

No. 658,323.

Patented Sept. 18, 1900.

G. REECE.

MECHANISM FOR FOLDING COLLAR BLANKS.

(Application filed June 6, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

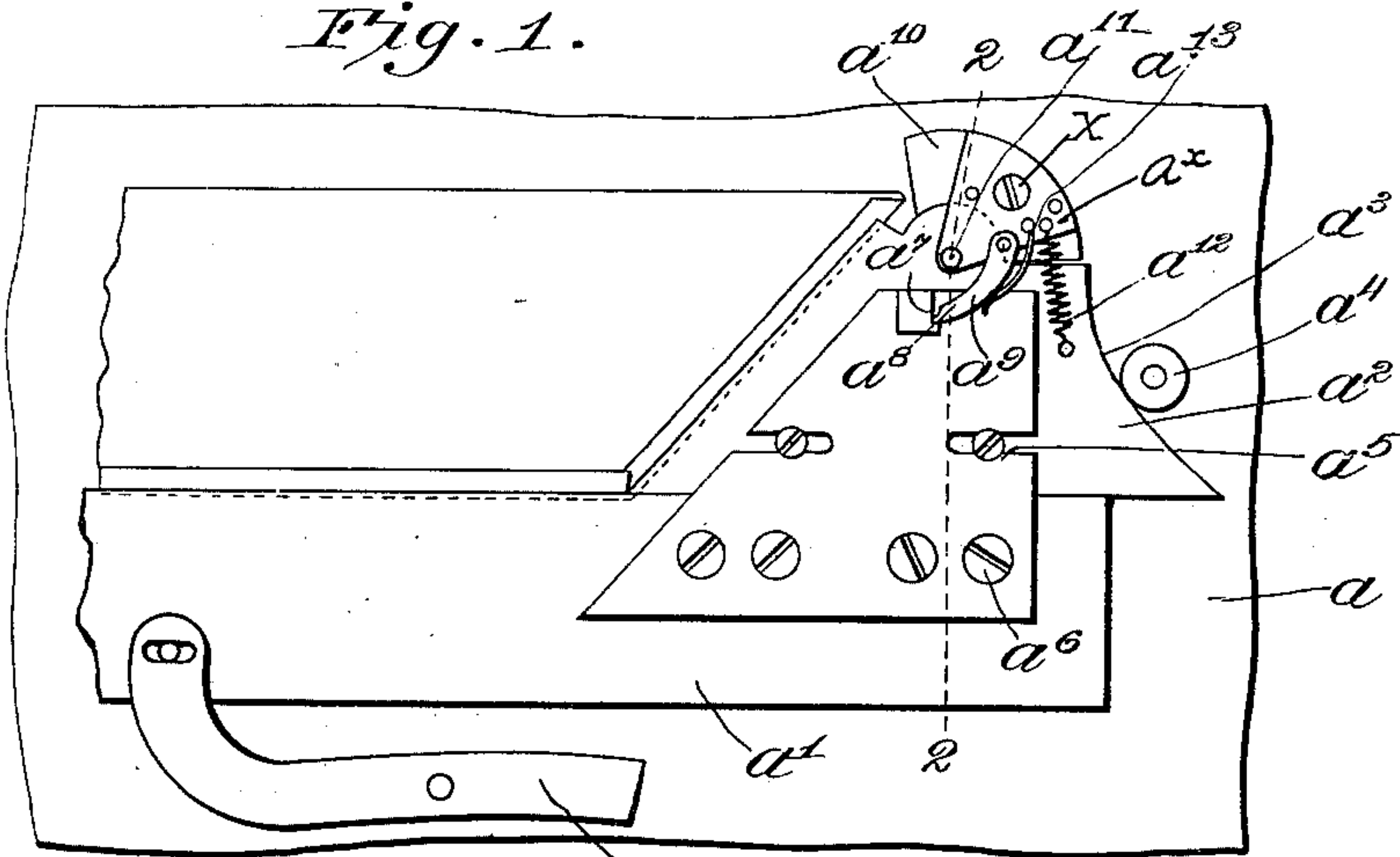


Fig. 3. a^2x

Fig. 4.

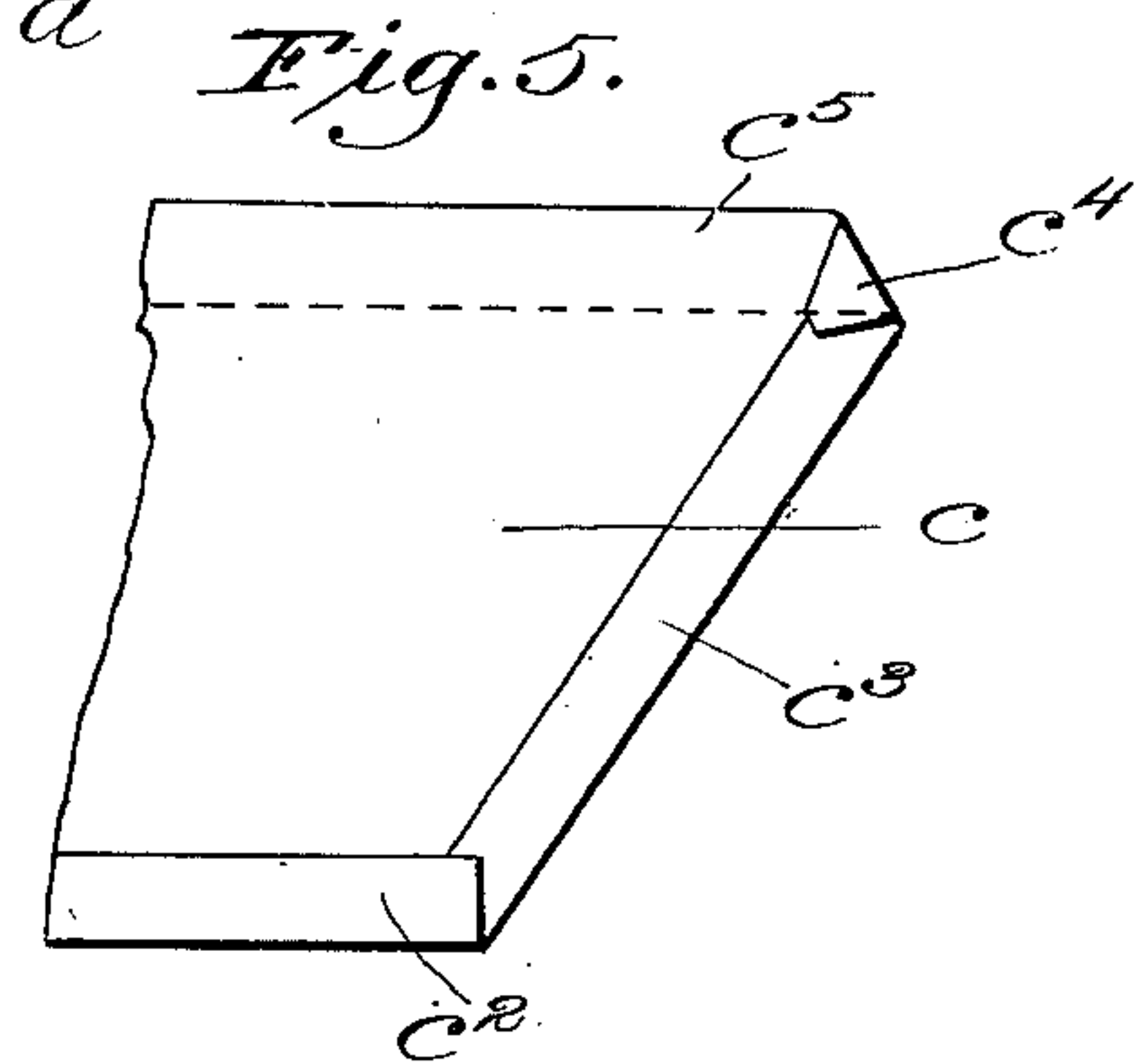
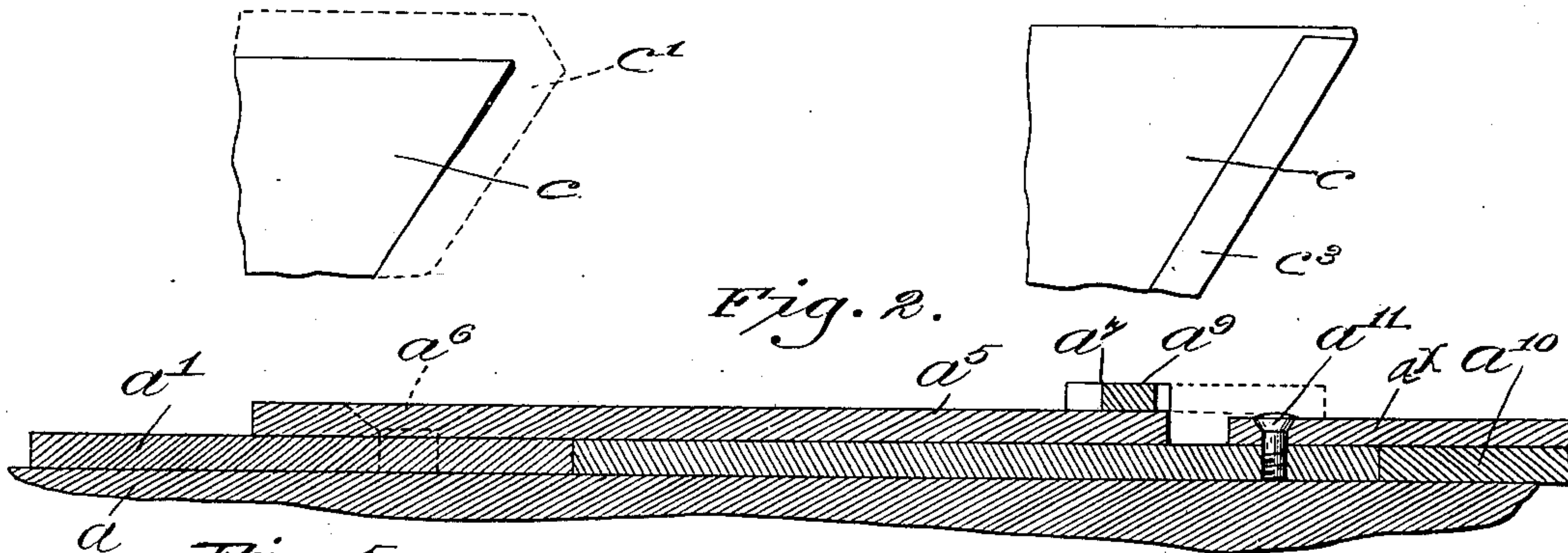
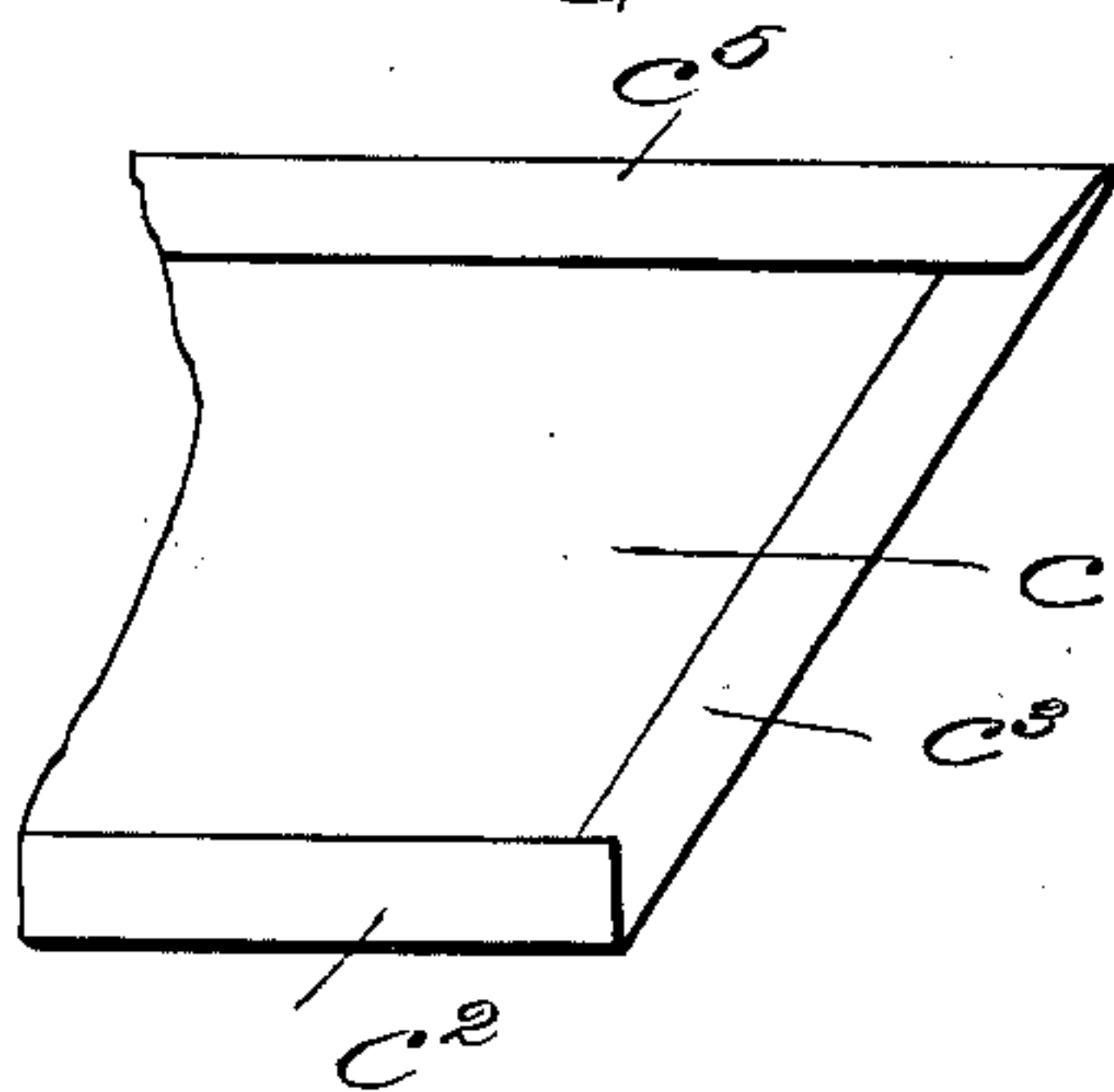


Fig. 6.



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2 Sheets—Sheet 2.

Fig: 7.

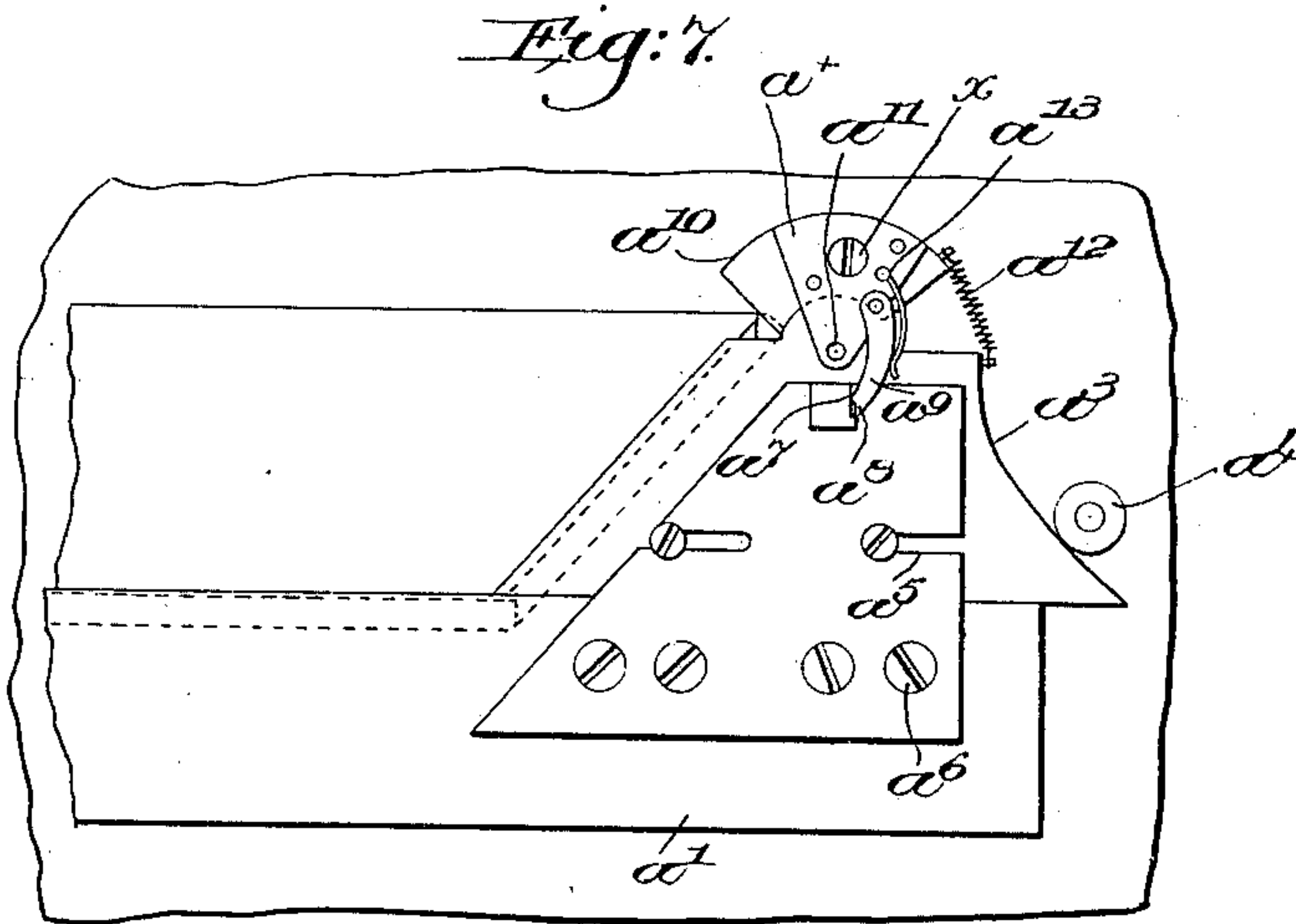
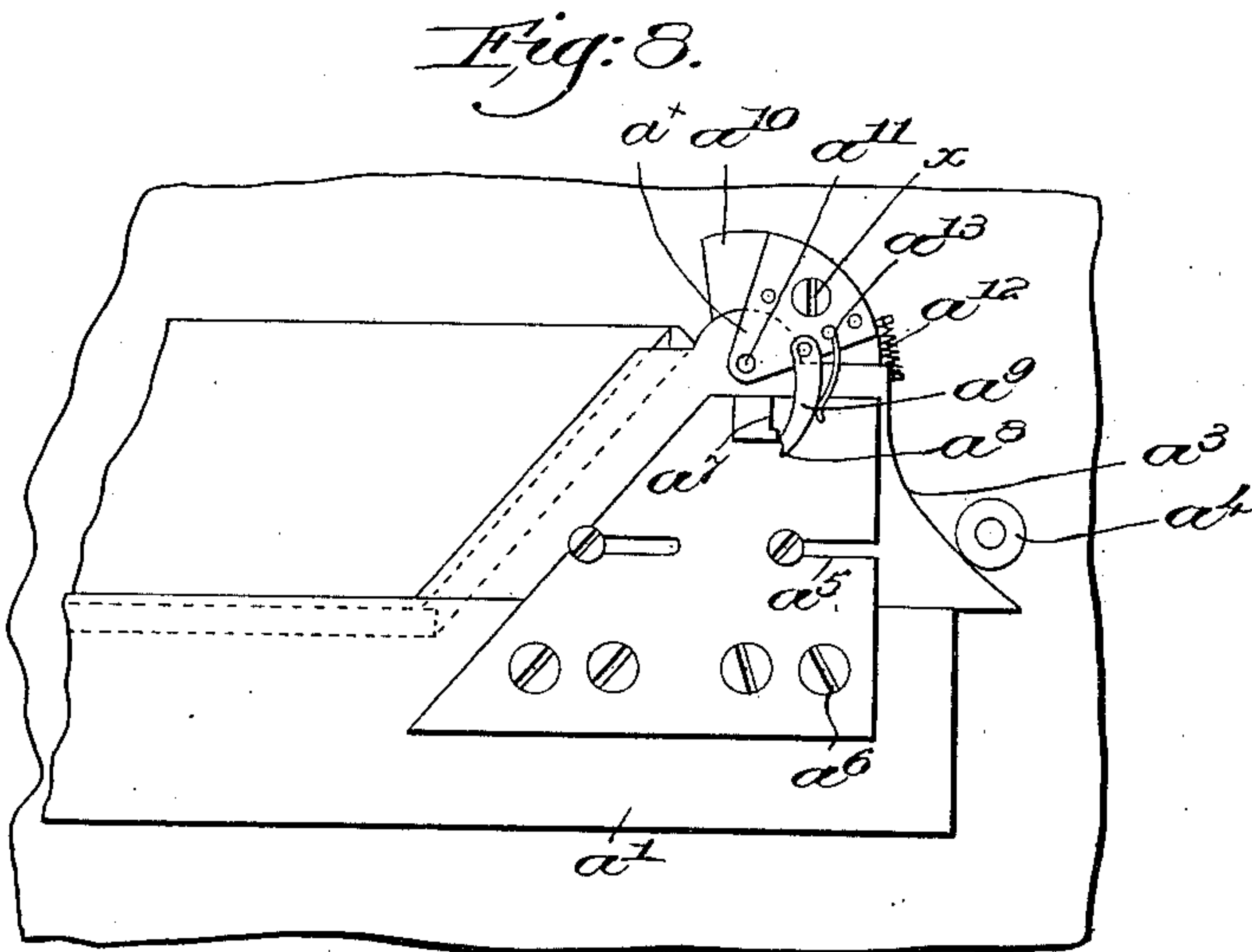


Fig: 8.



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# UNITED STATES PATENT OFFICE.

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## MECHANISM FOR FOLDING COLLAR-BLANKS.

SPECIFICATION forming part of Letters Patent No. 658,323, dated September 18, 1900.

Application filed June 6, 1900. Serial No. 19,223. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE REECE, a citizen of the United States, and a resident of Wollaston, county of Norfolk, State of Massachusetts, have invented an Improvement in Mechanism for Folding Collar-Blanks and the Like, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My present invention is a mechanism for making a corner fold such as is required in certain articles—as, for instance, a linen or other collar.

Within a few years successful efforts have been made in folding collar-blanks and the like automatically by machinery instead of by hand, as formerly, and it has therefore become necessary to provide folding mechanism for making all the various peculiar kinds of folds required by the different styles and patterns of collars, cuffs, &c. Among these styles it is sometimes necessary to fold an extremely sharp or acute corner, and accordingly I have devised a folding blade or mechanism in which while the longitudinal or edge fold is being made the end fold will be simultaneously formed and at the same time the acute or sharp-angled corner fold will be neatly and deftly made in such a manner as to prevent any possibility of a ragged protruding edge being formed.

The constructional details of my invention will be more particularly pointed out in the course of the following description, and the invention itself will be thereafter more definitely set forth in the appended claims.

In the drawings, in which I have shown one embodiment of my invention, Figure 1 is a top plan view of a sufficient portion of the mechanism to render my invention intelligible. Fig. 2 is an enlarged detail, in vertical cross-section, taken on the line 2 2, Fig. 1. Figs. 3 to 6 are diagrammatic views illustrating the folds and manner in which the same are made. Figs. 7 and 8 are top plan views of the mechanism, showing the same respectively in the position making the fold at the acute-angled corner and in position just after

said corner has been made and the folding finger or blade has resumed its original position.

It will be understood that I have omitted all the general details of the folding-machine with which my mechanism may be used, inasmuch as I intend it for use with any machine capable of general folding work and especially with a machine of the general character known in the trade as the "Reece folding-machine."

Referring to Figs. 1 and 2, it will be seen that I mount upon the bed  $a$  of the machine a front folding-blade  $a'$ , which may be operated in any suitable manner, and for convenience of illustration I have herein indicated a simple lever  $a^{2x}$  as a convenient operating means. Adjacent the end and bearing against the forward edge of the edge folding-blade  $a'$  is an end folding-blade  $a^2$ , having an inclined or cam surface  $a^3$ , bearing against a roller  $a^4$ , mounted in the bed of the machine, this end folding-blade being held and guided by any suitable means, as by an overlying plate  $a^5$ , secured at  $a^6$  to the blade  $a'$ . At the forward or free end of the plate  $a^5$  is a cam-lug or bearing-surface  $a^7$ , against which bears the free end  $a^8$  of an arm  $a^9$ , which together constitute a tripping device, pivotally mounted on a folding-finger  $a^{10}$ , shown as secured by a screw  $x$  to a carrier  $a^x$ , pivoted at  $a^{11}$  to the curved end of the end folder  $a^2$  and normally held back by a spring  $a^{12}$ . Quick movement is given to said finger by any suitable means, as by the said arm  $a^9$ , normally held by a spring  $a^{13}$  against the block or bearing-surface  $a^7$ .

A collar having the sharp corner above mentioned is indicated at  $c$ , and the blank from which said collar was folded is indicated in dotted lines at  $c'$ , the successive folds being shown in Figs. 4 to 6.

The operation of the above-described mechanism is as follows: The blank having been put in position and held in place by a suitable die or other holding means, the lever  $a^{2x}$  is operated so as to move forward the folding-blade  $a'$ , which lies over the lower edge  $c^2$  of the collar-blank. Simultaneously with this move-



ment the end blade  $a^2$  is caused to move to the left, Fig. 1, by reason of the engagement of its surface  $a^3$  with the roll  $a^4$ , and accordingly the end fold  $c^3$  is made substantially at the same time or, if preferred, immediately subsequent to the infolding of the edge  $c^2$ . While the end fold is being made the arm  $a^9$  is brought into engagement with the surface  $a^7$ , because of the sliding or lateral movement of the end blade  $a^2$ , and this engagement quickly swings the finger  $a^{10}$  around on its pivot  $a^{11}$ , so as to fold over the corner fold  $c^4$ , this movement cooperating with the folding movement of the end blade  $a^2$  in such a way as to infold and plait or crease down the corner neatly without any liability of any portion thereof projecting over the end fold. Inasmuch as in this class of machines the opposite edge fold  $c^5$  will be immediately made by another blade (not shown) it is necessary that this corner fold  $c^4$  should be made quickly and accurately and that the folding means which forms it should immediately get out of the way of the inwardly-moving blade which makes the fold  $c^5$ , and accordingly this is accomplished in the present instance by the passage of the arm  $a^9$  out of engagement with the surface  $a^7$  by the final inward movement or completion of movement of the end folding-blade, thereby permitting the spring  $a^{12}$  instantly to retract the finger  $a^{10}$  to its normal position.

It will be seen that the various movements above explained are all accomplished with exceeding rapidity and are due to the inward movement of the folding-blade  $a'$ . It will also be understood that this mechanism with slight modifications may be adapted to folding a corner in any situation desired, and, furthermore, that various changes and modifications may be resorted to without departing from the spirit and scope of my invention.

Having described my invention, what I

claim as new, and desire to secure by Letters Patent, is—

1. A mechanism for making a corner fold, comprising an inwardly-moving blade, means to move the same, a cooperating blade operated by the movement of said first-mentioned blade for infolding a fold at an angle to said first-mentioned blade, and means carried by the free end of said second blade for infolding a corner and laying the material at said corner over toward the first-mentioned blade, said means being actuated by the cooperating movement of said two folding-blades.

2. A mechanism for making a corner fold, comprising an inwardly-moving blade for infolding one edge of the material at said corner, a folding-finger carried by said blade, and means actuated by the movement of said blade for causing said finger to move quickly inwardly to make the corner fold and then move back out of the way of another blade for folding the opposite edge at said corner.

3. In a folding mechanism, means for folding one edge of an acute-angled corner of a fabric blank, and means for infolding the fabric at said corner over said edge fold slightly back from the edge thereof and prior to the infolding of the opposite edge of the corner.

4. In a folding-machine, a blade for folding one edge of a corner, a finger pivoted on said blade adjacent said corner, means normally holding said finger in retracted position, and a tripping device for giving said finger a quick in-and-out movement for folding the corner and moving back away from the same.

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

GEORGE REECE.

Witnesses:

GEO. H. MAXWELL,  
GEO. W. GREGORY.