

July 7, 1925.

C. E. OMAN

1,545,443

PASTE CUT-OUT

Filed June 18, 1923

2 Sheets-Sheet 1

Fig. 1.

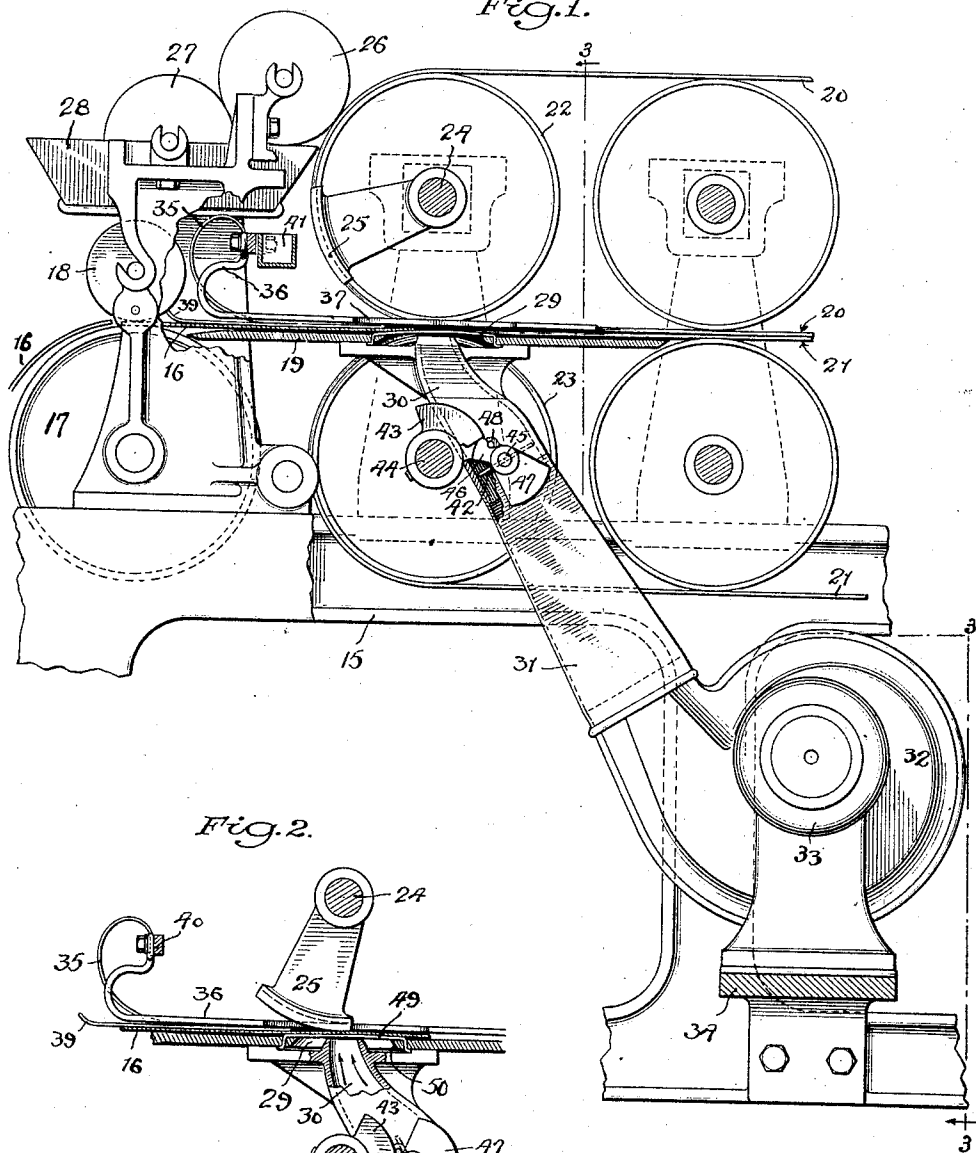


Fig. 2.

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Fig. 3.

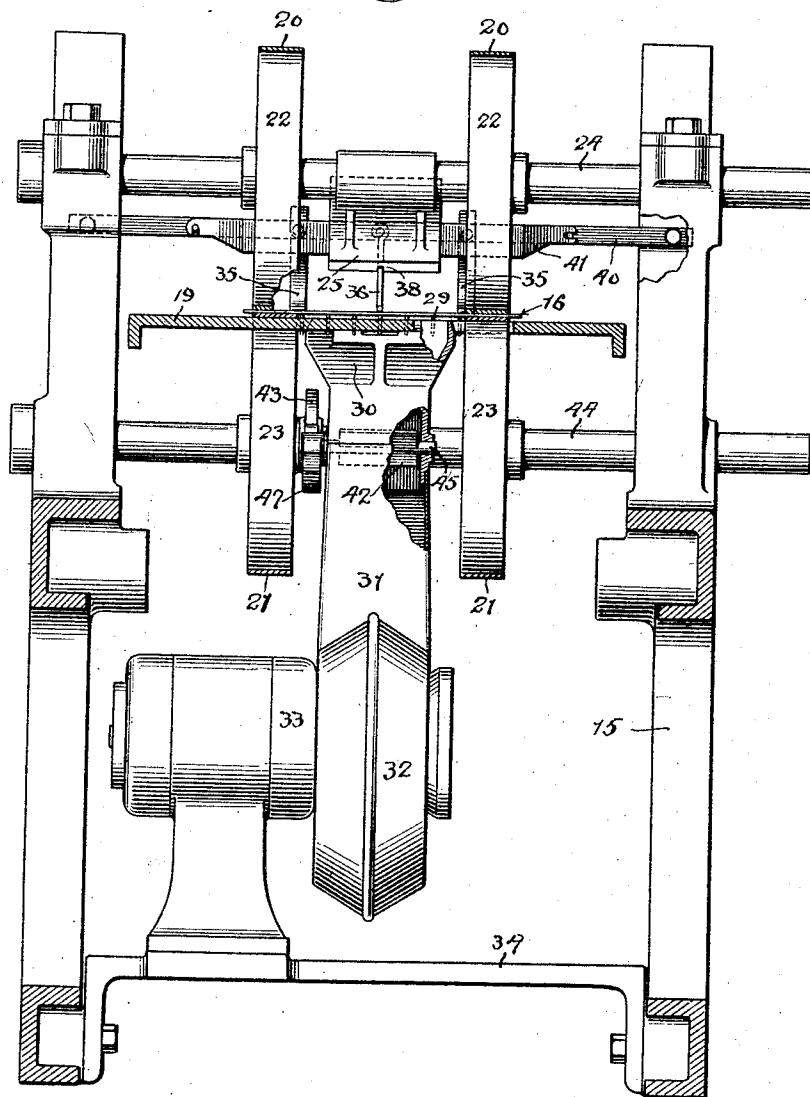


Fig. 4.

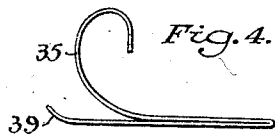
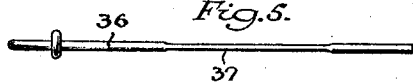


Fig. 5.



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UNITED STATES PATENT OFFICE.

CARL E. OMAN, OF SOUTH WINDHAM, CONNECTICUT, ASSIGNOR TO THE SMITH & WINCHESTER MFG. CO., OF SOUTH WINDHAM, CONNECTICUT, A CORPORATION OF CONNECTICUT.

PASTE CUT-OUT.

Application filed June 18, 1923. Serial No. 646,090.

To all whom it may concern:

Be it known that I, CARL E. OMAN, a citizen of the United States of America, residing at South Windham, in the county of Windham and State of Connecticut, have invented certain new and useful Improvements in Paste Cut-Outs, of which the following is a specification.

My invention relates to bag-making machines, and particularly to features which are commonly referred to in the trade as "paste cut-outs". The object of my invention is to provide a machine in which objectionable fouling of parts by the paster on interruption of the blank feed is obviated. Specifically, the invention contemplates the association with the rotary paster, of a pneumatic backer and related devices, the pneumatic backer taking the place of the usual backing roll to support the blank during its engagement by the paster.

In the accompanying drawings—

Fig. 1 is a broken side elevation of so much of a bag-making machine as is necessary to illustrate the application of my invention thereto;

Fig. 2 is a partial broken side elevation of the same showing the paster in a different position;

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

Fig. 4 is a side elevation of one of the bag guides; and

Fig. 5 is a plan view of another of the guides.

The invention is applicable to various bag-making machines, and is not limited to a bottomer of the type shown to illustrate a practical embodiment thereof. Various modifications of detail may be readily made without departing from the underlying conceptions of the invention.

As here shown, the machine comprises a frame 15 upon which are supported various elements for operating upon the bag blank 16, including the rear cylinder 17 and folding roll 18 between which the blank passes to the paster table 19. The side margins of the blank 16 are gripped as usual between pairs of belts 20 and 21 which pass respectively around pulleys 22 and 23. On the shaft 24 of the pulley 22 is a paster segment 25 adapted to receive adhesive from

the transfer roller 26, which runs in contact with the gathering roller 27 dipping into the paste pan 28.

At the point at which the pasting segment 25 is adapted to engage the blank 16, the table is apertured at 29. Beneath the aperture is arranged the nozzle 30 of a pneumatic pressure box 31, through which air is forced by a fan 32. The latter is driven by an electric motor 33 arranged on the cross beam 34 of the frame. It will be noted that the table aperture 29 is located between the points at which the side margins of the blank are gripped, through belts 20 and 21, by the pairs of pulleys 22 and 23, and that the blank is consequently held firmly at its opposite sides as it travels over the aperture.

In operation, the portion of the blank lying over the aperture in the table is supported and pressed by the blast against the paster 25 with sufficient force to take up the adhesive from the latter. The wind box 31 thus in effect forms a pneumatic backer or support for the blank, which takes the place of the usual backing roll. Obviously an interruption of the blank feed causes no fouling, since there is no backing roller engaged by the paster during its working travel. Loss of bags through fouling, on the renewal of the blank feed, is thus obviated.

Accessory to the pneumatic backer are lateral guides 35 and a center guide 36, which extend from the cylinder 17 above the table 19. The center guide 36 passes across the blast aperture 29 and is narrowed at 37 in the area which overlies the aperture, and is accommodated by channel 38 in the paster segment 25. The lateral guides 35 are formed from spring strips bent back upon themselves, and their free ends 39 extend into proximity to the folding roller 18. These several guides serve to prevent fluttering of the blank in the blast from the wind box, while the free ends 39 of the lateral guides 35 engage the forward end of the blank emerging from the nip of the rolls 17 and 18 and prevent it from being blown upward out of position. The lateral guides extend in the direction of the feed approximately to the nip of the blank by

the feed bands 20 and 21 and thus insure the proper presentation of the blank to the latter. The center guide 36 extends across the aperture 29 and assists the bands 20 and 21 in preventing an excessive upward displacement of the central portion of the bag upon which the paster acts.

The guides 35 and 36 may be supported in any desired manner. I have here shown them secured to a cross bar 40 which carries the drip pan 41.

In some instances it may be desirable to provide an intermittent blast which is operative only during the period of application of the paster 25 to the blank. For this purpose a valve 42 may be arranged in the throat of the wind box 31. To operate this valve in synchronism with the blank feed, I provide a cam 43 on the shaft 44 of the pulley 23 which is driven in synchronism with the feed. Fast on the valve spindle 45 is a lug 46 adapted to be engaged by the cam 43 to move the valve to open position. A counterweight 47, preferably integral with the lug 46, automatically returns the valve to closed position when the lug 46 escapes the cam 43. A stop pin 48 engaged by the lug, halts the valve in closed position. Obviously any other suitable operating connection for the valve may be provided, properly timed to the bag feed. Where an interrupted blast of this type is employed, the guides 35 and 36 are of less importance, and may in some instances be omitted.

As a further auxiliary for the blast, I provide across the blast opening 29 a series of fine spring wire supports 49 which bridge the aperture and not only prevent the forward edge of the bag from possibly engaging the forward edge 50 of the blast aperture, but also assist in holding the bag up to the paster 25 during the operation of the latter. This function of the spring wires 50 is of particular importance when the paper of which the bag is made, is of very heavy weight. The cross section of the wires is slight, however, and in case of a missed feed, they take little paste from the segment 25, so that no fouling results—more particularly in view of the fact that the air blast across the wires rapidly dries them.

It will be obvious that the self-contained blast unit may be driven from the main power shaft of the machine, instead of electrically, if preferred. The particular arrangement of the blast, and the details of the several parts are all subject to modification in many ways, without departing from what I claim as my invention.

I claim—

1. In a bag machine; a rotary intermittently-operated paster, means for feeding a bag blank to the paster, and means for supplying a blast to the face of the blank

opposite that engaged by the paster to support the blank against the paster during the operative travel of the latter.

2. In a bag machine; a rotary intermittently-operated paster, means for feeding a bag blank to the paster, and means for supplying a blast to the face of the blank opposite that engaged by the paster to support the blank against the paster during the operative travel of the latter, together with means controlling said blast to render it effective substantially only during the operative travel of the paster.

3. In a bag machine, a rotary intermittently-operated paster, means for feeding a bag blank to the paster, and means for supplying a blast to the face of the blank opposite that engaged by the paster to support the blank against the paster during the operative travel of the latter, together with means engaging the blank to prevent flutter thereof incident to the escape of the blast at the edges of the blank.

4. In a bag-making machine, an apertured table, rolls between which a blank is fed toward the aperture in the table, a rotary presser adapted to engage the blank at the aperture, a pneumatic backer delivering a blast at the aperture to press the blank against the paster, and guide means arranged above the table and extending from the rolls toward the aperture to prevent flutter of the blank as it is fed from the rolls.

5. In a bag-making machine, an apertured table, rolls between which a blank is fed toward the aperture in the table; a rotary presser adapted to engage the blank at the aperture, a pneumatic backer delivering a blast at the aperture to press the blank against the paster, and guide means arranged above the table and extending from the rolls toward the aperture to prevent flutter of the blank as it is fed from the rolls, said guide means comprising a pair of spring strips arranged adjacent opposite side margins of the blank.

6. In a bag-making machine, an apertured table, rolls between which a blank is fed toward the aperture in the table; a rotary presser adapted to engage the blank at the aperture, a pneumatic backer delivering a blast at the aperture to press the blank against the paster, and guide means arranged above the table and extending from the rolls toward the aperture to prevent flutter of the blank as it is fed from the rolls, said guide means comprising a pair of spring strips arranged adjacent opposite side margins of the blank, and an intermediate guide rod extending across the aperture in the table.

7. In a bag-making machine, an apertured table, rolls between which a blank is fed toward the aperture in the table, a rotary

presser adapted to engage the blank at the aperture, a pneumatic backer delivering a blast at the aperture to press the blank against the paster, and guide means arranged above the table and extending from the rolls toward the aperture to prevent flutter of the blank as it is fed from the rolls, said guide means comprising a pair of spring strips arranged adjacent opposite side margins of the blank, and an intermediate guide rod extending across the aperture in the table, said guide rod having a constricted area in the region of the aperture in the table.

8. In a bag-making machine, an apertured table, a rotary paster and a pneumatic backer cooperating at the aperture in the

table, in combination with wire supports bridging the aperture.

9. In a bag-making machine, an apertured table, a rotary paster and a pneumatic backer cooperating at the aperture in the table, in combination with spring wire supports bridging the aperture.

10. In a bag-making machine, an apertured table, a rotary paster and a pneumatic backer cooperating at the aperture in the table, in combination with spring wire supports extending across the aperture in the direction of the blank feed.

In testimony whereof I have signed my name to this specification.

CARL E. OMAN.