

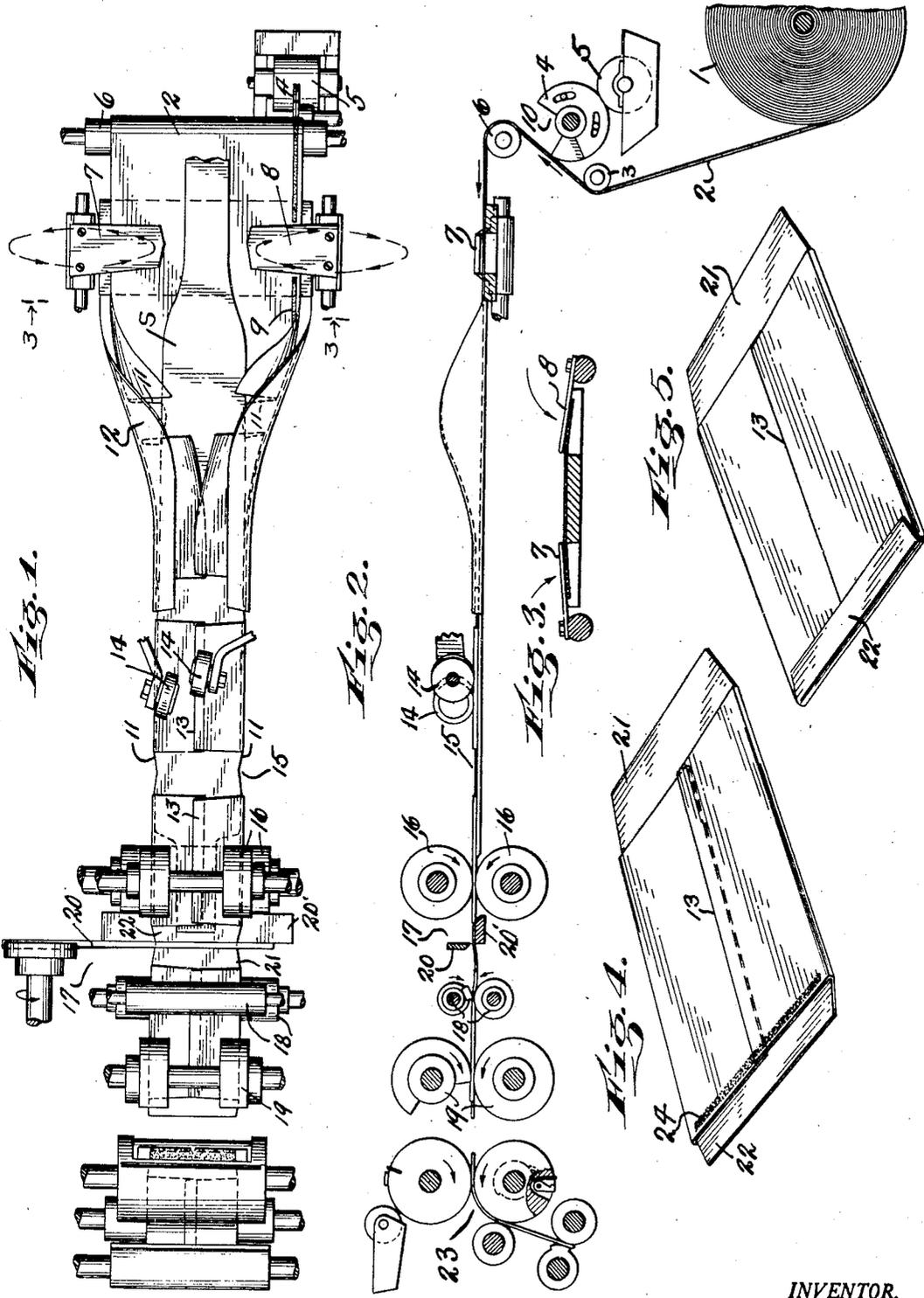
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MACHINE FOR MAKING ENVELOPES AND THE LIKE

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MACHINE FOR MAKING ENVELOPES AND THE LIKE

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7 Claims. (Cl. 93—18)

This invention relates to an apparatus for making envelopes, and has for one of its objects the provision of an apparatus for the making of envelopes in which the top of the envelope is provided with a projecting flap and in which in the making of the envelope means are employed for notching the web from which the envelopes are to be made, the notching mechanism being of such a character that to vary the envelope lengths it is unnecessary to change the notching die, the envelope lengths being altered merely by changing the speed of the draw rollers.

In the drawing accompanying this application:

Fig. 1 is a more or less diagrammatic plan view of an apparatus constructed in accordance with my invention;

Fig. 2 is a side sectional elevation of the apparatus of Fig. 1;

Fig. 3 is a section substantially on the line 3—3 of Fig. 1;

Fig. 4 shows the bag of the invention just before the bottoming operation; and

Fig. 5 shows the finished bag.

Referring to the drawing in detail, the material for the making of the envelopes is taken from a supply roll 1, the web 2 from this roll passing about the idler or guide roll 3 to and in contact with circumferentially adjustable segmental gluing disc 4, receiving its glue or other adhesive from glue roll 5, the material still in web form then passing about guide roller 6 and past notching mechanisms or notching dies at each side of the web designated 7 and 8.

The gluing disc 4 applies stripes of glue or other adhesive 9 longitudinally of the web, the stripes being aligned but discontinuous by reason of the break 10 in the disc. The disc 4 being circumferentially adjustable it will be apparent that the stripes 9 may be very accurately located.

The notchers or dies 7 and 8 move or are driven in a direction transverse to the direction of travel of the web 2, as indicated by the arrows on Fig. 1, their movement being about parallel axes and these axes in turn being parallel to the travel of the web. The notches which are cut out of each side of the web are designated 11. This permits the web speed to be varied to vary the spacing of the notches without varying the speed of the notchers. It is to be noted that each of the dies 7 and 8 is slightly tapered in plan and also is so set that the forward edge is slightly lower than the trailing edge to permit of speeding up or slowing down of the web speed to vary the envelopes, and yet insuring that the notches 11 will be clean cut.

The gluing disc 4, which as above mentioned is adjustable circumferentially is set so that the notcher or die 8 will notch the edge of the web intermediate adjacent ends of the glue or adhesive stripes 9.

The web after being notched passes through tubing mechanism 12 where it is formed into a tube having a longitudinal seam 13. The rollers 14 are employed to insure proper folding of the envelope around the former shoe S.

In the tubing or folding over operation, the web edges are folded toward each other into overlapped relation along the inner ends of the notches 11, as will be seen from Fig. 1, so as to bring the notches 11 into the upper wall or seam wall of the tube as seen at 15 in Fig. 1.

The tube thus formed continues through forwarding or draw rollers 16, and from thence to cutting off or severing mechanism 17, holdback rollers 18 to another pair of forwarding rollers 19.

The cutting off or severing mechanism 17 comprises a knife 20 driven transversely to the travel of the tube, moving downwardly with respect to the plane of the web as shown in Fig. 1 and cooperating with a fixed blade 20'. The machine is so timed that the cutting off or severing operation takes place at that part of the lower wall of the web which immediately underlies the space, referred to above as 15, provided by the folded over abutting notches 11. This provides a flap 21 on the trailing edge of the forward envelope length and a flap 22 on the leading end of the adjacent bag length, the flap 21 as will be pointed out hereinafter being at the top of the envelope in the finished article, the flap 22 at the bottom.

The envelope length with a flap projecting from each end of the lower wall thereof then goes into the bottoming mechanism designated 23 where it receives a transverse stripe 24 of adhesive on the upper surface of the upper wall and where the flap 22 is folded over upon the upper wall of the envelope length and upon this adhesive stripe to finish the bag as shown in Fig. 5.

The bottoming mechanism is part of my co-pending application, Serial No. 635,495, filed September 30, 1932, and hence will not be described in detail herein.

What I claim is:—

1. In a machine for making envelopes and the like from a web of material, the combination of means for continuously advancing the web, and notching devices at each side of the advancing web adjacent the edges thereof for notching the web at predetermined intervals, each of said notching devices continuously rotating about axes

parallel to the direction of travel of the web and having their leading edges slightly lower than their trailing edges.

2. In a machine for making envelopes and the like, the combination of a segmental disc for applying aligned stripes of adhesive to one face of a continuously traveling web adjacent one edge of said web, and means for notching opposed edges of the traveling web, the notching mechanism rotating continuously about axes parallel to the direction of travel of the web and being so timed as to notch one edge of the web in the space between adjacent ends of the said aligned adhesive stripes as the web is being continuously advanced.

3. In a machine for making envelopes and the like, the combination of a rotary striping device for applying aligned spaced stripes of adhesive along one face of a traveling web adjacent one edge thereof, means rotating about axes parallel to the direction of the web travel for notching opposed edges of the web, the notches in the striped edge of the web being positioned in the space between the adjacent ends of adjacent adhesive stripes, tubing mechanism for tubing the web and to bring opposed notches into juxtaposition in one wall of the tube, and severing mechanism rotated transversely of the web travel for severing the tube intermediate the sides of opposed notches.

4. In a machine for making envelopes and the like, the combination of means for continuously advancing a web of material, notching devices at each side of the advancing web adjacent the edges thereof for notching the web at predetermined intervals, each of said notching devices rotating about an axis parallel to the direction of travel of the web to permit of varying the speed of the web without varying the speed of said notchers thereby to vary the spacing of the notches in the web, means for tubing the web to bring opposed notches into juxtaposition, and severing means for severing the tube transversely intermediate the sides of opposed notches.

5. In a machine for making envelopes and the like, the combination of means for continuously advancing a web of material, notching devices at each side of the advancing web adjacent the edges thereof for notching the web at predetermined intervals, each of said notching devices rotating about an axis parallel to the direction of travel of the web to permit of varying the speed of the web without varying the speed of the notches, thereby to vary the spacing of the notches in the web, and means for tubing the web to bring opposed notches into juxtaposition.

6. In a machine for making envelopes and the like, the combination of means for continuously advancing a web of material, a striping device for applying aligned spaced stripes of adhesive along one face of the advancing web adjacent one edge thereof, notching devices at each side of the advancing web adjacent the edges thereof for notching the web between said stripes, each of said notching devices rotating about an axis parallel to the direction of travel of the web to permit of varying the speed of the web without varying the speed of said notchers, to vary the spacing of the notches in the web.

7. In a machine for making envelopes and the like, the combination of means for continuously advancing a web of material, a circumferentially adjustable segmental disc for applying aligned stripes of adhesive along one face of the advancing web adjacent one edge thereof, notching devices at each side of the advancing web adjacent the edges thereof for notching the web between said stripes, each of said notching devices rotating about an axis parallel to the direction of travel of the web to permit of varying the speed of the web and the setting of said striping disc without varying the speed of said notchers, to vary the spacing of the notches in the web.

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