

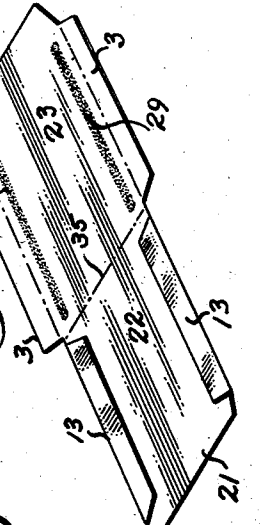
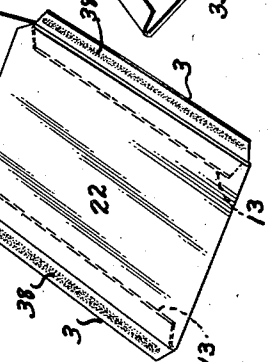
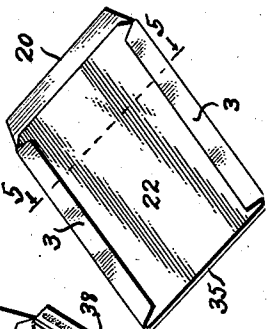
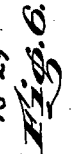
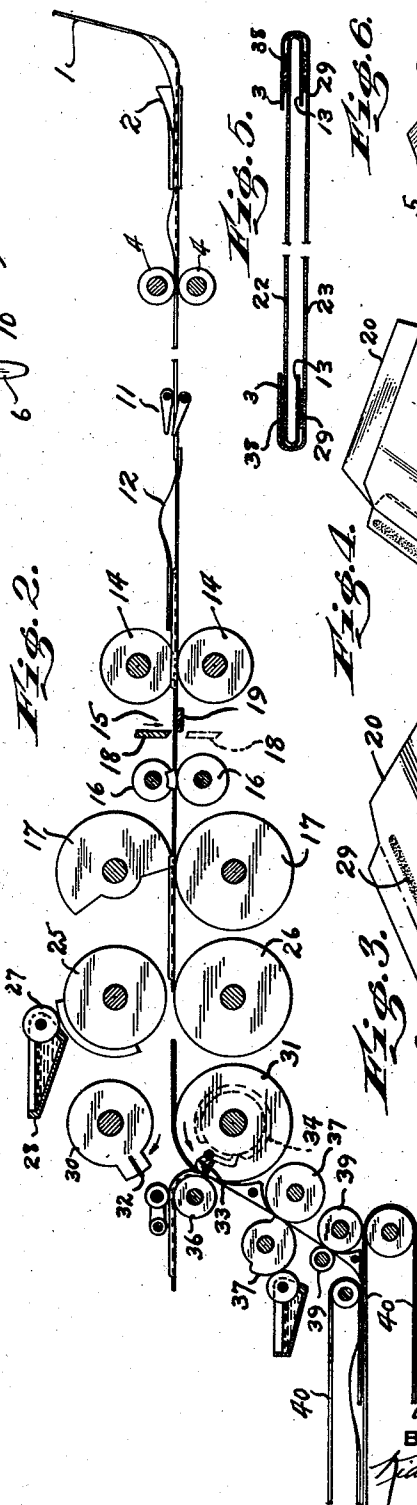
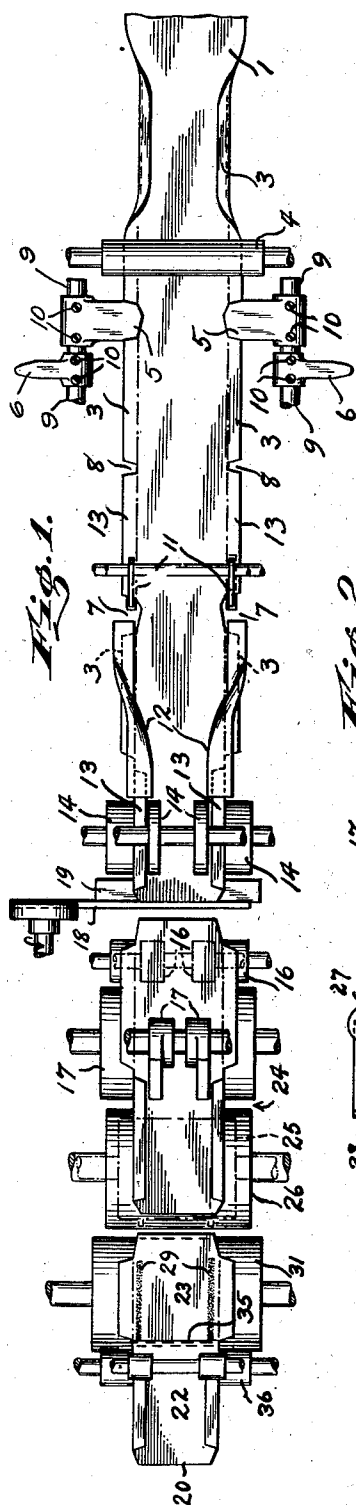
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APPARATUS FOR MAKING BAGS

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APPARATUS FOR MAKING BAGS

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Application November 20, 1934, Serial No. 753,821

5 Claims. (Cl. 93—13)

This invention relates to improvements in apparatus for making bags and is particularly well adapted for making bags from material such as cellulose acetate, cellulose hydrate, glassine, and like materials, as distinguished from paper.

In the accompanying drawing:

Fig. 1 is a plan view somewhat diagrammatic of an apparatus constituting one embodiment of my invention;

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

Figs. 3 and 4 show the bag in the various stages of its manufacture;

Fig. 5 is a sectional view of the completed bag taken on line 5—5 of Fig. 6; and

Fig. 6 is a perspective view of the completed bag.

Referring to the drawing in detail: The material designated 1 is led past plates 2 which are adapted to fold the opposed edges of the web over toward each other upon the main body of the web to form flanges 3 at opposite sides of the web.

The web then passes between rollers 4 by which the flanges are turned outwardly again so that the web is once more flat.

In its flattened condition the web passes notching mechanism comprising notchers 5 and 6 at each side of the web and adapted to notch the web as shown at 7 and 8. The notchers 5 and 6 are mounted on the same shafts.

The notchers 5 and 6 are held to their supporting shaft 9 by screws 10, so that the notchers may be adjusted relatively to each other to vary the spacing of the notches 7 and 8 lengthwise of the web to suit different conditions.

The web next passes between rocking fingers 11 adapted to engage the opposite edges of the web, these fingers being so timed that the opposed edges of the web at one side of the opposed notches 7 will move under a plate 12 interposed in the path of the advancing web while the edges at the other side of the same notches will ride over the plate, which is so shaped as to turn these edges over upon the body of the web to form flanges as shown at 13.

The web next passes between rollers 14, past cutting off mechanism 15 and between rollers 16 and 17.

The cutting off mechanism comprises a rotary cutter bar 18 driven in the direction of the arrow on Fig. 1 cooperating with a fixed member 19. The function of this cutting off mechanism is to sever the main body of the web transversely, across opposed notches 7 but an appreciable dis-

tance to one side (to the right as viewed in Fig. 1) of the center of these notches so as to leave a relatively long flap designated 20 in Figs. 1, 3 and 5 on the trailing edge of the cut off portion and a relatively short flap 21 at the leading edge of the adjacent section of material.

Each length of material, therefore, is approximately double the length of the finished bag and as shown in Fig. 1 is composed of what I shall term two panels designated 22 and 23, respectively, the flanges 13 of the panel 22 being turned inwardly over upon the body of the web 1 as hereinbefore mentioned, while the flanges 3 on the panel 23 are in an opened up condition. The length of material as shown at 24 in Fig. 1 passes between rollers 25 and roller 26. The rollers 25 are the first paste applying rollers and receive paste from the roller 27 mounted in the paste pot 28. Longitudinal stripes of paste 29 are applied by the rollers 25 to the body of the panel 23 between the flanges 3.

The length of material shown at the left in Fig. 1 passes from the rollers 25 and 26 to forwarding and creasing rollers 30 and 31. The roller 30 is provided with a creaser blade 32 and the roller 31 with a gripper 33 controlled by a cam 34. The setting and timing of these two rollers 30 and 31 are such that the creaser blade 32 engages the web substantially along the line 35 of Figs. 1 and 3 to force the web downwardly with respect to the roller 31 so that the gripping finger 33 may function to grip the material. Continued rotation of the roller 31 draws the material around with this roller and between the face of the roller and the face of a roller 36 lying adjacent thereto to fold the two panels of the web over upon each other along the line 35 as illustrated in Fig. 4 thereby to bring the outer faces of the flanges 13 into contact with the paste stripes 29 on the panel 23, to paste the panel 22 on the panel 23.

In this condition the inner faces of the flanges 3 of the panel 23 are contacted with gluing discs 37 which apply adhesive thereto as shown at 38 in Fig. 4.

The folded material then passes between rollers 39 and finally between a pair of superposed belts 40 where the flanges 3 of panel 23 are folded over upon the panel 22 as shown in Fig. 6, which completes the bag.

It will be noted from the sectional view of the bag shown in Fig. 5 that the flanges 13 of the panel 22 are pasted to the body of panel 23 by means of the adhesive stripes 29 and that the flange 3 of the panel 23 is pasted to the body of 55

the panel 22 by means of the adhesive stripes 38, thereby providing a bag wherein the flanges 2 or folded flaps forming the seams are reinforced. In other words the edges of the bag have twice the number of plies as either wall of the bag. In the bag illustrated the bag wall is single ply, the edges of the bag being two ply.

The claims of the present application are directed primarily to apparatus for making bags, the method of making such bags constituting the subject matter of my copending application Serial No. 753,822 filed November 20, 1934.

While I have illustrated and described one embodiment of my invention I do not wish to be limited to the precise structure herein shown and described as obviously various modifications and changes may be made therein without departing from the spirit and scope of my invention.

What I claim is:—

1. A bag making machine comprising in combination web-advancing means and a pair of rotary notchers at opposite sides of the machine rotatable about axes parallel to the direction of travel of the web, the notchers of each pair being offset with respect to each other so as to provide a pair of end notches and a pair of intermediate notches in the opposed edges of the web, means for folding the opposite edges of the web at one side of the intermediate notches inwardly upon the web, and paste applying means for applying paste to the body portion of the web at the other side of said intermediate notches in line with said folded over edges.

2. A bag making machine comprising in combination web-advancing means and a pair of rotary notchers at opposite sides of the machine rotatable about axes parallel to the direction of travel of the web, the notchers of each pair being offset with respect to each other so as to provide a pair of end notches and a pair of intermediate notches in the opposed edges of the web, means for folding the opposite edges of the web at one side of the intermediate notches inwardly upon the web, and paste applying means for applying paste to the body portion of the web at the other side of said intermediate notches in line with said folded over edges and cutting off mechanism for severing the web into sections substantially at said end notches.

3. A bag making machine comprising in combination web-advancing means and a pair of rotary notchers at opposite sides of the machine rotatable about axes parallel to the direction of travel of the web, the notchers of each pair being offset with respect to each other so as to provide a pair of end notches and a pair of intermediate notches in the opposed edges of the web, means for folding the opposite edges of the web

at one side of the intermediate notches inwardly upon the web, and paste applying means for applying paste to the body portion of the web at the other side of said intermediate notches in line with said folded over edges, means for applying paste to the unfolded edges and means for folding said last-mentioned edges about the first-mentioned edges to secure the same thereto.

4. A bag making machine comprising in combination web-advancing means and a pair of rotary notchers at opposite sides of the machine rotatable about axes parallel to the direction of travel of the web, the notchers of each pair being offset with respect to each other so as to provide a pair of end notches and a pair of intermediate notches in the opposed edges of the web, means for folding the opposite edges of the web at one side of the intermediate notches inwardly upon the web, and paste applying means for applying paste to the body portion of the web at the other side of said intermediate notches in line with said folded over edges, means for applying paste to the unfolded edges and means for folding said last-mentioned edges about the first-mentioned edges to secure the same thereto, cutting off mechanism for severing the web into sections substantially at said end notches, means for folding the severed section along a transverse line to bring the portions of the length at each side of the transverse line into parallelism and to bring the folded edges into engagement with the pasted portion.

5. A bag making machine comprising in combination means for applying longitudinal stripes of paste at intervals in areas intermediate the opposite edges of a traveling web, notchers for notching the opposite edges of the web at predetermined stations, folding mechanism for turning alternate edges of the web inwardly upon the main portion of the web on further advance of the web, cutting-off mechanism for severing the web transversely at the leading end of each unpasted area, rotary advancing or forwarding means for advancing the severed lengths, clamping mechanism carried thereby for gripping a severed length midway of its length so that the severed length will be deflected out of its previous path of travel, and a pair of rollers for receiving the deflected bag length and folding the same transversely to bring the portions of the length at each side of the transverse fold into parallelism and to bring the folded edges into contact with the stripes of adhesive, means for thereafter applying stripes of adhesive to the edges of the unfolded edges and means for folding the last-mentioned edges about the first folded edges and to secure the same thereto.

ADOLPH POTDEVIN.