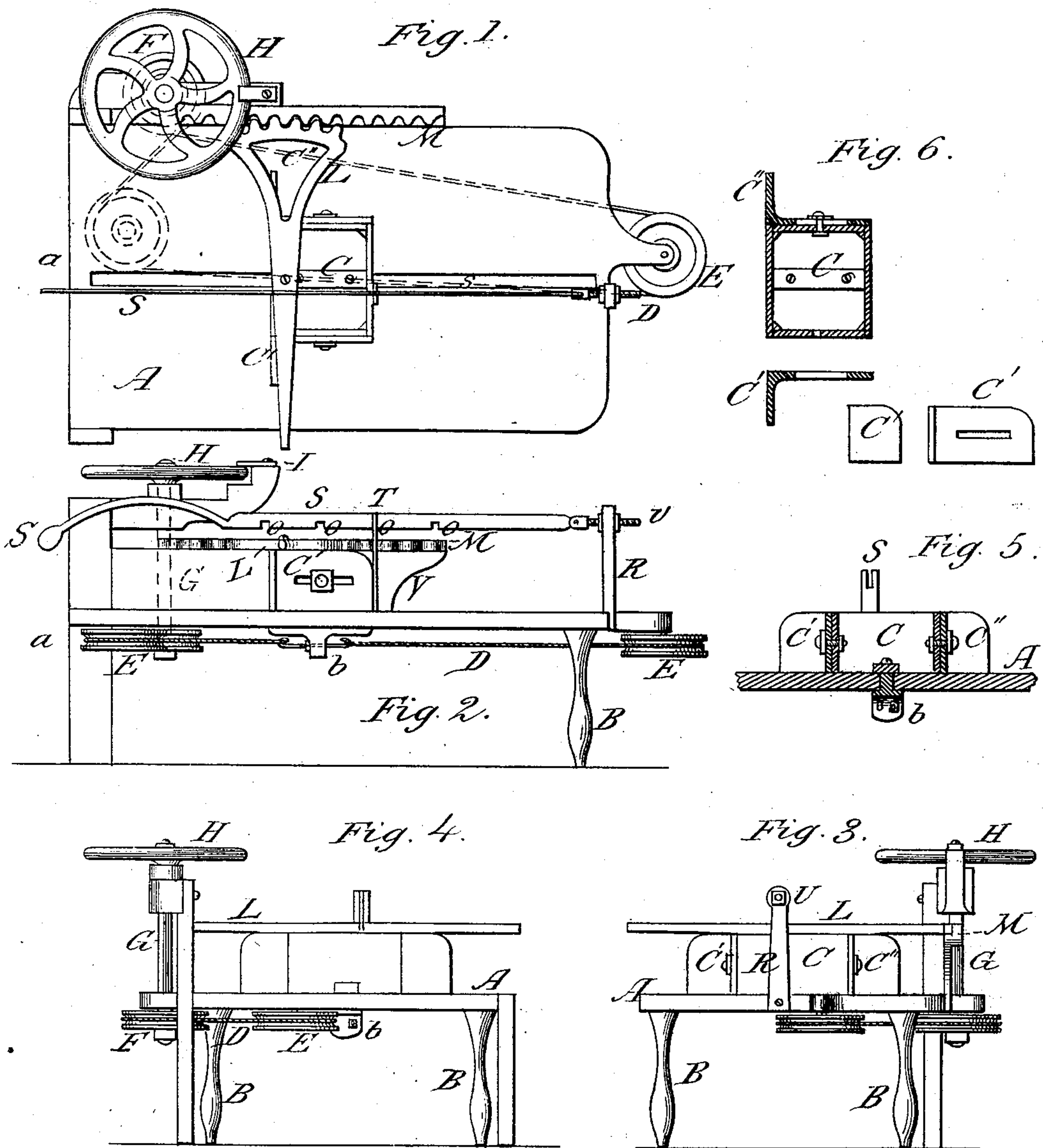


C. CRANSTON.  
Gage for Paper-Cutting Machines.

No. 206,230.

Patented July 23, 1878.



Attest:

Ernest Webb  
Mortimer blanks

Inventor.

Charles Cranston,  
by Atty,  
J. C. Clayton.

# UNITED STATES PATENT OFFICE.

CHARLES CRANSTON, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF  
HIS RIGHT TO EZRA J. STERLING, OF SAME PLACE.

## IMPROVEMENT IN GAGES FOR PAPER-CUTTING MACHINES.

Specification forming part of Letters Patent No. **206,230**, dated July 23, 1878; application filed  
November 19, 1877.

*To all whom it may concern:*

Be it known that I, CHARLES CRANSTON, of Brooklyn, Kings county, State of New York, have invented certain new and useful Improvements in Gages for Paper-Cutting Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification.

In the drawings, Figure 1 is a plan view; Fig. 2, a side elevation; Fig. 3, a rear-end elevation; Fig. 4, a front-end elevation; and Figs. 5 and 6 are detail views of the adjustable triple gage.

My invention chiefly consists in the construction and operation of a three-part or triple gage, so that the process of cutting the three sides of pamphlets at once may be carried on upon the same machine; also, in the peculiar manner of moving and stopping the gages of paper-cutters, all of which will fully appear hereinafter.

In the drawings, A represents the table of the cutting-machine, the knife passing the front end, *a*; B, the legs; C, the triple gage, consisting of the box-gage C, provided with a sliding piece, *b*, so that the gage slides in its slot *s* in the table. This constitutes the gage for ordinary work.

C<sup>1</sup> and C<sup>2</sup> are, respectively, sliding gages, sliding upon opposite sides of the box-gage C, so that the combined triple gage C C<sup>1</sup> C<sup>2</sup> may present at once three different gages or distances from the cutting-edge *a*, as shown at *x y z*, Fig. 1; or the faces of the three gages may be in the same line, making one broad-faced gage for wide work.

My triple gage is moved by a chain, cord, or belt, D, the opposite ends of which are secured under the table to the ends of the sliding piece *b*. Cord D then passes over pulleys E E, at opposite ends of the table, and is fastened to winding-wheel F on the shaft G. The upper end of the shaft G has a hand-wheel, H, at the front of the table, convenient to the operator.

By turning the wheel H the cord D is made to draw the gage from front to rear of the table, as may be required.

I is a clamp-screw, acting upon the periphery of the hand-wheel, so as to set or lock it at any desired position. If desired, there may be a scale or series of measures marked on the wheel, so as to indicate the desired position of the gage.

When I wish to work at the side of the machine, instead of moving the gage by means of the cord D, as above described, I use the cogged quadrant-lever L, pivoted to the box-gage C, and operating in the rack M at the side of the table. The rack M, as shown, rests upon the side gage V.

S is a lever, acting as a positive stop to prevent change of gage. One end of it is pivoted to a standard, R, at rear end of table. The other end is to be raised or lowered by a handle convenient to the operator. The under edge of this stop S is provided with a series of notches, *o*, which gripe the upper edge of a standard, T, affixed to the gage. When the stop is thus set, by gripping the standard T the gage cannot move backward or forward, and perfect accuracy and uniformity of a given gage is secured for any number of cuts. The width and shape of the notches vary to suit the work to be done.

Some of the notches *o* are made about one-eighth of an inch wider than the top edge of the standard T, for the following reason: In cutting flat-caps or other similar work the gage is drawn to the proper point for the first cut, and set by stop S, the standard T engaging in the notch *o'* against the rear edge of the notch. After making this first cut, the flat-cap is reversed, and the gage is drawn forward about one-eighth of an inch, the standard T moving that distance in its special notch. The trimming is then removed. The other edges of the paper are then cut in like manner, the gage, of course, being changed in the notches for different-sized cuts.

I have fully described the stop S; but I do not limit myself to any particular form of rigid stop. A simple rigid rod, acting by nuts and screw upon the gage, will answer a good purpose.

U is a set-screw, worked by nuts and carried in upper end of standard R. The end of the



stop-lever S is pivoted in the head of screw U, which is used for exact or micrometer adjustment of the gage.

The construction and operation of my invention are fully shown in the drawings, which are working drawings. In ordinary work, such as cutting flat-caps or cards, I use only the gage C; or, if the work is wide, the faces of gages C<sup>1</sup> and C<sup>2</sup> are secured in line with face of gage C, as shown in Fig. 1.

In pamphlet or book work, three cuts are made—for fronts, heads, and tails—thus requiring three different gages of cut. For this work my triple gage is especially adapted. The gage C is drawn and secured in proper position for cutting the fronts. Gage C<sup>1</sup> is then moved backward and set for proper cut of heads. Gage C<sup>2</sup> is then moved a little farther backward and set for proper cut of tails. It will now be seen that this triple gage presents three different gages, all acting at once, so that the cutting-knife may at one stroke cut the fronts, heads, and tails of the three piles of books respectively set against the

three faces of the triple gage, and fed rapidly by, if needed, three operatives. Superior accuracy and speed are secured by my invention.

I claim as my invention—

1. The triple gage composed of slide-gage C, provided with the longitudinally-adjustable side gages C<sup>1</sup> C<sup>2</sup>, whereby the fronts, heads, and tails of book-work can be simultaneously cut.

2. The rigid stop-bar S, provided with notches, in combination with a sliding gage, substantially as described.

3. The combination, with the sliding gage, of a stop-bar having special elongated notches for permitting the adjustment of the gage therein, substantially as and for the purpose described.

In testimony that I claim the above invention I have hereunto signed my name this 17th day of November, 1877.

CHARLES CRANSTON.

Witnesses:

J. C. CLAYTON,

LEONARD A. GIEGERICH.