No. 773,810. PATENTED NOV. 1, 1904.

A. W. RAU.

PAPER CUTTER.

APPLICATION FILED DEC. 7, 1903.

NO MODEL.

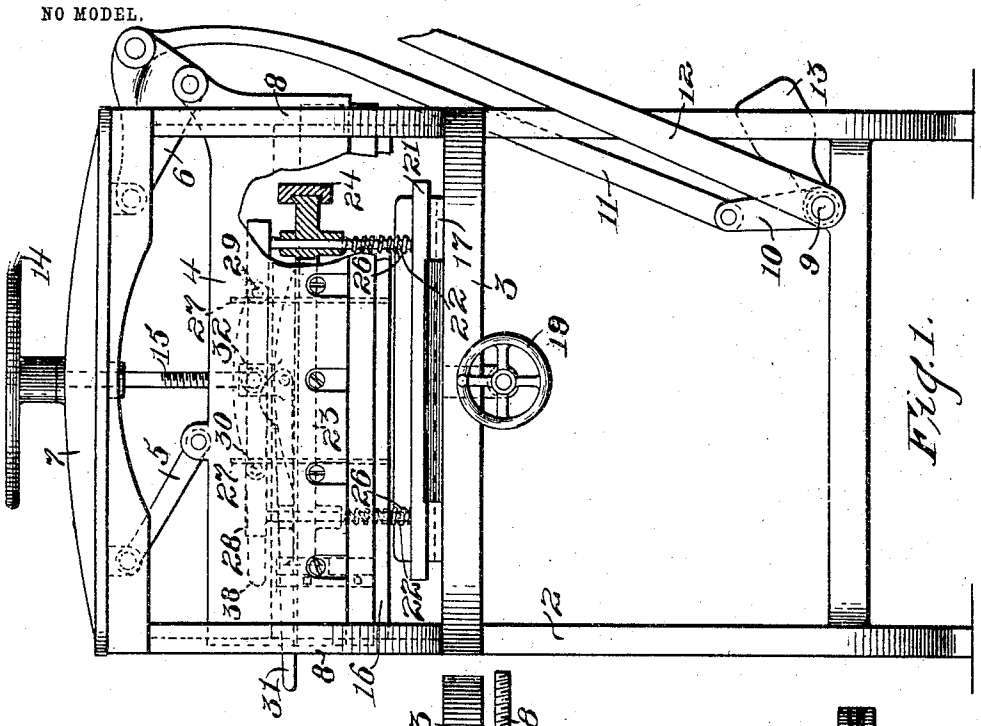


Fig. 1.

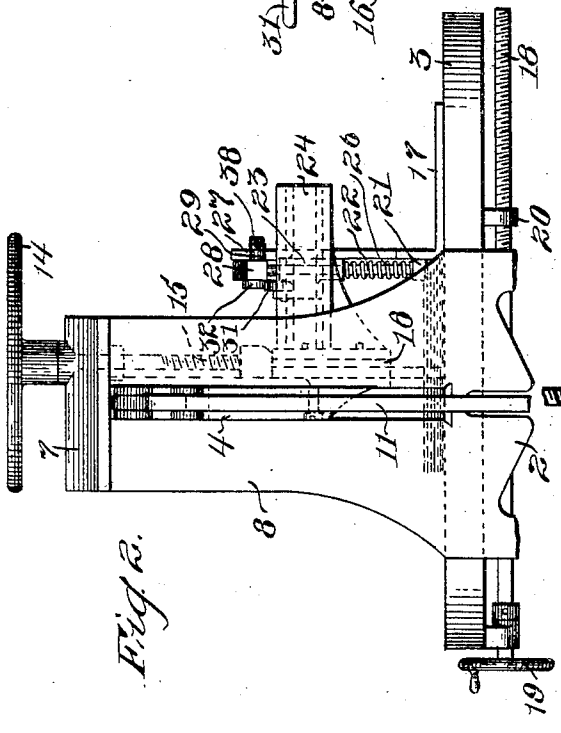


Fig. 2.

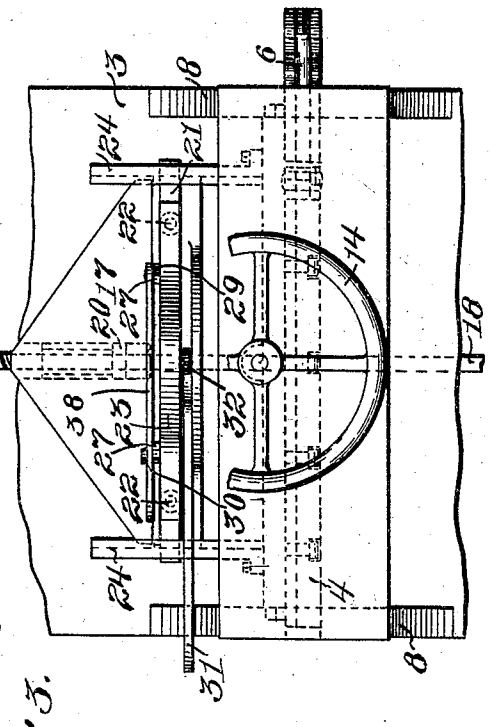


Fig. 3.

Witnesses:
C. C. Tuss.
R. W. Pittman

Inventor:
Alexander W. Rau.
By his Attorney
F. A. Richards.

No. 773,810. Patented November 1, 1904.

UNITED STATES PATENT OFFICE.

ALEXANDER W. RAU, OF BROOKLYN, NEW YORK.

PAPER-CUTTER.

SPECIFICATION forming part of Letters Patent No. 773,810, dated November 1, 1904.

Application filed December 7, 1903. Serial No. 184,065. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER W. RAU, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Paper-Cutters, of which the following is a specification.

The present invention relates particularly to means for rapidly and accurately cutting a number of paper sheets to size, the sheets being stacked in a pile for cutting upon the bed or platen of a paper-cutting machine; and the invention is especially designed to overcome the difficulty experienced in cutting the sheets when the stacked pile thereof is thicker along one side than along the other.

When a pile of superposed folded sheets—such, for instance, as folded writing-paper or books or of pads or other stationery having a greater thickness at one side than at the opposite (by reason of the folds in the paper, the adhesion of the pads, &c.)—are placed upon the cutting-bed or platen of the machine or cutting mechanism and the operation of cutting through the pile, as in sizing the same to predetermined dimensions, is then performed, difficulty is ordinarily experienced in effecting a cutting such that the sheets when cut shall be of the same dimensions at the upper part of the pile as at the bottom thereof. Briefly, the operation of cutting ordinarily involves the compression and holding of a pile by a presser-bar, whereupon the cutter or knife is caused to descend. The tendency of such presser-bar in descending to press and hold the pile is to carry or urge some of the upper sheets, &c., forward away from the gage-plate against which the sheets lie, and thus render the upper sheets when cut smaller than those below.

According to the present improvements I employ an auxiliary presser-bar designed to contact with the matter to be cut close to the thicker edge thereof—that is, immediately adjacent to the gage-plate—and to maintain a constant compressive action on the pile until and during the time that the main presser-bar nearer the plane of action of the cutter comes into contact with and is forced down upon the pile. The action of this latter presser-bar as it comes in contact with the sheets and tightly compresses them is precluded by the said auxiliary presser-bar from shifting any of the sheets forward away from the gage-plate or otherwise displace them.

The accompanying drawings set forth an embodiment of the present invention.

In the drawings, Figure 1 is a front elevation of such a paper-cutter to which my invention is applied. Fig. 2 is a side elevation thereof, the lower portion of the mechanism being broken away; and Fig. 3 is a plan view, part being broken away.

Similar characters of reference designate corresponding parts in all figures.

I have for the purpose of illustration disclosed the present invention as applied to a simple type of hand-operated paper-cutting machine and wish it understood that such disclosure is made by way of illustration and not with the intention of restricting the application of the device to the particular mechanism or type of mechanism shown. Suffice it here to say that the illustrated machine comprises a supporting-frame 2, a cutting-bed or platen 3, and a knife or cutter 4, hung by links 5 and 6 from a cross-piece 7, extending between uprights 8 8 at the sides of the machine. This cutter is operated from a shaft 9 through an arm 10, extending from the shaft and connected by a link 11 with the said suspension-link 6. An operating-handle 12 and a counterweight 13 also extend from the shaft, while a hand-wheel 14 serves to operate a screw 15, which engages with the main presser-bar 16, running in proper guides in the uprights 8 8 at the rear of the cutter 4. A gage-plate 17 is adjustable from front to rear of the bed 3, and vice versa, by means of a screw-rod 18, having a hand-wheel 19 and engaging with a threaded opening in a projection 20, extending from the gage.

The pile of folded sheets, pads, &c., having been stacked upon the bed 3 with the folded or thicker edge of the heap in contact with the adjusted gage-plate 17, the general operation comprises the actuation of the screw-rod 15 to cause the compression of the sheets and the holding the pile in compact condition, after which the manual operation of the cutter 4

lar to the same, means for locking the gage-plate to and disconnecting it from said auxiliary presser-bar, and means for holding the auxiliary presser-bar in an inoperative position.

3. In a paper-cutting machine, the combination with a cutting-bed, of a reciprocating knife, a gage, a main presser-bar, and an auxiliary spring-pressed presser-bar operable in unison with the main presser-bar, said main presser-bar being adapted to press the paper adjacent to the plane of action of the knife, and the auxiliary presser-bar operating to press the sheets adjacent to the gage, and both of which bars are movable toward and away from the bed in a plane perpendicular to the plane of the same, means for locking the gage-plate to and disconnecting it from said auxiliary presser-bar, and means for holding the auxiliary presser-bar in an inoperative position.

4. In a paper-cutting machine, the combination with a cutting-bed, of a reciprocating knife, a gage, a main presser-bar and an auxiliary spring-pressed presser-bar operable in unison with said main presser-bar, said main presser-bar being adapted to press the paper adjacent to the plane of action of the knife, and the auxiliary presser-bar operating to engage with the pile adjacent to the rear thereof, and both of which bars are movable toward and away from the bed in a plane perpendicular to the same, means for locking the gage-plate to and disconnecting it from said auxiliary presser-bar, and means for holding the auxiliary presser-bar in an inoperative position.

5. In a paper-cutting machine, the combination with a cutting-bed, of a cutting-tool, an adjustable gage, a main presser-bar and an auxiliary spring-pressed presser-bar operable in unison with the main presser-bar, said main presser-bar being adapted to press the paper adjacent to the plane of action of the tool, and the auxiliary presser-bar operating to engage with the pile adjacent to the rear thereof, and both of which bars are movable toward and away from the bed in a plane perpendicular to the same, means for locking the gage-plate to and disconnecting it from said auxiliary presser-bar, and means for holding the auxiliary presser-bar in an inoperative position.

6. In a paper-cutting machine, the combination of a cutting-table, a cutting-tool, a main presser-bar, brackets extending therefrom, a spring-pressed auxiliary presser-bar slidably mounted on said brackets, a gage-plate, and means for locking said gage-plate to and disconnecting it from said auxiliary presser-bar.

7. In a paper-cutting machine, the combination of a cutting-table, a cutting-tool, a main presser-bar, brackets extending therefrom, a spring-pressed auxiliary presser-bar slidably mounted on said brackets, a gage-plate, means for locking said gage-plate to and disconnecting it from said auxiliary presser-bar, and means for holding the auxiliary presser-bar in an inoperative position.

Signed at Nos. 9 to 15 Murray street, New York, N. Y., this 4th day of December, 1903.

ALEXANDER W. RAU.

Witnesses:
P. L. WELLS,
JOHN O. SEIFERT.