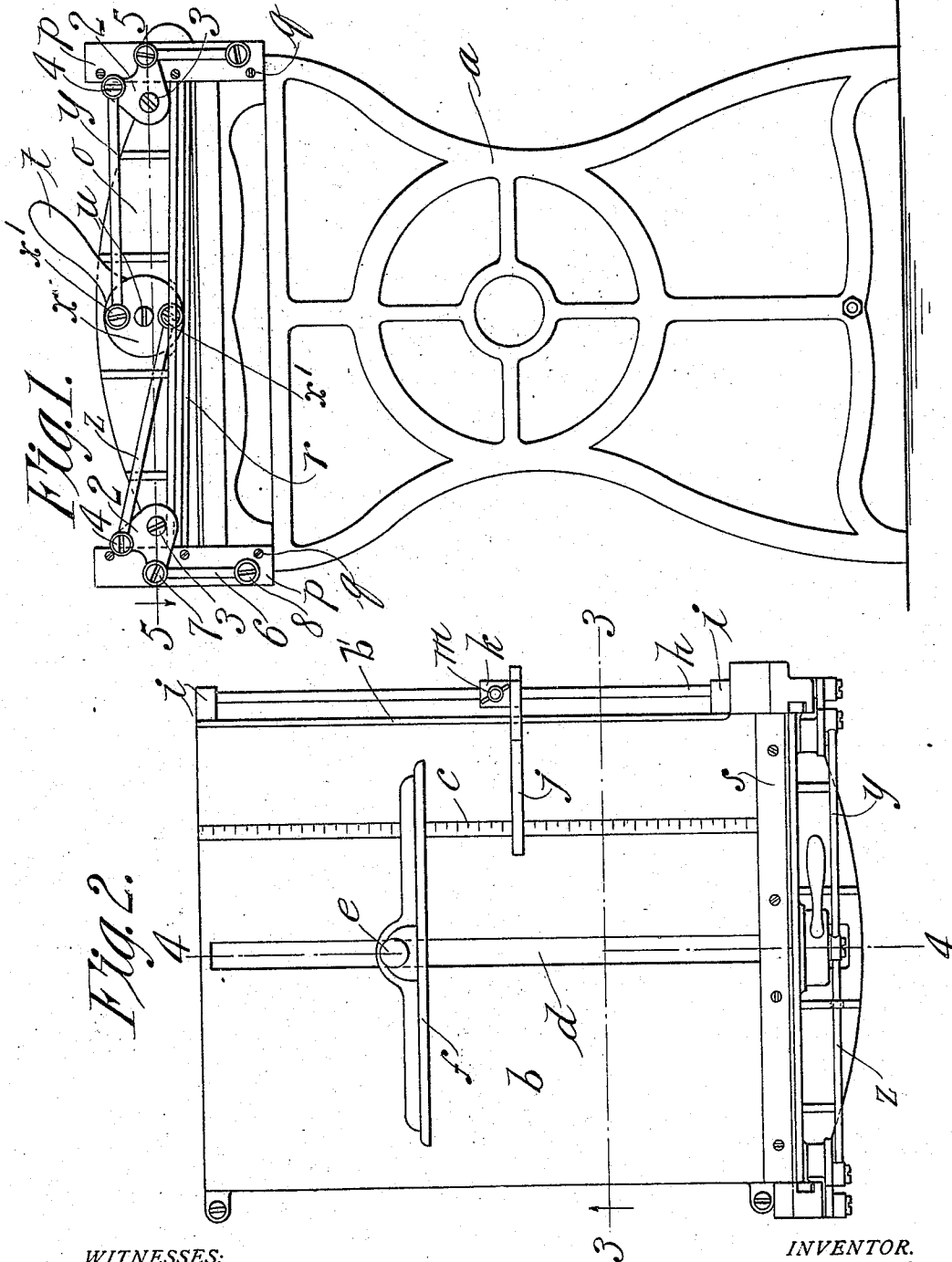


H. F. DUNBAR.
PAPER TRIMMING MACHINE.
APPLICATION FILED MAR. 8, 1909.

930,744.

Patented Aug. 10, 1909.

2 SHEETS—SHEET 1.



WITNESSES:

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2 SHEETS—SHEET 2.

Fig. 3.

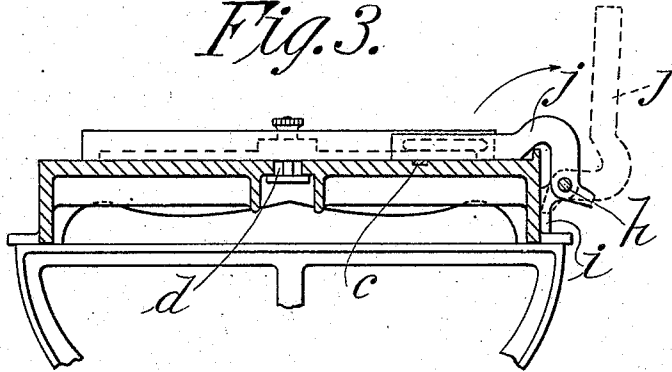


Fig. 4.

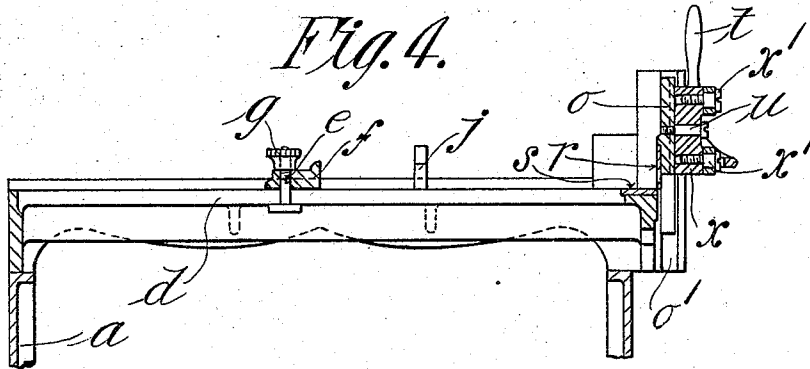
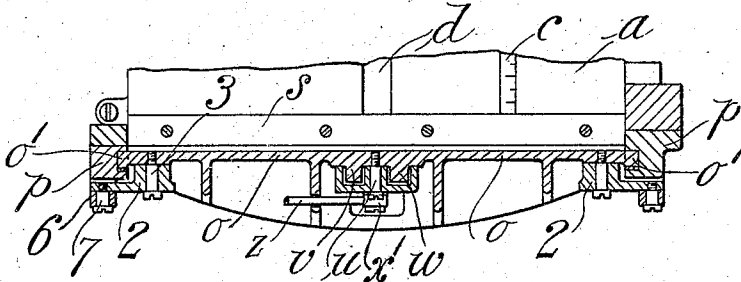


Fig. 5.



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HAROLD F. DUNBAR, OF TURNERS FALLS, MASSACHUSETTS.

PAPER-TRIMMING MACHINE.

No. 930,744.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed March 8, 1909. Serial No. 482,013.

To all whom it may concern:

Be it known that I, HAROLD F. DUNBAR, a citizen of the United States of America, residing at Turners Falls, in the county of Franklin and State of Massachusetts, have invented new and useful Improvements in Paper-Trimming Machines, of which the following is a specification.

This invention relates to improvements in paper-trimming machines, the object of the invention being, primarily, to provide a machine that will readily and accurately trim the four edges of a sheet of paper with two operations of the trimming knife, after the sheet of paper has been folded twice so that all four edges will be trimmed in two operations of the cutter. Broadly stated, the machine comprises a platform or table that is provided with a scale, and two abutments or stops that can be moved over the scale for determining the length and breadth of the sheet, one of the stops being so connected with the table that it can be swung or moved away from the top of the table, while two of the edges of the sheet are being trimmed.

The invention further consists in such an arrangement of the cutting knife and the stops so that when a sheet of paper is folded in two directions and one of the folded parts of the sheet is placed against one stop, two of the edges can be trimmed, and when the other folded part of the sheet is placed against another stop, the remaining two edges of the sheet may be trimmed.

In the drawings forming part of this application,—Figure 1 is an end elevation of the machine showing the lever and link mechanism for operating the knife. Fig. 2 is a plan view looking down on the top of the table and illustrating the two adjustable stops. Fig. 3 is a transverse sectional view on the line 3—3, Fig. 2, showing one of the stops in dotted lines when it is lifted away from the top of the table and the scale. Fig. 4 is a vertical longitudinal sectional view on the line 4—4, of Fig. 2, and illustrating the adjustable stop which moves in a groove in the top of the table and also showing the construction of the cutter-knife. Fig. 5 is a horizontal sectional view on line 5—5, Fig. 1, illustrating the eccentric construction for operating the knife.

Referring to the drawings in detail, the supporting framework of the machine is indicated by *a* and the table by *b*, with a guide-rib *b*¹. Extending longitudinally of

the machine is a suitably graduated scale *c* that is embedded in the top of the table and flush with its upper surface, as shown in Fig. 3. Extending parallel with the scale *c* is a slot *d* in the table, and passing through the slot is a bolt *e* for adjustably and rigidly locking a stop *f* with the top of the table, the locking being effected by means of the thumb-nut *g*. Referring to Fig. 2, it will be seen that the stop *f* extends practically the width of the table and over the scale *c*. Extending parallel with the scale *c* and the slot *d* is a shaft *h* that is rotatably mounted in the bearing-blocks *i*. *j* designates a second stop that is connected to the shaft *h* by means of the sleeve *k*. As seen in Fig. 2, the stop *j* extends over the scale *c* and is adapted to be locked to the shaft *h* by means of the thumb-nut *m*. The stop *j*, as will be seen in Fig. 3, can be rotated into the dotted line position by simply lifting the same away from the table, the shaft *h* to which this stop is locked at the same time turning in the bearings *i*.

Referring now to the construction of the cutter: *o* designates the main or body portion of the cutter that is adapted to slide in a groove *o*¹ of the vertically arranged guide-ways *p*, which are bolted or secured to the frame of the machine, as shown at *q*. The lower edge of the cutter *o* is provided with the hardened plate *r* which works against a plate *s*, also hardened, and secured to the forward end of the table *a* in the usual manner. *t* designates the operating handle for the cutter-blade carrier *o*. This handle is pivotally secured to the blade *o* by means of a bolt *u*, as shown in Figs. 4 and 5. The inner and lower part of the handle *t* is provided with an annular recess *v* for receiving an annular boss or rib *w*, as clearly illustrated in Fig. 5. The lower portion of the handle *t* is made circular or disk-shaped, as shown in Fig. 1 at *x*.

Pivotally connected to the disk-shaped portion *x* of the handle at *x*¹, are two links *y* and *z*, that extend in opposite directions and transversely of the machine, to bell-crank or elbow levers 2 which are pivotally connected to the cutter-blade *o*, at the point 3. The links *y* and *z* are pivotally connected to the levers 2 at 4.

6 designates links that are pivotally connected to the elbow-levers 2 at the point 7, and to the guide-ways *p*, at the point 8.

The operation of the machine is as fol-

lows, when it is desired to trim a sheet of paper: The operator first folds a sheet in two directions at right angles to each other: Next the operator places one of the folded
 5 edges of the paper against the stop *f* having set the stop so as to give the proper size to the sheet when trimmed. The distance, as measured on the scale *c* from the plate *r*
 10 to the stop *f* is equal to one-half of the length of the sheet, when cut. Upon the operation of the knife, two of the edges of the paper are trimmed at one operation. It should be understood that the stop *j* is elevated away from the table, as shown in dotted
 15 lines in Fig. 3. The next step is in turning the stop *j* downward onto the table *a*. The folded sheet is turned through 90° and its second folded edge is placed against the stop *j* when the other two edges of the sheet
 20 are trimmed, which completes the trimming operation. The links 6 serve as supporting fulcrums for the elbow-levers 2 and the operating handle *t* rises with the knife *o* during the cutting operation.
 25 From the construction herein described, it is clear that both ends of the knife will be operated in unison, and a parallel motion imparted to the knife.

What I claim, is:—

- 30 1. A paper-trimming machine having in combination with a table and a scale embedded therein, stops overlapping the scale, independent means for permitting the stops to be moved over the scale and at a spaced
 35 distance from each other, a cutter in parallel relation to the stops, means for operating the cutter, whereby a folded sheet of paper may be trimmed on four edges with two operations of the knife, as described.
- 40 2. In a paper-trimming machine, a table, a knife, a knife guide for the same, a handle pivoted to said knife, elbow-levers pivoted to the knife, links pivotally attached to the

guides, elbow-levers, and handle, respectively, whereby a parallel motion may be
 45 imparted to the knife.

3. In a paper-trimming machine, a table, a knife, guides for the same, a handle pivoted to said knife, elbow-levers pivoted to the knife, links pivotally attached to the
 50 guides, elbow-levers, and handle, respectively, whereby a parallel motion may be imparted to the knife, a pair of stops arranged in parallel relation to the edges of the knife, and means for swinging one of
 55 the stops away from the table, as described.

4. In a paper-trimming machine, a table, a knife, guides for the same, a handle pivoted to said knife, elbow-levers pivoted to the knife, links pivotally attached to the
 60 guides, elbow-levers, and handle, respectively, whereby a parallel motion may be imparted to the knife, a pair of stops arranged in parallel relation to the edge of the knife, means for swinging one of the
 65 stops away from the table, said means including a pivotally mounted rod, and means for adjustably locking said stop to the rod.

5. A paper-trimming machine having in combination with a table and a scale embedded therein, stops overlapping the scale,
 70 independent means for permitting the stops to be moved over the scale and at a spaced distance from each other, a cutter in parallel relation to the stops, means for operating the
 75 cutter, said means including guides for the cutter, a handle pivoted to said cutter, elbow-levers pivoted to the cutter, links pivotally attached to said guides, elbow-levers, and handle, respectively, whereby a parallel
 80 motion may be imparted to the knife.

HAROLD F. DUNBAR.

Witnesses:

A. R. SMITH,
 W. B. MARSTON.