

(No Model.)

2 Sheets—Sheet 1.

J. WEST.
METHOD OF MAKING ENVELOPES.

No. 442,841.

Patented Dec. 16, 1890.

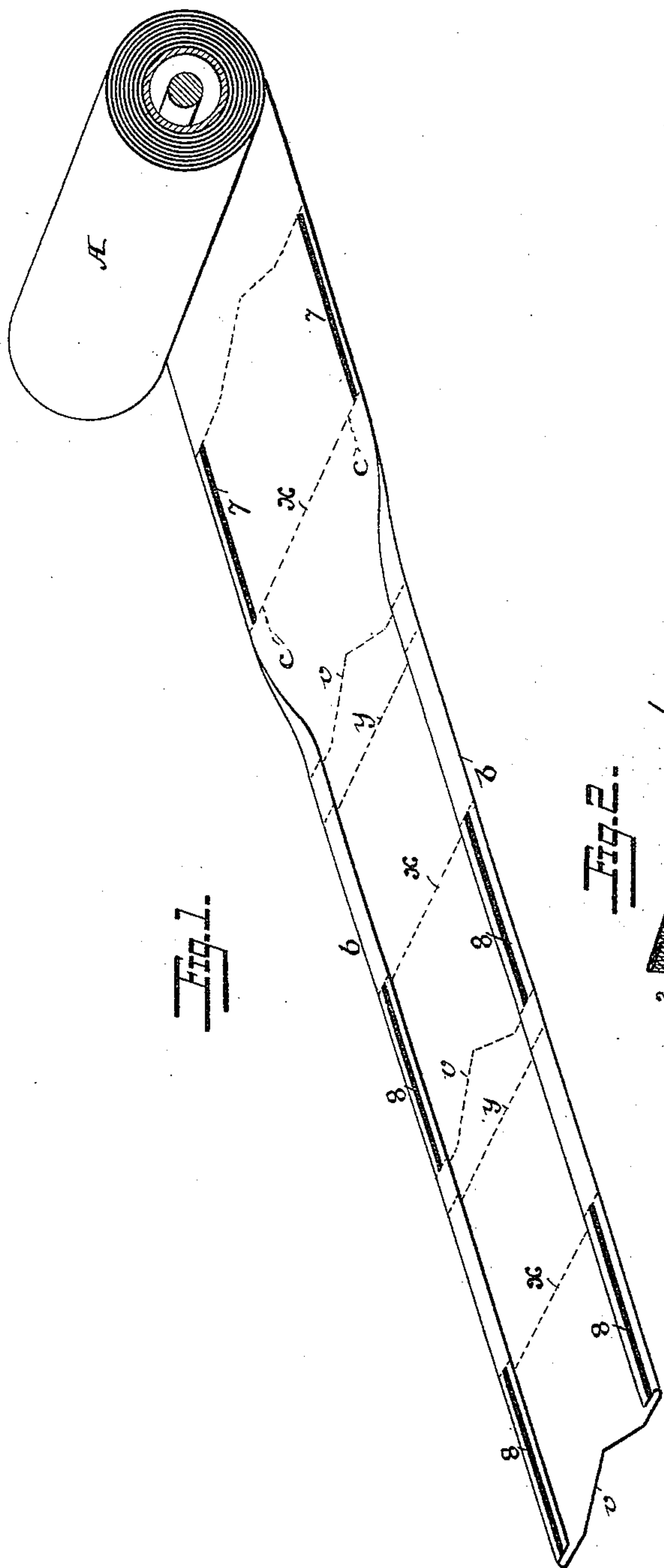


Fig. 1.

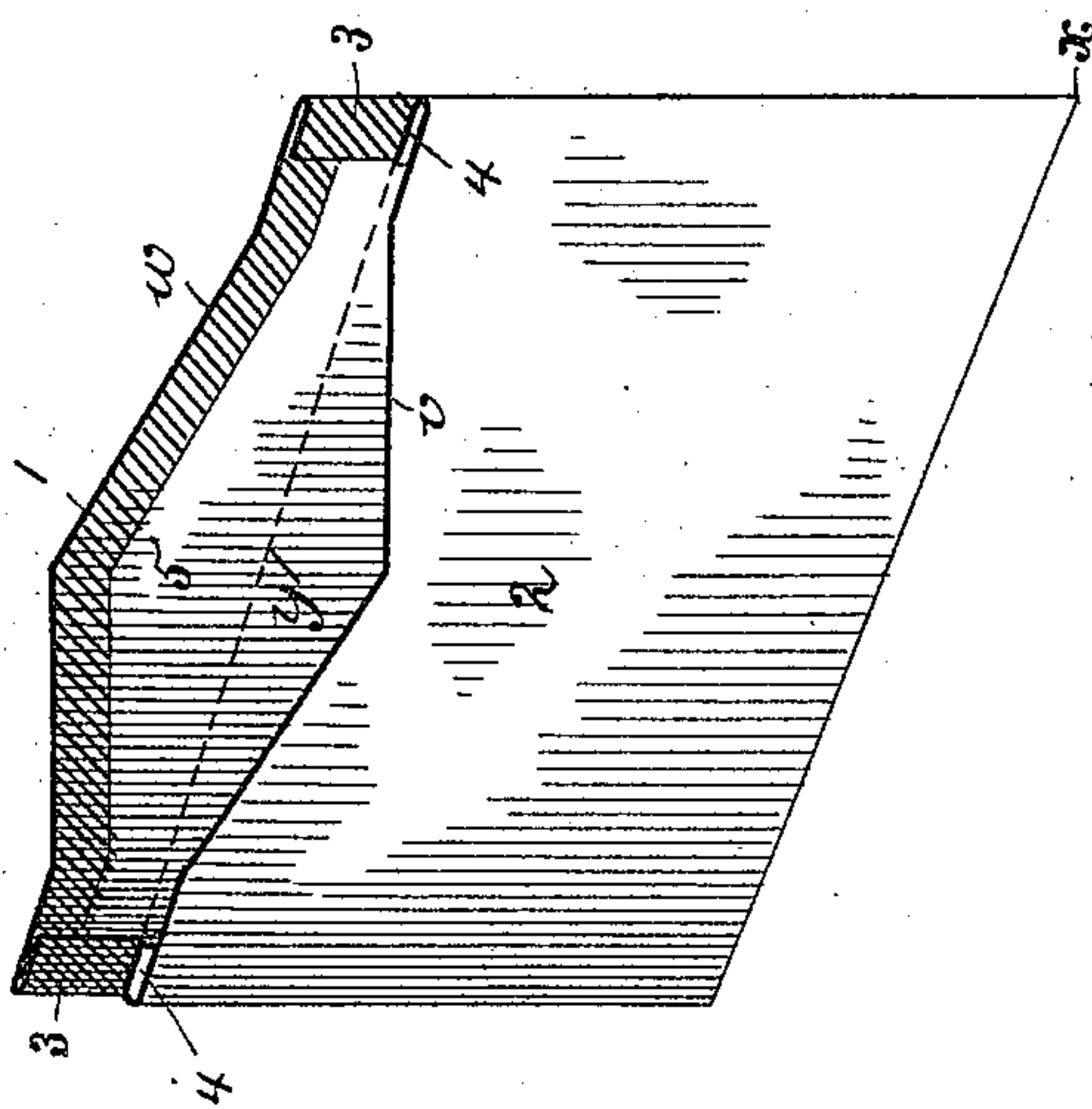


Fig. 2.

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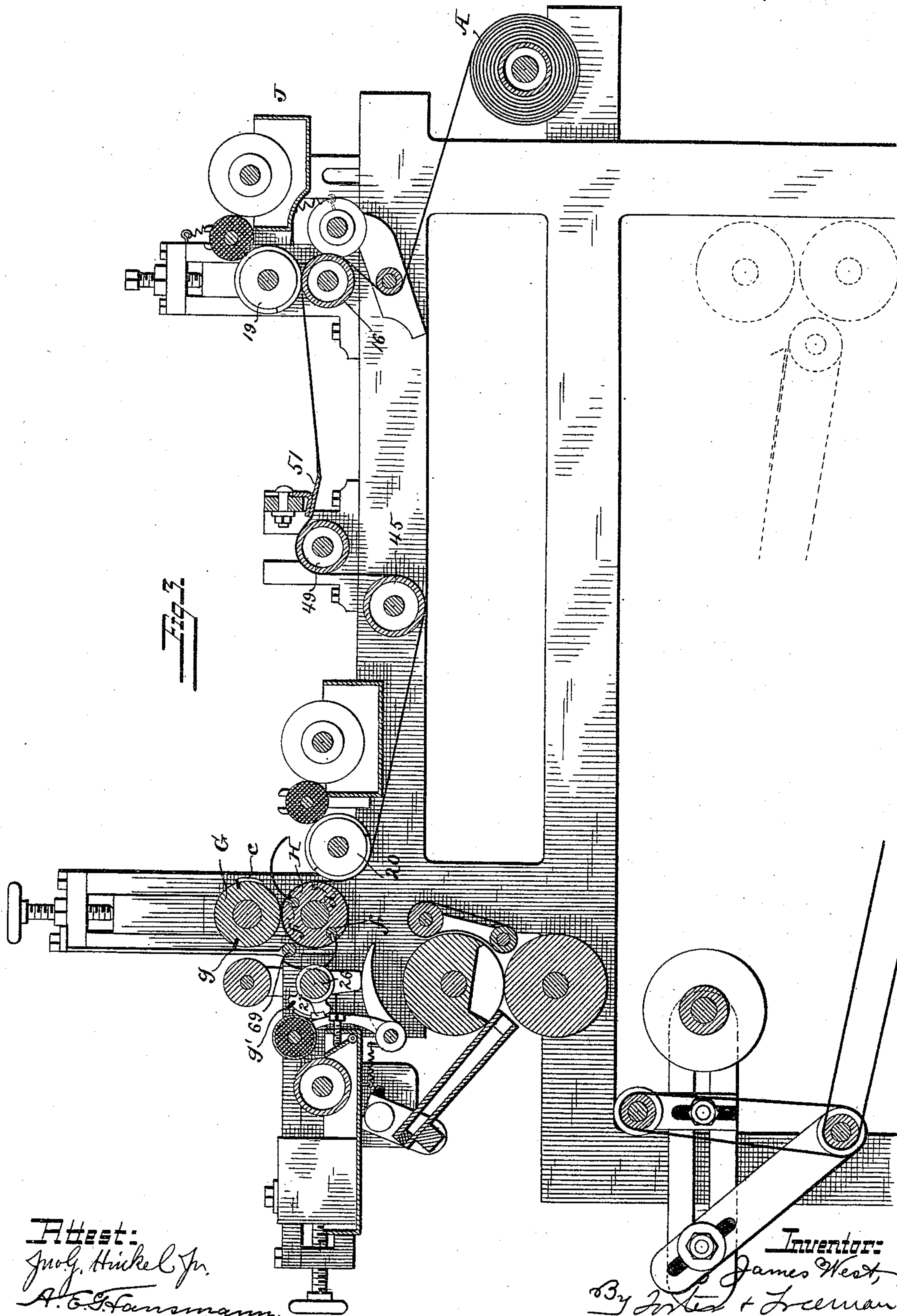
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2 Sheets—Sheet 2.

J. WEST.
METHOD OF MAKING ENVELOPES.

No. 442,841.

Patented Dec. 16, 1890.



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UNITED STATES PATENT OFFICE.

JAMES WEST, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO SAMUEL CUPPLES, OF SAME PLACE.

METHOD OF MAKING ENVELOPES.

SPECIFICATION forming part of Letters Patent No. 442,841, dated December 16, 1890.

Application filed January 27, 1888. Serial No. 262,154. (No model.)

To all whom it may concern:

Be it known that I, JAMES WEST, a citizen of the United States, and a resident of St. Louis, Missouri, have invented certain new and useful Improvements in the Method of Making Envelopes, of which the following is a specification.

My invention relates to the manufacture of envelopes consisting each of a single sheet of paper having infolded edges forming inturned flanges pasted to each other and to the front or back portion of the envelope; and my invention consists in making said envelopes by series of pasting, flanging, folding, creasing, and severing operations upon a traveling strip of paper, as fully set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view illustrating the successive steps upon a traveling strip of paper embodying my method of manufacture. Fig. 2 is a perspective view illustrating the general character of the envelopes made by my improved method of manufacture. Fig. 3 is a sectional elevation of sufficient of a machine to illustrate mechanism by means of which the said method of manufacture may be carried out.

My invention relates to the manufacture of envelopes of the construction illustrated in Fig. 1, each envelope consisting of a single sheet folded on the line x to form the front portion 1 and the back portion 2, the front portion being extended to form the flap 5, and the edges of the sheet being turned in to form flanges 3 4, the flange 3 being pasted down against the front portion of the envelope, the flanges 4 being pasted against the flanges 3, and a crease being formed on the line y , opposite to the edge of the back portion, to form a line of separation between the front and the flap and facilitate the turning down of the flap, which is suitably gummed along the edge to secure its adhesion to the back portion. In the manufacture of such envelopes I use a roll of paper, which, if sufficient in width, is divided into two or more strips, each equal in width to the width of the blanks from which the envelopes must be formed, and upon each strip I perform the following operations: Lines of paste 7 7, about equal in

length to the front and flap portion of the envelope, are first deposited adjacent to the opposite edges of the strip, as shown in Fig. 2, the said lines of paste 7 terminating upon the same transverse line x upon which the sheet is afterward folded, as hereinafter fully set forth, and the edges of the sheet are then turned in upon lines c c , parallel to the side edges of the strip, so as to form inturned flanges b b , portions of which will be pasted to the body of the strip where they contact with the lines 7 7 of paste. After the turning in and pasting of the flanges b , as described, other lines 8 8 of paste are applied to the faces of the inturned flanges, each line 8 beginning opposite the line x and extending as far as the line v , upon which the strip is afterward severed transversely, so as to form the edge of the flap of one envelope and the edge of the back of the next envelope. This severing of the strip upon the line v may be effected before or after the strip is folded upon the line x , whereby the paste-covered portions of the inturned flanges which are upon the portion of the strip which constitutes the back of the envelope are brought against and pasted to the outer faces of the flanges that adhere to the portion of the strip constituting the front of the envelope. The strip is then creased transversely along the line y , adjacent to the edge of the back portion of the envelope, and the gum is applied to the edge of the flap and dried thereon. These operations are performed in succession upon a continuously-traversing strip, which is thereby coated with paste on the lines 7 7, then turned in at the edges, coated with paste upon the lines 8 8, then folded upon the line x , creased upon the line y , and divided along the line v , and these operations are repeated in succession, so as to quickly transform the traveling strip into envelopes of the desired character. In carrying out these series of operations upon the strip I make use of the apparatus illustrated in sectional elevation in Fig. 3.

A represents the roll of paper from which the strip or strips pass upward over the guide-rolls 16 and beneath the pasting-roll 19, to which paste is fed from a box J and by which the lines 7 7 of paste are applied.

The strip then passes beneath the folder-blade 51 and over the roll 49, by means of which the edges are turned in and the strip then continues to travel forward beneath the guide-roll 45 and under the pasting-roll 20, by which the lines 8 8 of paste are applied to the faces of the inturned strips. The strip then passes between the rolls G and H, the latter carrying a folding-blade *g*, which forces the strip transversely into a transverse slot in the roller H, where it is clamped by a clamp *f* and then carried down around the roller H between the latter and the bar 69, which folds the back portion onto the front portion to paste the flanges thereof thereto, after which a folding-blade *g'*, carried by a shaft 26, forces the strip transversely along the line opposite the back edge of the envelope into a slot in the roller H, where it is clamped by the clamp *f'*, thereby creasing the strip transversely along the line *y*, after which a cutter *c* upon the roller G cuts the strip transversely against a cutting-face *d*, carried by the roller H, severing it upon the line *v*, after which the gummer-type 27, carried by the shaft 26, applies a layer of gum to the edge portion of the flap.

For a fuller illustration of the machine employed for carrying out the above-described series of operations I refer to a separate application for Letters Patent, Serial No. 261,983, wherein the devices are claimed; but I do not limit myself to the use of such devices, as different means may be employed for effecting the same result; nor do I claim the article herein set forth, as the same constitutes the subject of a separate application for Letters Patent, Serial No. 262,153.

It will be evident that the form of the envelope may be varied according to the purposes for which it is to be employed without varying the series of operations above described, constituting my improved method of manufacture. It will also be evident that the lines 8 8 of paste may be applied to the flanges that have been pasted to that portion

of the strip constituting the front portion of the envelope between the lines *x* and *y*, or they may extend from the line *v* to the line *y*.

Without limiting myself to the precise details herein set forth, I claim—

1. The within-described process in the manufacture of envelopes, consisting in depositing intermitting lines of paste upon the opposite edges of a continuous strip of paper of uniform width, then forming continuous inturned flanges by turning in said edges against the body of the strip, then depositing other intermitting lines of paste of different length from those first deposited upon the outer faces of the inclined flanges, then folding a portion of the paper upon a transverse line over and upon the other portion, then creasing the strip transversely opposite the edge of the turned-down portion, and finally severing the strip beyond said crease to form the flap, substantially as described.

2. The within-described process in the manufacture of envelopes, consisting in depositing lines of paste upon the opposite edges of a continuous strip of paper of uniform width, then forming continuous inturned flanges by turning in said edges against the body of the strip, then depositing other lines of paste of different length from those first deposited upon the outer faces of the inturned flanges, then folding a portion of the paper upon a transverse line over and upon the other portion, then creasing the strip transversely opposite the edge of the turned-down portion, then severing the strip beyond the edge of the turned down portion to form the flap, then pasting the edge of the flap, and finally folding the flap down against the body of the envelope, substantially as described.

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

JAMES WEST.

Witnesses:

J. M. KERR,
C. A. KAHRE.