

(No Model.)

D. W. SWIFT.
ENVELOPE CUTTER.

No. 500,304.

Patented June 27, 1893.

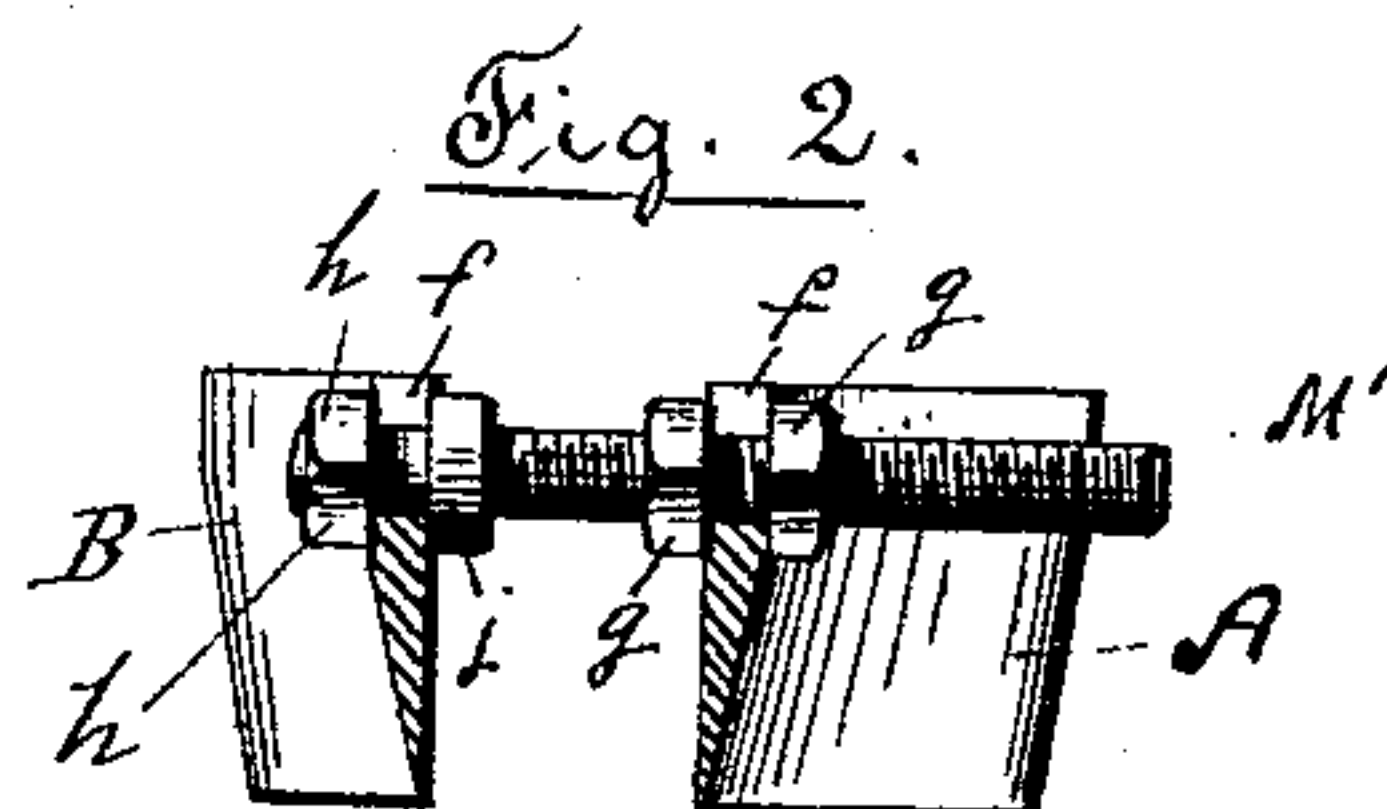
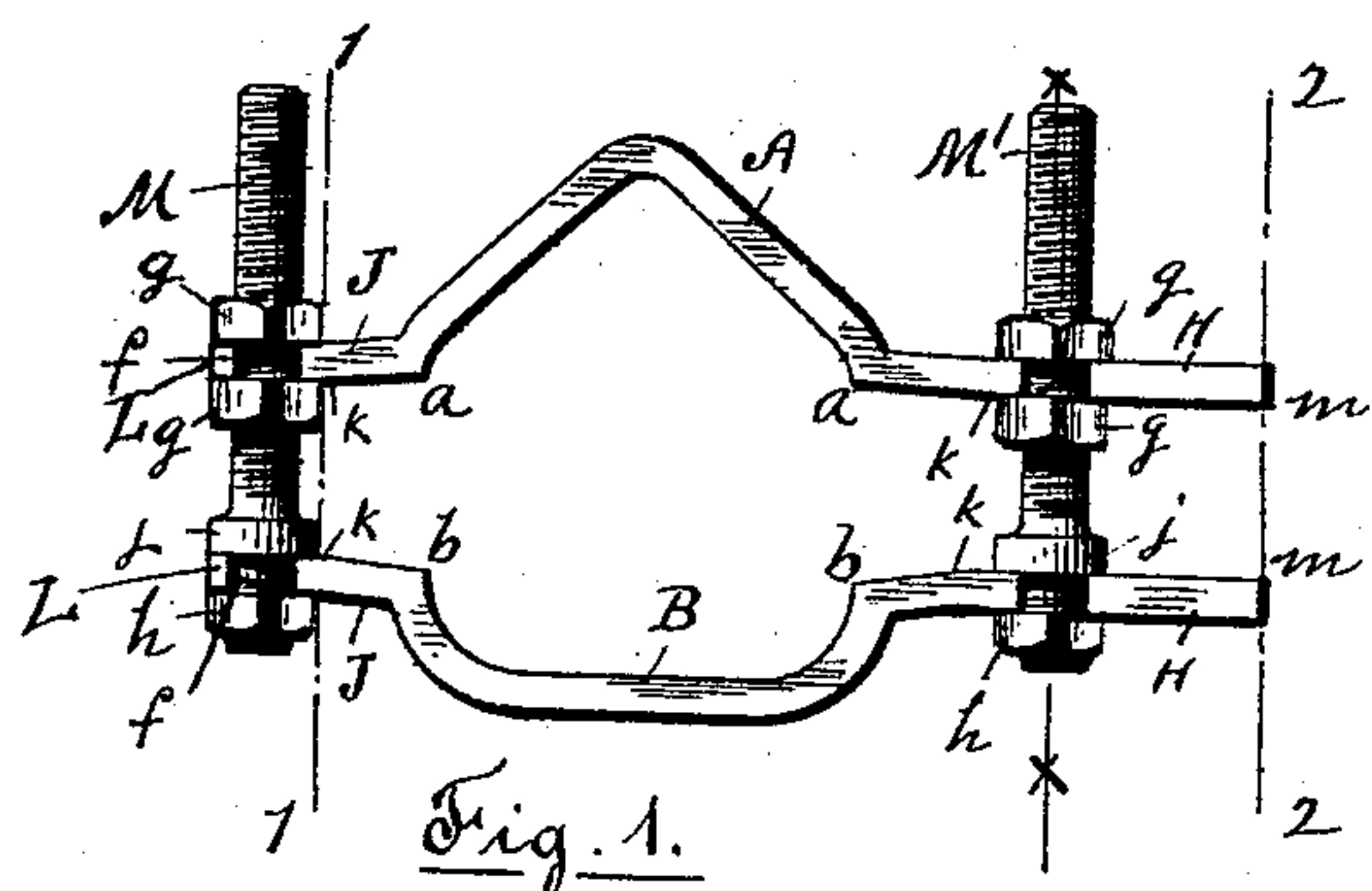


Fig. 3.

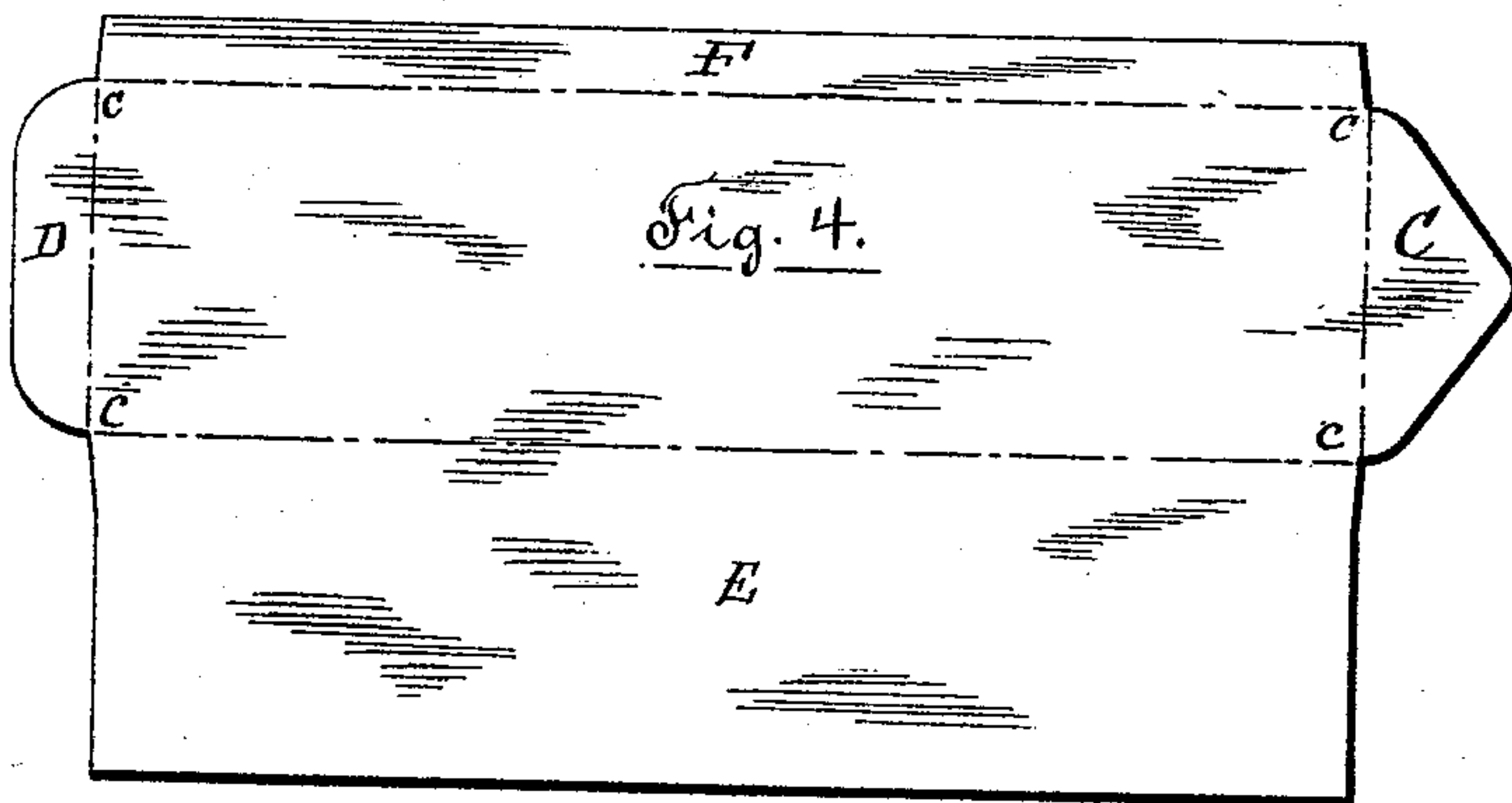
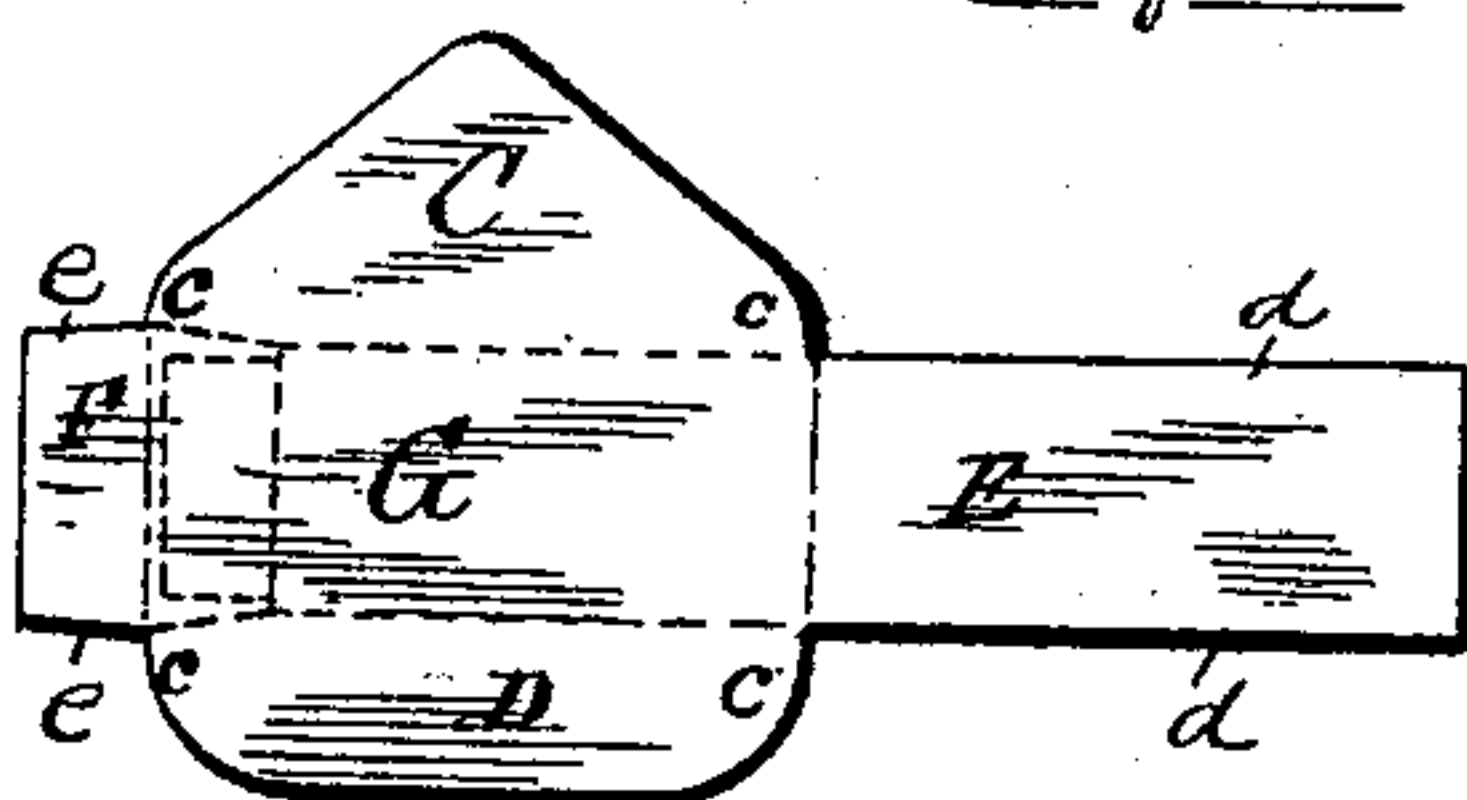
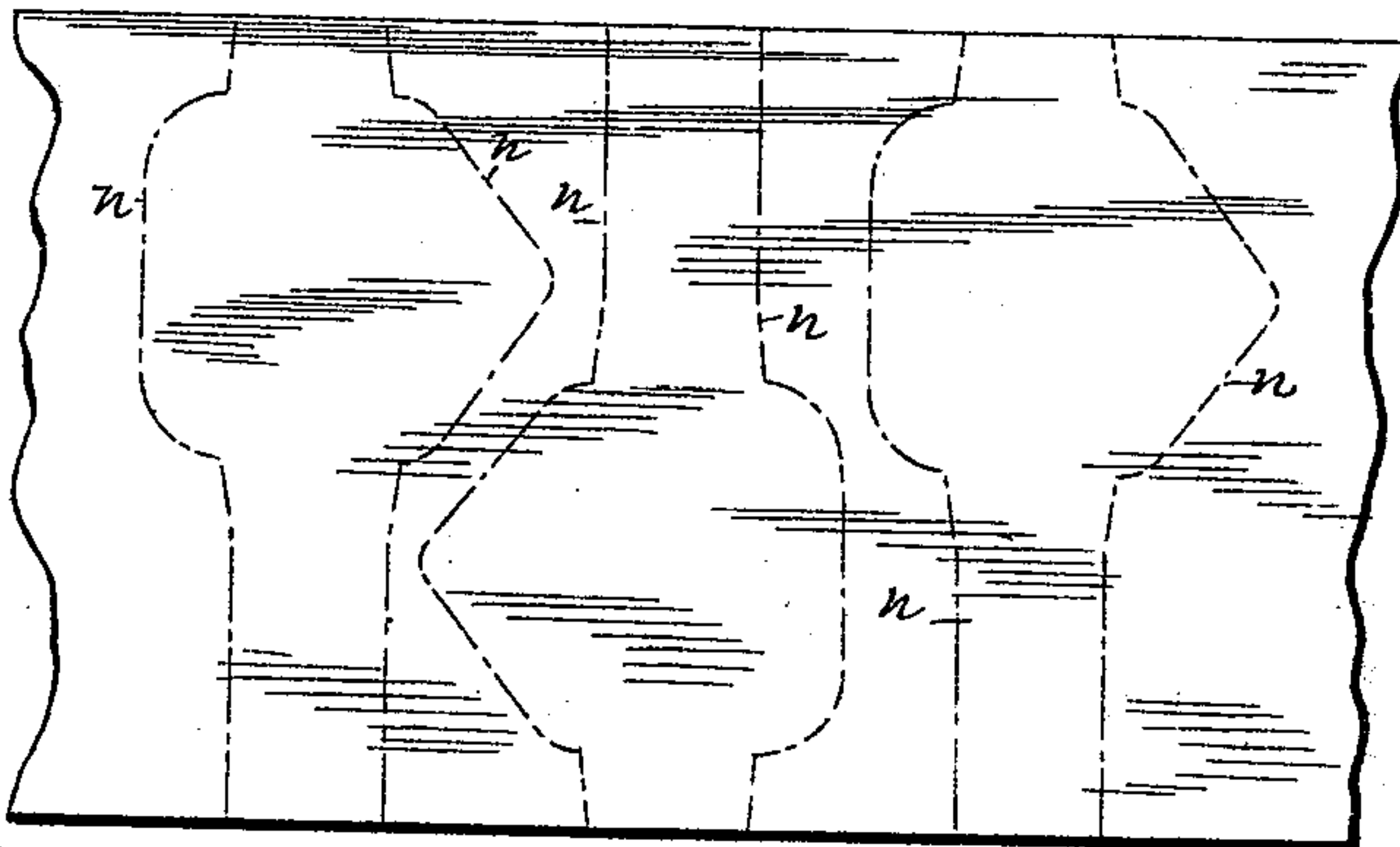


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

DANIEL WHEELER SWIFT, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO
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ENVELOPE-CUTTER.

SPECIFICATION forming part of Letters Patent No. 500,304, dated June 27, 1893.

Application filed February 1, 1889. Serial No. 298,418. (No model.)

To all whom it may concern:

Be it known that I, DANIEL WHEELER SWIFT, a citizen of the United States, and a resident of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Envelope-Cutters, of which the following is a specification, containing a full, clear, and exact description of my invention, illustrated by the accompanying drawings, forming a part of the specification, and in which—

Figure 1 represents a top view of my improved envelope cutter. Fig. 2 denotes a sectional view on line X X Fig. 1. Fig. 3 represents an envelope blank as formed by the cutter, shown in Fig. 1, and adapted when folded to form an envelope open upon the side. Fig. 4 represents an envelope blank for forming an "open end" envelope and cut by the cutter shown in Fig. 1 by an adjustment of the cutting knives, and Fig. 5 represents in top view a pile of paper to be cut and showing by a series of broken lines the successive positions of the cutter in cutting the blanks.

Similar letters refer to similar parts in the different figures.

The object of my present invention is to provide an envelope cutter for cutting the blanks of envelopes having two straight and parallel sides, whereby the expense of the cutter is lessened and blanks of varying size can be cut with the same cutter.

In the use of my improved cutter, as hereinafter described, the paper to be cut is prepared in sheets whose width is equal to the distance between the straight and parallel sides of the envelope blank and the separate blanks are formed by cutting these sheets transversely by cutting knives shaped to conform to the curved sides of the blank, forming the back and seal flaps of the envelope.

The cutter consists of a knife A shaped to conform to the side of the blank forming the seal flap and a knife B shaped to conform to the side of the blank forming the back flap, the curved section *a a* of the knife forming the seal flap and the curved section *b b* of the knife B forming the back flap.

In Fig. 3 a blank cut by the cutter shown in Fig. 1 is represented, C indicating the seal flap and D the back flap of the envelope. E

denotes the long side flap and F the shorter side flap which are folded on the broken lines *c c, c c* in the position shown in Fig. 3 with their ends overlapping at G. The sides *d d* of the long side flap are formed by the wings H H extending laterally from the side of the curved sections of the knives A and B, and the sides *e e* of the shorter side flap are formed by the wings J J extending laterally from the opposite sides of the curved sections of the knives A and B.

The strip of paper to be cut occupies the space between the broken lines 1 1, 2 2, Fig. 1 and the wings J J are extended beyond the edge of the paper at L L in order to allow the connecting bolt to be placed in and held by parallel sections of the knives. The upper edges of the knives are slotted a short distance as shown at *f f*, Fig. 2 to receive the connecting bolts M M', which are screw threaded to receive the nuts *g g* inclosing the knife A and also screw threaded at the opposite end to receive a nut *h h* holding the knife B against the collar *j* attached to the rods or bolts M, M'.

The sides of the knives in contact with the nuts *g g* and with the nuts *h h* and collars J J are parallel and vertical, thereby causing the knives to be maintained in a true vertical position.

By the adjustment of the nuts *g g* upon the bolts M M' the width of the blanks can be varied by increasing or decreasing the distance between the knives A and B. In case the distance between the knives is less than that between the folds *c c, c c*, the seal flap will be brought upon the longer of the parallel sides of the envelope and the envelope will be open upon its side, but if the distance between the knives be increased until it exceeds the width between the end folds *c c, c c*, then the envelope will be what is known as an "open end" envelope, such a blank being shown in Fig. 4. It will be seen that while the size of the envelope, in one direction, is determined by the length of the back and seal flaps or the distance between the points *a a* and *b b*, Fig. 1, the size of the envelope in the opposite direction is easily varied by increasing or decreasing the distance between knives A and B, by means of the adjustment

allowed by the nuts *g g* on the bolts *M M'*. As the cutter is placed upon the strip of paper it is reversed at each successive cut as shown by the broken lines in Fig. 5, bringing the curved section *a a* forming the seal flap opposite the longer wings *H H*, allowing the blanks to be cut with less waste of stock between them. The side flaps are slightly decreased in width by means of the inclined sections of the knives between the points *a—k* in knife A, and *b—k* in knife B, but as the sections *k—m* are parallel the bolt *M'* is held within the cutting edges, and as the inclined sections upon the opposite or shorter side flap limit the cutting edges upon that side of the cutter the parallel extensions *L L* become necessary. Similar parallel extensions upon the side of the long side flap can be used in case the shape of the blank does not require the cutters to be parallel.

Adjustable cutters for cutting out the corners of envelope blanks have been in use heretofore, such I do not herein claim, but

What I do claim, and desire to secure by Letters Patent, is—

1. In an envelope cutter the combination of a pair of cutting knives provided with curved sections conforming to the shape of the seal and back flaps, respectively, lateral wings *H, H*, provided with cutting edges and forming an extension of said curved sections upon one side, a connecting rod *M'*, by which said wings *H, H*, are united, lateral wings *J, J*, extending from the opposite side of said curved sections and provided with cutting edges extensions *L, L*, extending from said

wings *J, J*, and a connecting rod *M*, by which the extensions *L, L*, are united, substantially as described.

2. In an envelope cutter the combination of the knives A, B, provided with the curved sections *a, a*, and *b, b*, lateral cutting wings *H, H*, provided with slots *f, f*, in their upper edges, lateral cutting wings *J, J*, having extensions *L, L*, provided with the slots *f, f*, in their upper edges and connecting rods *M, M'*, held in said slots, substantially as described.

3. In an envelope cutter, the combination with a cutting knife shaped to conform to one of the curved sides of an envelope blank, of a pair of screw threaded connecting rods attached to said knife, and having adjusting nuts, and a knife shaped to conform to the opposite curved side of the envelope blank and held upon said connecting rods between said adjusting nuts, substantially as described.

4. The combination with a pair of cutting knives shaped to conform to the opposite curved sides of an envelope blank and provided with openings to receive a pair of connecting rods, of a pair of screw threaded connecting rods, passing through the openings in said knives and having nuts by which said knives are rigidly held apart and in a true vertical position during the operation of cutting the envelope blanks, substantially as described.

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Witnesses:

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