

No. 660,601.

Patented Oct. 30, 1900.

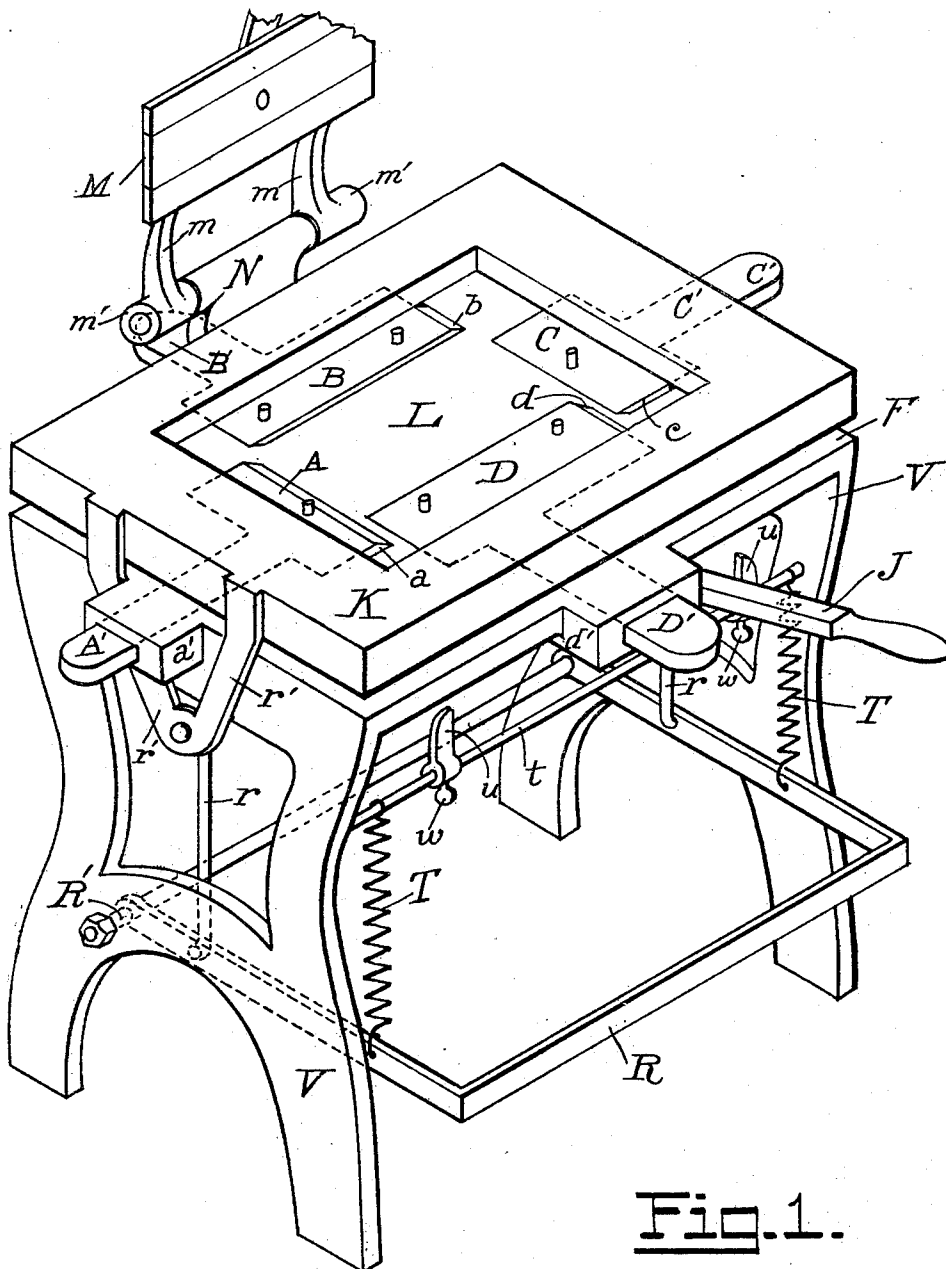
J. TEMPLE.

MACHINE FOR FOLDING COLLARS, &c.

(Application filed Apr. 7, 1899.)

(No Model.)

5 Sheets—Sheet 1.



WITNESSES

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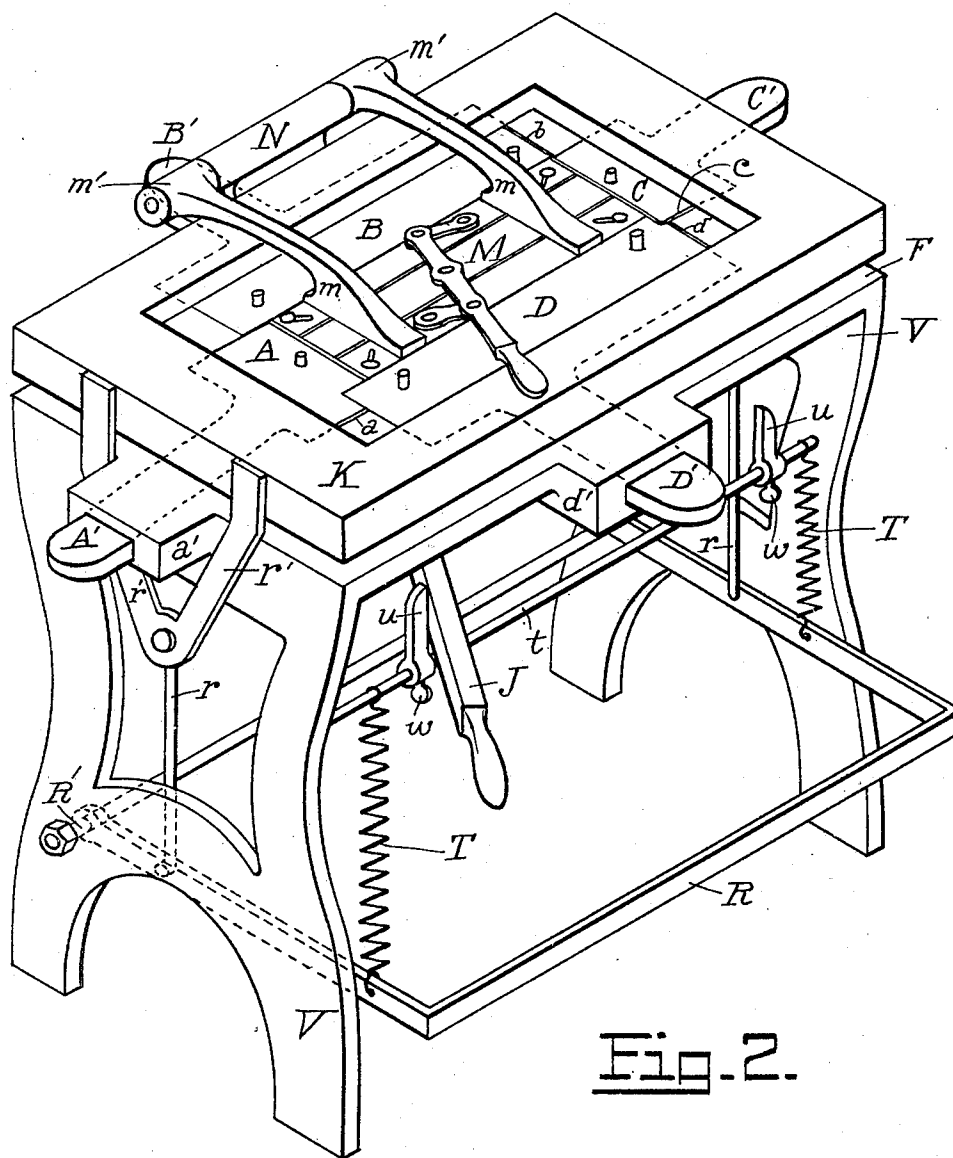
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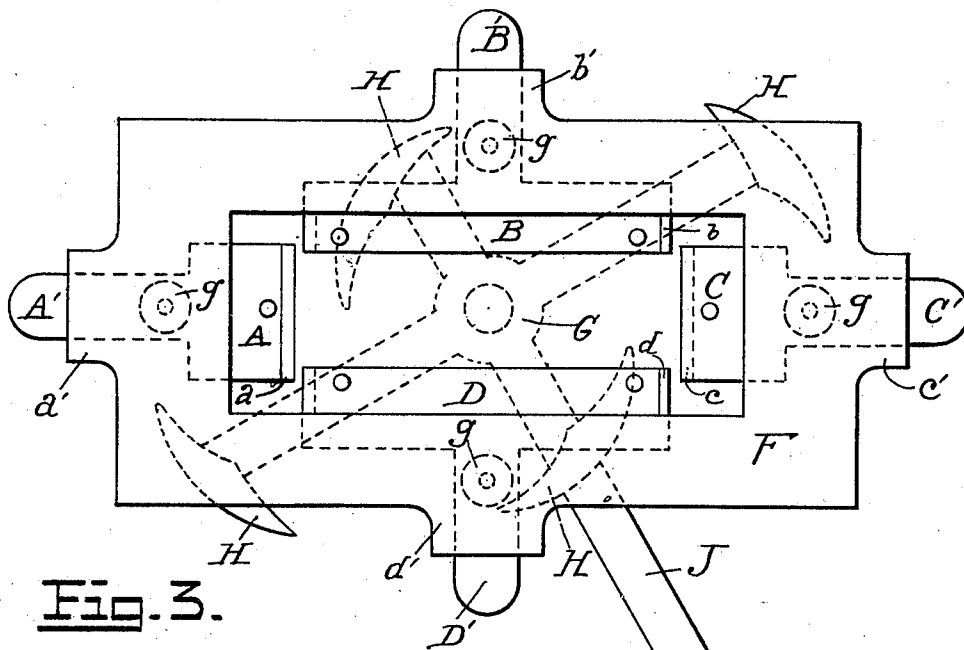


Fig. 3.

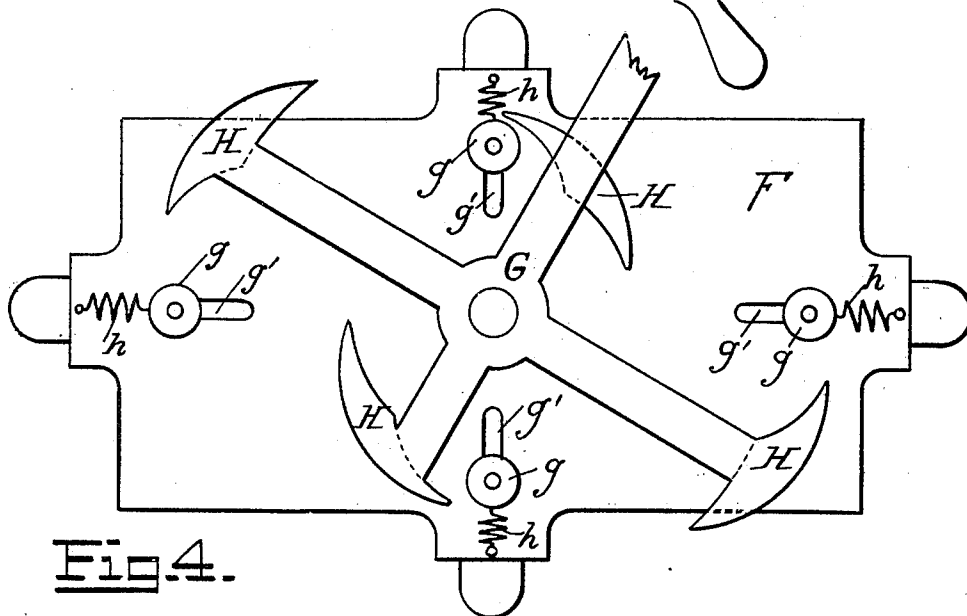


Fig. 4.

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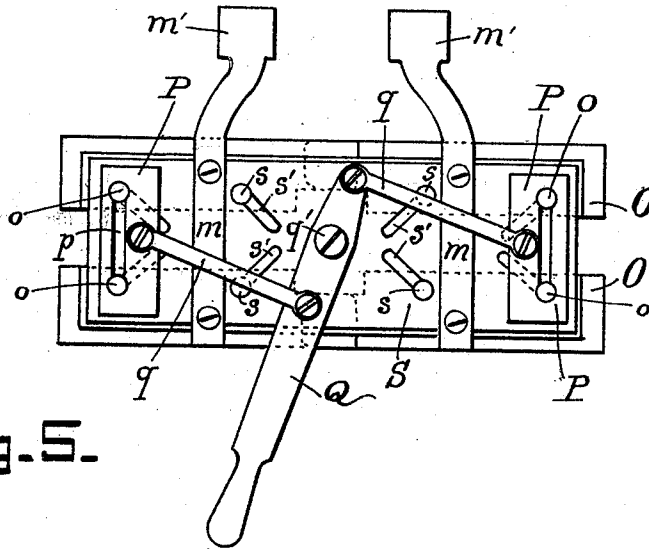


Fig. 5.

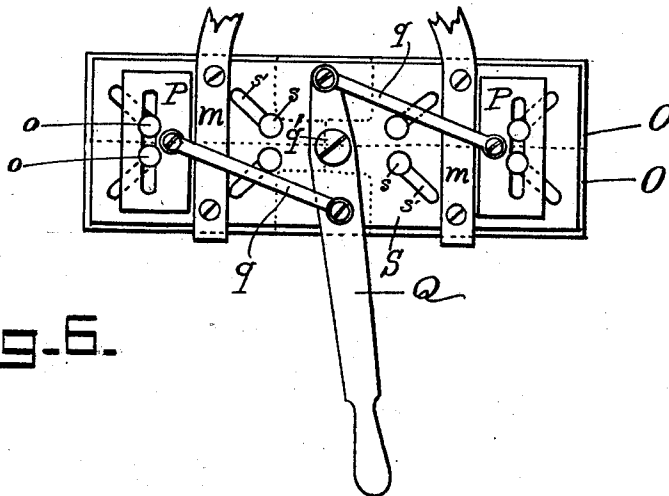


Fig. 6.

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Fig. 7

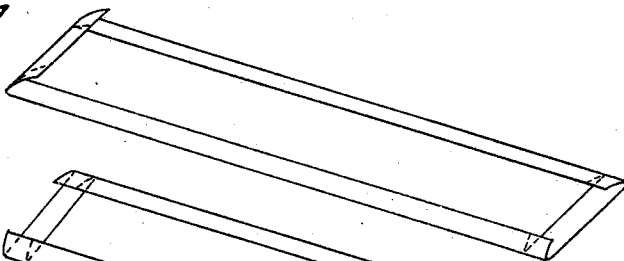


Fig. 8

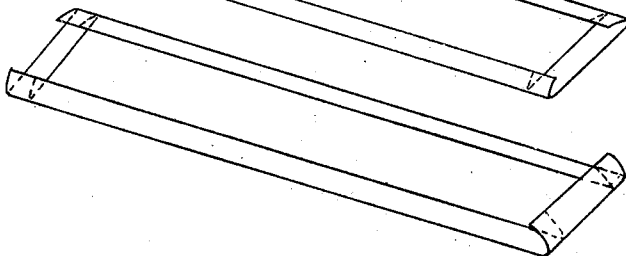
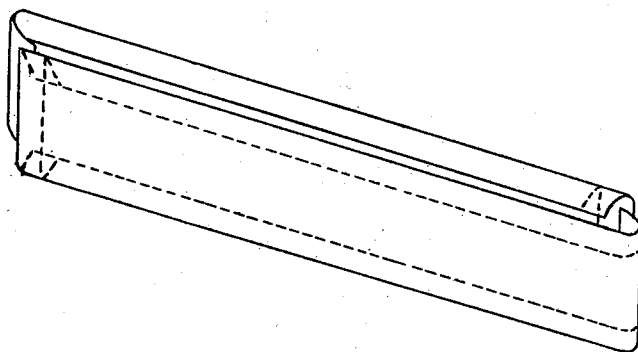


Fig. 9



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UNITED STATES PATENT OFFICE.

JOHN TEMPLE, OF WATERVLIET, NEW YORK.

MACHINE FOR FOLDING COLLARS, &c.

SPECIFICATION forming part of Letters Patent No. 660,601, dated October 30, 1900.

Application filed April 7, 1899. Serial No. 712,067. (No model.)

To all whom it may concern:

Be it known that I, JOHN TEMPLE, a subject of Great Britain, and a resident of the city of Watervliet, in the county of Albany, State of New York, have invented certain new and useful Improvements in Mechanism for Folding the Edges of Fabrics, of which the following is a specification.

My invention relates to mechanism for folding the edges of fabrics; and the object of my invention is to provide a machine by the operation of which one person is able to fold the edges of a collar, cuff, or other fabric, together with such elements and combinations as are hereinafter more particularly set forth and described. I attain this object by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view showing the die raised. Fig. 2 is a perspective view showing the die closed. Fig. 3 is a plan view of the top of the table, showing the same when operating the slides. Fig. 4 is a detailed plan view of the under side of the table. Fig. 5 is a plan view of the die, showing the same open. Fig. 6 is a plan view of the die, showing the same closed. Fig. 7 is a view of a blank folded by my machine. Fig. 8 is a view of the reverse piece folded by my machine. Fig. 9 is a view showing the manner of locking the reverse piece with the first folded piece.

Similar letters refer to similar parts throughout the several views.

By the use of my improved machine the edges of a collar or cuff blank or other fabric may be turned successively.

I arrange a series of slides A B C D, provided with feather-edges arranged with the retreating portion of the edges *a b c d*, respectively, on the under side. These slides are adjusted within the table F in any suitable manner, being preferably, however, arranged to allow the shanks A' B' C' D', respectively, of the slides to move within the supporting-boxes *a' b' c' d'*, respectively, and the blades to extend slightly above the top of the table or flush therewith, and which shanks are each provided with a projecting roller or stop *g*, the said rollers or stops *g*, preferably arranged upon a suitable spindle attached to each of the shanks of the slides aforesaid, respec-

tively, said spindle extending through the slotted opening *g'* in the top of the table F, and said rollers or stops placed on the under side of the top of the table F, as shown in Fig. 4. I also arrange in connection with the stops or rollers *g* springs *h h*, suitably secured at one end to the lower surface of the table F, and at the other end secured to said stop, the tendency of the spring being to draw the stop toward the edge of the table, and therefore to withdraw the blade of the slide from contact with the work.

For the purpose of operating the slides I preferably arrange a spider G, having a suitable number of projecting arms, each of which is provided with a cam-shaped engaging block H H, adapted to come in contact with the rollers or stops *g* and to draw them toward the center of the table against the tension of the springs *h h*. The blocks H H and the arms of the spider are so arranged with reference to the rollers *g* that one of them may come in contact with one of the rollers and draw it toward the center, causing the slide to be brought in contact with the work before either of the others engages with its corresponding roller, and the contour of the block H is so arranged in reference to the rollers that after engagement has been made therewith by the block or the spider and the slide has been drawn to the position necessary in the performance of its work further movement of the spider will not bind or tend to move farther toward the center of the table the slide that has thus performed its work.

For the purpose of moving the spider G, I attach to it, either by extending one of its arms which carries the block H, as shown in Figs. 3 and 4, or by means of an additional arm or in any suitable manner, a lever J, which extends beyond the edge of the table and may be operated by one standing in front of the table.

Upon the top F of the table I place a pressure-plate K, having an opening L, within which opening the slides A B C D project, and within which opening is placed for holding the fabric desired to be operated upon. The collar, cuff, or other fabric may be placed in position in the opening L, and the slides being drawn outward in position in Fig. 1 the die M is

brought in contact therewith. The die M is preferably mounted upon the arms *m m*, carried by the collars *m' m'*, which in turn are supported by a spindle passing through the supporting-post N, which is attached to the table. The die consists of two or more blades O O, each provided with lugs *o o*. The plate P, provided with a slotted opening *p*, is placed on the lugs *o o* on adjacent blades O O, as is shown in Figs. 5 and 6. The plates P P are attached by links *q q* to a lever Q, said links being attached to said lever on opposite sides of its fulcrum *q'*. When the lever is moved toward the left when it is attached, as shown in the drawings, the blades O O will be opened, the plates being forced as far as possible toward the ends of the blades, and the lugs *o o*, sliding to the extent of the slotted openings *p p* in each of the plates, the die will assume the position shown in Fig. 5. The reverse movement of the lever will of course close the blades until the die assumes the position shown in Fig. 6. I preferably arrange on each of the blades lugs *s s*, adapted to move within the slots *s' s'* in the plate S, which plate is secured to the arms *m* and upon which the blades O O rest, for the purpose of guiding the blade in its movements. The die is brought in contact with the work in its open position. It then rests upon the work between the slides A B C D. The blades of the die hold the work in contact with the slides A B C D. The lever J is then operated, when one of the slides—D, for instance—will be forced toward the center of the table, which will turn the edge of the fabric over. A further movement of the lever J will cause the slide B to be drawn toward the center of the table, which will turn another edge of the fabric over. Then slide C will be actuated, and thereafter slide A, until each of the edges has been folded successively and in such a manner that when the reverse piece shall be brought in contact with it the folded-over parts may be locked under the corresponding part of the first piece folded, forming what is known as a "locked connection," as shown by Fig. 9. After each of the blades has been projected and each of the sides of the fabric folded the lever Q is drawn to the right, closing the die-blades. The pedal R is then pressed upon, which tends to draw the pressure-plate K downward. The links *r r* are attached to the pedal R between its fulcrum R' and the front of the pedal and are also attached at their opposite ends to the plate K by means of the braces *r' r'*. In this way the folded-over edges are firmly pressed in position. The lever J is then drawn to the opposite side of the machine, thus liberating the blocks H H from contact with the rollers *g* and pressure removed from the pedal R, which, because of the springs T T, attaching the forward part of the pedal-frame to the rod *t*, will tend to raise the plate K from contact with the work, and the springs *h h* will

withdraw the slides A, B, C, and D, leaving the work completed and ready to be removed from the machine.

I show on the rod *t* stop-blocks U U, capable of adjustment by means of screws *u u*, for the purpose of limiting the movements of the lever J.

It will be understood that I do not intend to limit myself to the number of the slides or their location in reference to each other as shown in the drawings, for the reason that their position and number will depend upon the character and contour of the fabric to be worked upon. Thus a cuff with rounded corners will necessarily have a different form of slide from that shown in the drawings. Nor do I limit myself to the number of arms on the spider, which for obvious reasons must be arranged to correspond with the number of slides and their arrangements.

I do not wish to limit myself to the manner of attaching the lever to the plate K nor to the table supported on the open frame-supports V V.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a device for folding the edges of fabrics, a plurality of slides, adapted to come in contact with the edges of the fabric, successively; a means for holding the work in position during the movement of said slides; a means for causing said slides to be operated, one after the other, during the work until it is completed; suitable springs arranged to cause all the slides, simultaneously, to return to their normal position when said slides are released, substantially as described.

2. A device for folding the edges of fabrics, comprising a series of slides provided with projections thereon, and adapted to engage with cam-shaped blocks; cam-shaped engaging blocks; with a device for holding the work in position, consisting of a die provided with two or more blades and a lever, said lever connected with a plate, the operation of the lever tending to open and close the blades; with a pressure-plate adapted to hold the slides in contact with the fabric; a pedal adapted to operate said pressure-plate in such a manner that the plate shall be drawn into closer contact with the said slides, all substantially as described.

3. In a machine for folding the edges of fabrics, a series of slides arranged to move within the top of a table, each of said slides provided with a projection; a spider carrying a series of cam-shaped blocks adapted to engage with said projections on the slides; a series of springs connected with said projections, tending to draw the slides toward the edge of the table, with a pressure-plate; a pedal so adjusted that by pressing on the pedal the slides will be held in position; said spider so adjusted that its movement and the releasing of the pedal will cause said springs to turn all the slides simultaneously, out of

contact with the work, substantially as described.

4. In a device for folding the edges of fabrics, a spider pivoted to the machine, said
5 spider provided with a plurality of arms; cam-blocks secured to said arms, said cam-blocks adapted to engage with a plurality of slides, successively, which slides are arranged

to come in contact with the edges of the fabric, substantially as described.

Signed by me this 1st day of April, 1899.

10

JOHN TEMPLE.

Witnesses:

FREDERICK W. CAMERON,

WILLIAM E. VAN WERT.