,963.

Patented Oct. 31, 1893.

Fig. 1.

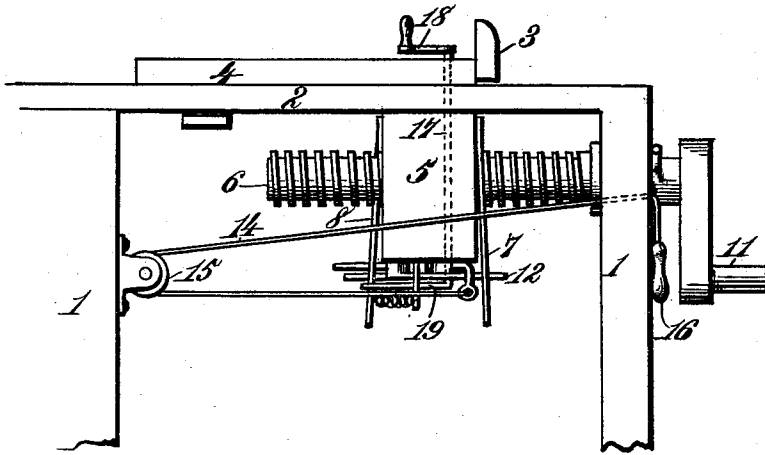


Fig. 2.

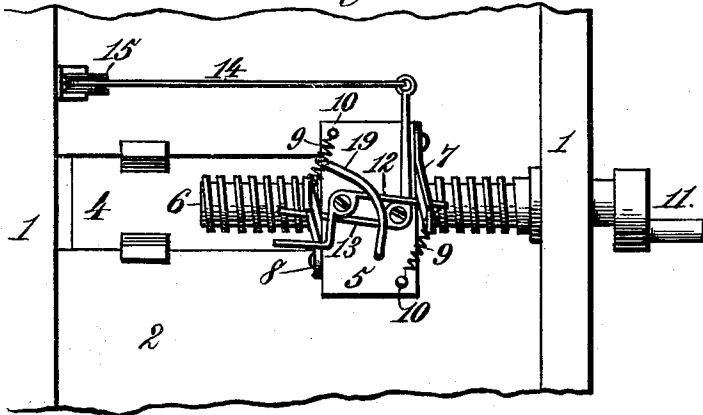
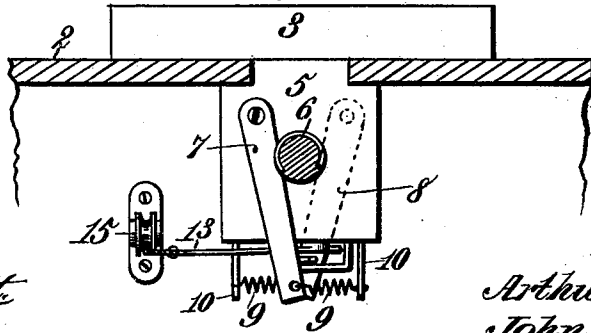


Fig. 3.



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UNITED STATES PATENT OFFICE.

ARTHUR S. BOGART AND JOHN J. NESMITH, OF WARREN, PENNSYLVANIA.

BACK GAGE FOR PAPER-CUTTING MACHINES.

SPECIFICATION forming part of Letters Patent No. 507,963, dated October 31, 1893.

Application filed December 27, 1892. Serial No. 456,440. (No model.)

To all whom it may concern:

Be it known that we, ARTHUR S. BOGART and JOHN J. NESMITH, citizens of the United States, residing at Warren, in the county of Warren and State of Pennsylvania, have invented new and useful Improvements in Back Gages of Paper-Cutting Machines, of which the following is a specification.

This invention relates to improvements in gage adjusting mechanism for paper cutting machines and consists in the novel features of construction and combination of devices, as hereinafter described and claimed, for permitting a quick adjustment of the gage where-
by it can be moved at once to any desired position independent of the usual slow operation of the ordinary screw shaft.

In the annexed drawings Figure 1 is a side elevation of so much of a paper cutting machine as is required to illustrate our invention. Fig. 2 is an inverted plan of the same. Fig. 3 is a vertical transverse section of the machine in front of the gage.

Referring to the drawings the numeral 1 designates the supports of the table 2 on which the paper is to be placed. The back gage 3 is attached to a suitable slide 4 that is longitudinally movable in a slot or opening formed in the table. To the under side of this gage slide 4 is secured a depending block 5 having a perforation of sufficient size to enable the block to loosely surround a screw shaft 6 that is also suitably supported at one end of the machine frame. On the opposite sides of the screw shaft 6 and having their upper ends pivoted respectively to the front and rear of the block 5 are arranged two depending blades 7 and 8 that have their lower ends connected by springs 9 to pins or lugs 10 on the lower end of said block. By the action of these springs 9 the blades 7 and 8 are drawn toward each other and into engagement with the opposite sides of the screw shaft. When thus engaged with the screw shaft the blades 7 and 8 serve as the threads of a nut so that if the screw shaft is now turned in either direction, by means of a crank handle 11 on its outer end, the gage 3 will be moved slowly forward or back, as the case may be, until the required adjustment is obtained. To the lower end of the block 5 are pivoted two horizontally arranged angle

levers 12 and 13. The lever 12 has one arm in contact with the inner edge of the blade 7 and its other arm in contact with the outer edge of the blade 8 while the lever 13 has one arm in contact with the inner edge of the blade 8 and to its other arm is attached a cord 14 that is passed partly around a pulley 15 and then through a guide opening at the other end of the machine. To the end of the cord 14 a handle 16 may be attached. By grasping this handle and drawing on the cord 14 the angle lever 13 will force the blade 8 outward or away from the screw shaft and at the same time cause the blade 8 to actuate the lever 12 so as to likewise force the blade 7 from its engagement with the screw shaft. While the blades 7 and 8 are thus held from engagement with the screw shaft the gage 3 and attached slide and block can be rapidly moved any distance to the required position with relation to the table and the cutting mechanism without incurring the delay of the usual slow adjustment by means of the screw shaft. If desired a vertical shaft 17 may be passed through the slide 4 and block 5 and be provided at its upper end with an operating crank handle 18 and at its lower end with an arm 19 adapted to be forced against the inner edge of the blade 8 by turning the crank handle 18 in the proper direction. In this case, also, the blade 8, on being forced outward by pressure of the shaft arm 19, will actuate the lever 12 as before described in such a manner as to cause one of its arms to bear forcibly against the inner edge of the blade 7 and thus disengage it from the screw shaft at the same time that the blade 8 is disengaged. The blades 7 and 8 may thus be disengaged from the screw shaft either by the action of the levers 12 and 13 operated through the cord 14 or by the action of the lever 12 and arm 19 when operated by the crank 18 on the shaft that carries said arm. After the quick adjustment of the gage has been made and the cord 14, or crank 18, released, the springs 9 will draw the blades 7 and 8 again into engagement with the screw shaft so that any further or exact adjustment of the gage can be made gradually by turning the screw shaft in a proper direction. It will be observed that when the cord 14 is pulled to disengage the

blades 7 and 8 from the screw shaft it will also at the same time draw the gage back by reason of one end of the cord being attached to the lever 13 which through the block 5 is
 5 connected with the gage slide. The cord 14 possesses the additional advantage of not being in the way as the projecting end of a rod would be. When the vertical shaft 17 is rotated for the purpose of causing its arm 19
 10 to disengage the blades 7 and 8 from the screw shaft 6 the gage can be quickly moved either forward or back, as required.

What we claim as our invention is—

1. The combination with the screw shaft
 15 and the slide having attached thereto a perforated block that loosely surrounds said screw shaft, of the pivoted blades attached to said block on opposite sides of the screw shaft, springs attached to said blades and
 20 adapted to hold them in engagement with the screw shaft, a lever for actuating one of said blades to disengage it from the screw shaft and a lever for transmitting motion from one
 25 blade to the other whereby both are disengaged from the screw shaft at once against the action of their springs, substantially as described.

2. The combination with the screw shaft 6 and the slide 4 having attached thereto a per-

forated block 5 that loosely surrounds said
 screw shaft, of the pivoted blades 7 and 8
 provided with springs 9, the lever 12 having
 one arm engaged with the inner edge of the
 blade 7 and its other arm engaged with the
 outer edge of the blade 8 and means for actu-
 35 ating the blade 8 to disengage both blades
 from the screw shaft, substantially as described.

3. The combination with the screw shaft 6 and the slide 4 having attached thereto a per-
 40 forated block 5 that loosely surrounds said screw shaft, of the pivoted blades 7 and 8 provided with springs 9, the lever 12 having one arm engaged with the inner edge of the
 45 blade 7 and its other arm engaged with the outer edge of the blade 8, the lever 13 having an arm adapted to force the blade 8 outward, and a cord 14 for actuating said lever, substantially as described.

In testimony whereof we have hereunto set
 our hands and affixed our seals in presence of
 subscribing witnesses.

ARTHUR S. BOGART. [L. S.]
 JOHN J. NESMITH. [L. S.]

Witnesses:

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