

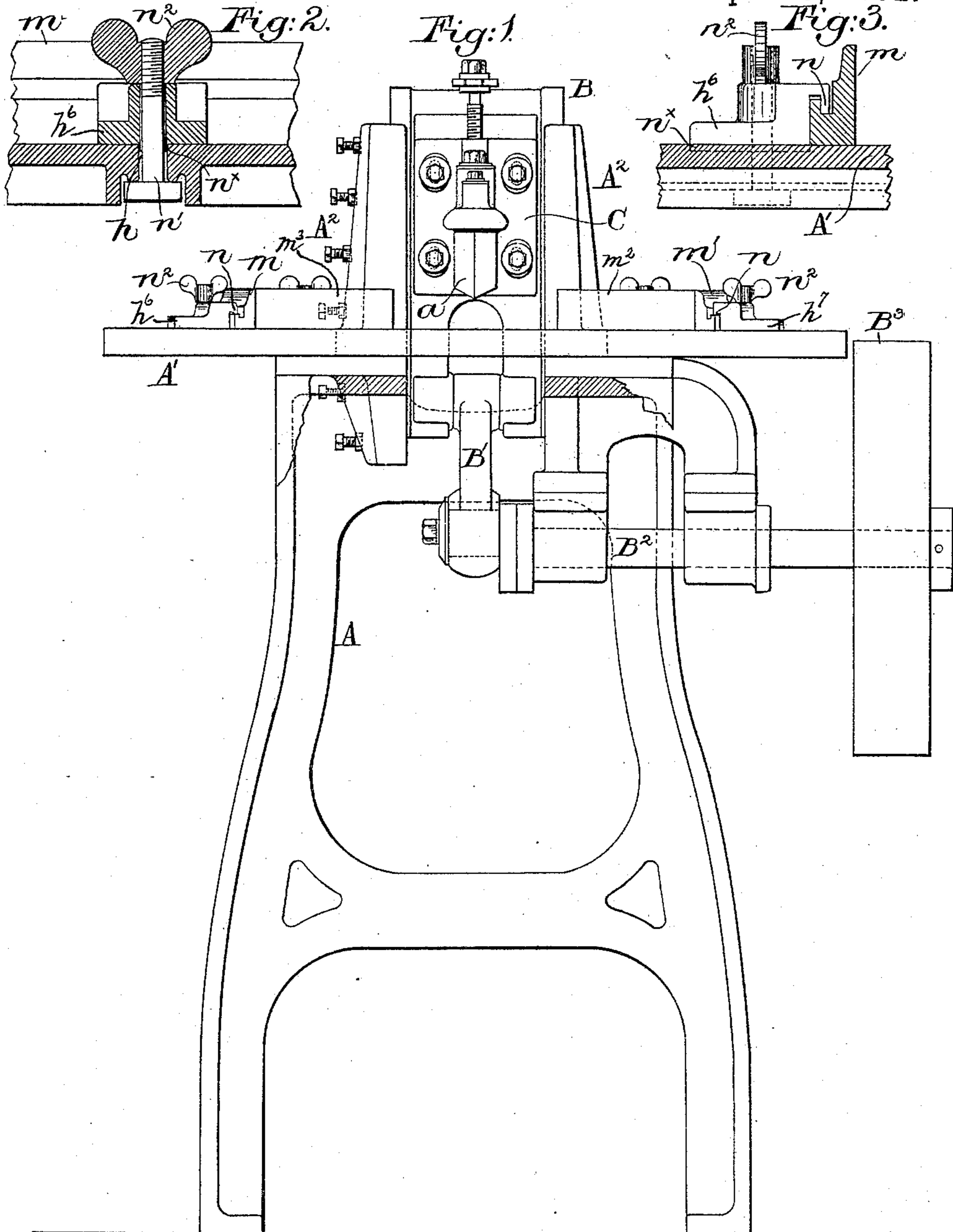
(No Model.)

2 Sheets—Sheet 1.

E. H. TAYLOR.  
CORNER CUTTER FOR PAPER BOX BLANKS.

No. 473,859.

Patented Apr. 26, 1892.



Witnesses:  
Louis McGrawell  
Fred S. Grunkeaf.

Inventor:  
Eugene H. Taylor  
by Leroy Gregory attys.

(No Model.)

2 Sheets—Sheet 2.

E. H. TAYLOR.

## CORNER CUTTER FOR PAPER BOX BLANKS.

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*Fig: 5.*

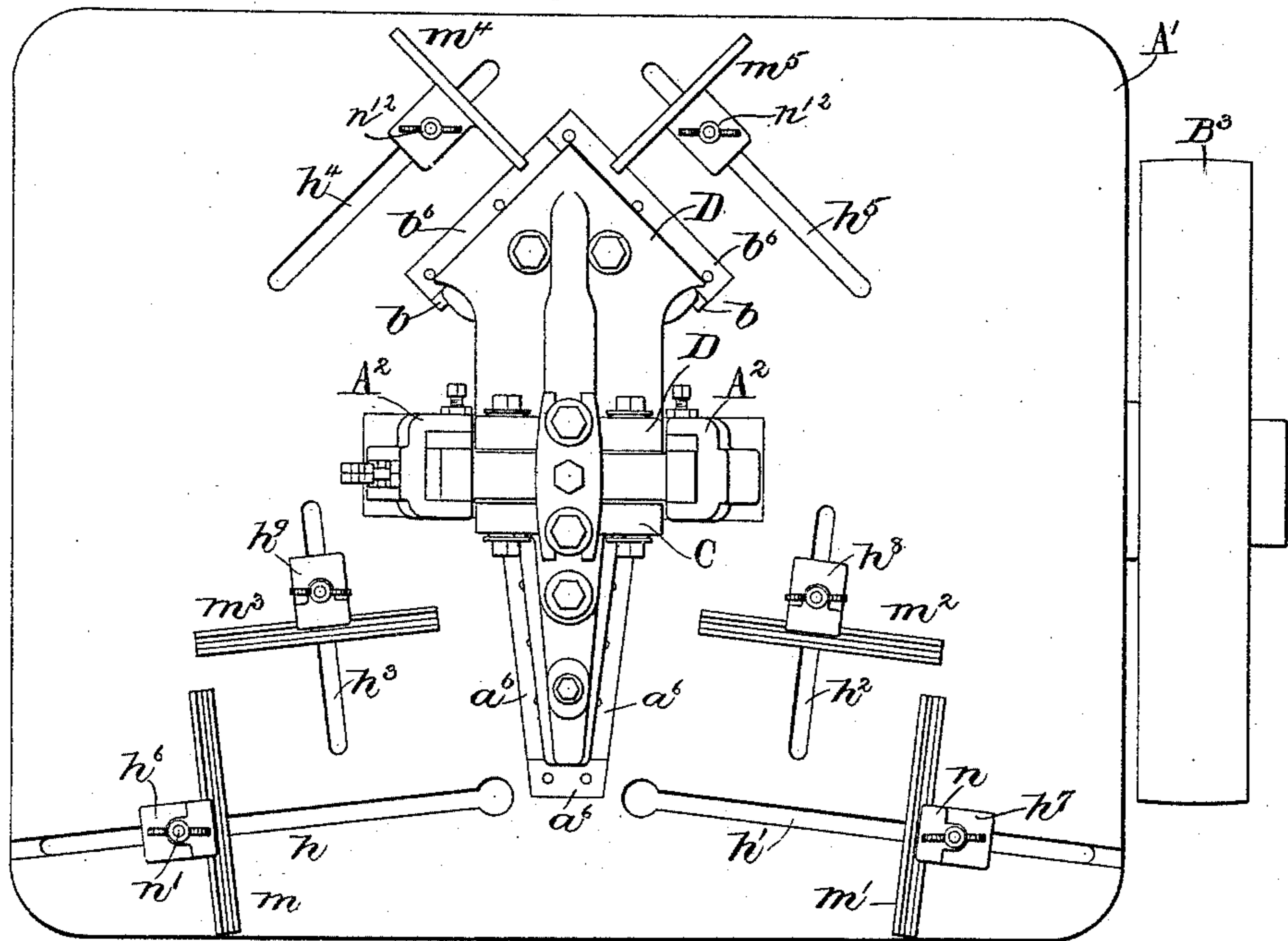
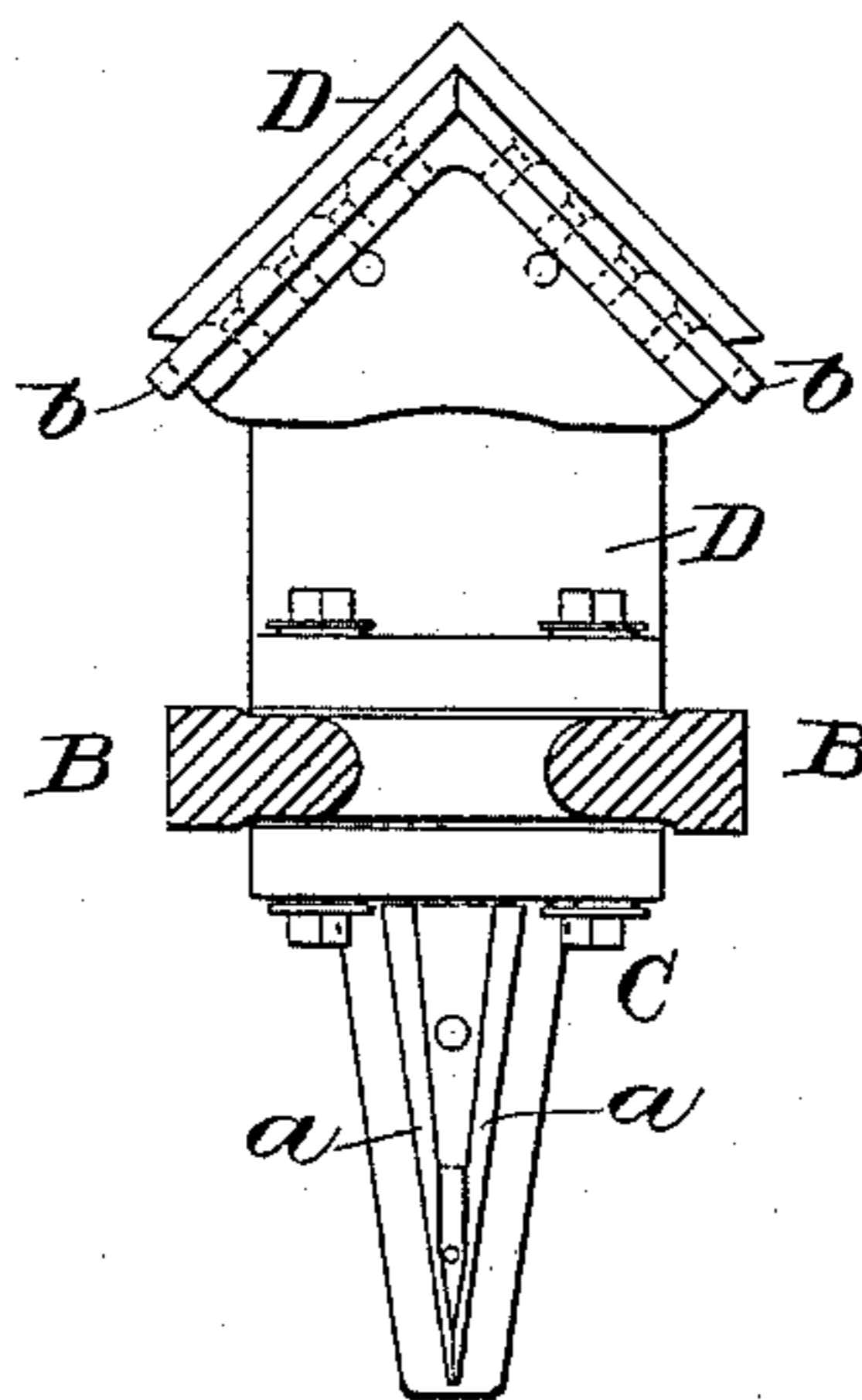
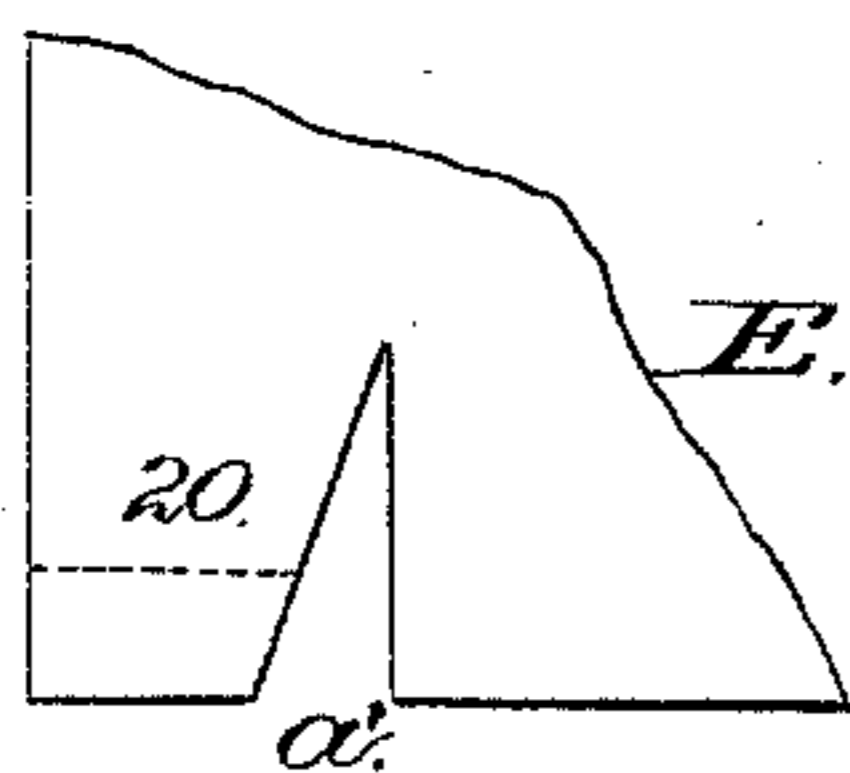


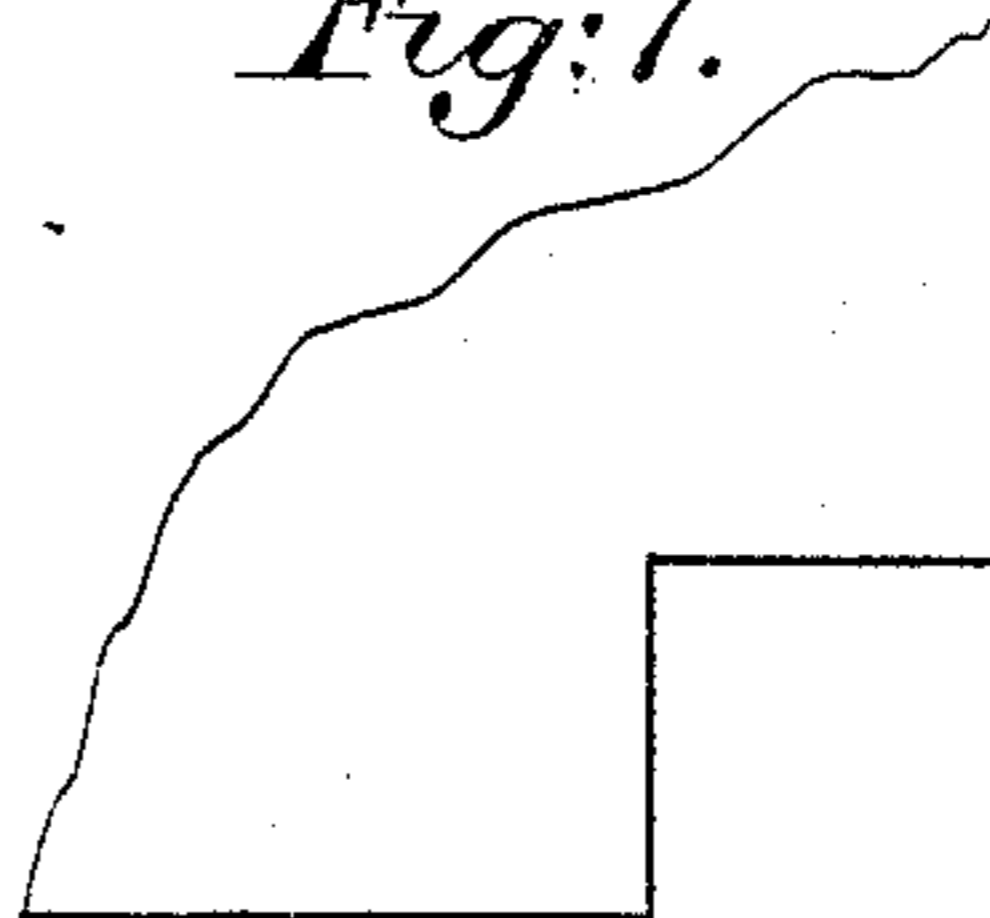
Fig. 4.



*Fig: 6.*



*Fig: 7.*



*Witnesses.*

Go. C. Hunting.  
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*Inventor:*

Eugene H. Taylor,  
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# UNITED STATES PATENT OFFICE.

EUGENE H. TAYLOR, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE CUSHMAN PAPER BOX MACHINE COMPANY, OF PORTLAND, MAINE.

## CORNER-CUTTER FOR PAPER-BOX BLANKS.

SPECIFICATION forming part of Letters Patent No. 473,859, dated April 26, 1892.

Application filed September 29, 1890. Serial No. 366,707. (No model.)

*To all whom it may concern:*

Be it known that I, EUGENE H. TAYLOR, of Lynn, county of Essex, State of Massachusetts, have invented an Improvement in Corner-Cutters for Paper-Box Blanks, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object the production of a simple rapid-working machine for cutting into and shaping the corners of paper blanks to be made into boxes.

My improved machine has a cross-head provided with two different shaped knives.

My invention consists, essentially, in the bed and its attached plates, combined with the cross-head and its attached cutter-carriers and cutter to notch a blank, and adjustable corner-gages located on the same side of the cutter and their holding-blocks, substantially as will be described.

Other features of my invention will be pointed out in the claims at the end of this specification.

Figure 1, in elevation partially broken out, shows a corner-cutting machine embodying my invention. Figs. 2 and 3 are details to be referred to; Fig. 4, a view of the under side of the cross-head and its knives. Fig. 5 shows a plan view of the machine, with the bed, its gages, and the stationary knives; and Figs. 6 and 7, parts of a blank, showing shapes of notches to be cut.

The frame of the machine consists, essentially, of legs A and a table or bed A', mounted thereon. From this bed rise guideways A<sup>2</sup>, in which is fitted to slide a cross-head B, to which is attached in adjustable manner knife-carriers C and D. The knife-carrier C has attached to it adjustably a knife *a*, which is V-shaped and so placed as to cut a notch, as *a'*, in the blank E. (Shown separately in Fig. 6.) The knife-carrier D has attached to it a knife *b*, the shape of the cutting-edge of which is as best represented in Fig. 4, it being adapted to cut out from the corner of the blank a right-angled notch, (see Fig. 7,) or to cut off the ends of the lip 20 left by the action of the V-shaped cutter *a*, as is desirable in the manu-

facture of some kinds of boxes. (See dotted line, Fig. 6.)

The cross-head B has jointed to its lower end a link B', which surrounds a crank-pin at the inner end of a rotating shaft B<sup>2</sup>, having suitable bearings in the frame-work, the said shaft having in practice mounted upon it a suitable belt-pulley B<sup>3</sup>, adapted to be driven by power from any suitable source.

The bed-plate has slots *h h' h<sup>2</sup> h<sup>3</sup>*, in which are made adjustable the blocks *h<sup>6</sup> h<sup>7</sup> h<sup>8</sup> h<sup>9</sup>*, holding the guides *m m' m<sup>2</sup> m<sup>3</sup>*, which in practice are set in the proper position, according to the box to be made. Each block has a like lip *n* to enter a groove in the top of the guide and at their lower sides projections *n<sup>x</sup>* (see Figs. 2 and 3) to enter the slots, which aid in guiding said blocks, each block being shown as held in adjusted position by a bolt *n'*, having a thumb-nut *n<sup>2</sup>*. The slots *h<sup>4</sup> h<sup>5</sup>* receive suitable projections at the lower sides of the gages *m<sup>4</sup> m<sup>5</sup>*, so that they are held in adjusted position by suitable bolts *n<sup>12</sup>*, (see Fig. 5,) which correspond with those marked *n'* and adapted to hold the blocks *h<sup>6</sup> h<sup>7</sup>* in adjusted position. These gages may be adjusted toward or from each other, according to the size of the blank to be cut. The bed-plate in practice will have suitable steel plates, as *a<sup>6</sup> b<sup>6</sup>*, fastened to or let into it, they having their inner edges parallel to the cutting-edges of the cutters *a* and *b*, the said plates constituting the lower members of the cutters. These gages *m<sup>2</sup>* and *m<sup>3</sup>* are adjustable not only in the direction of their length, but also at right angles thereto by the blocks *h<sup>8</sup> h<sup>9</sup>*.

The gages *m* and *m<sup>3</sup>* constitute a pair and the gages *m'* and *m<sup>2</sup>* another pair, one pair of gages being used to position the blank when the edge near one corner is to be provided with a diagonal or inclined notch *a'*, (see Fig. 6,) the other pair of gages positioning the blank when a notch is being made in the same edge of the blank, but near its opposite end.

It is necessary to cut the notches (shown at *a'* in Fig. 6) at an angle, and to insure this the gages *m<sup>2</sup>* and *m<sup>3</sup>* are inclined with relation to a line drawn through the machine from front to back and intersecting the corner angles of the cutters; or, in other words, the

gages  $m^2 m^3$  are set at right angles to the edge of the blade  $a$  nearest to them.

The gages  $m'$  and  $m$  are set at right angles to the faces, respectively, of the gages  $m^3$  and  $m^2$ .

I claim.—

1. The bed and its attached plates  $a^6$ , combined with the cross-head and its attached cutter-carrier C, and the cutter  $a$  to notch a blank, and with the adjustable independent gage-holding blocks located at the same side of the cutter, and the corner-gages  $m m^3$ , each adjustable longitudinally in its holding-block, substantially as described.

2. In a machine for notching blanks, a cross-head, a cutter-carrier, and cutter, combined with the table, and the gages  $m m' m^2 m^3$ , and adjustable holders in which they are made adjustable, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EUGENE H. TAYLOR.

Witnesses:

GEO. W. GREGORY,  
ANNIE S. WIEGAND.