

Sept. 16, 1930.

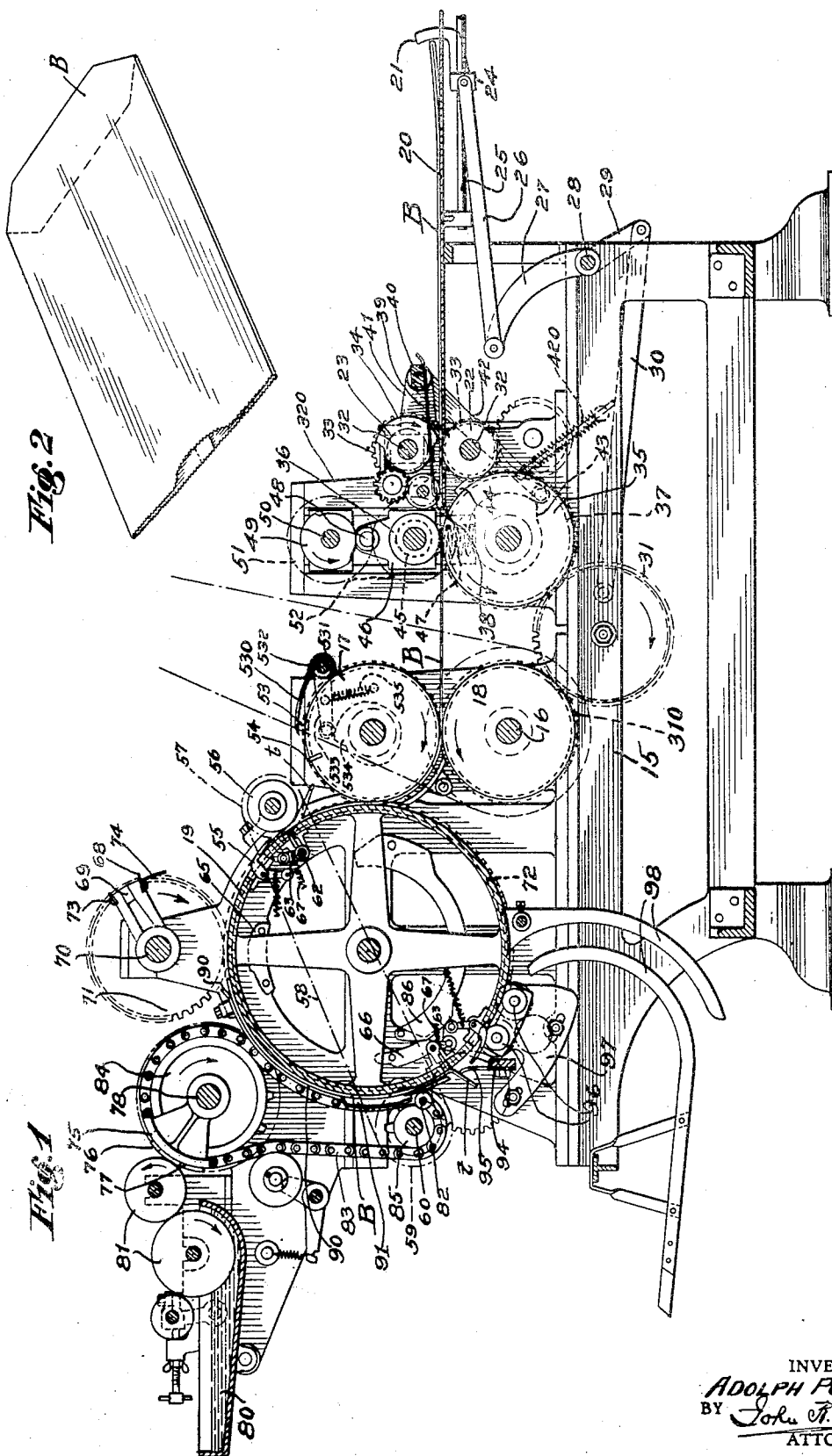
A. POTDEVIN

1,775,829

BAG MAKING MACHINE

Filed Nov. 2, 1928

3 Sheets-Sheet 1



INVENTOR
ADOLPH POTDEVIN
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ATTORNEY

Sept. 16, 1930.

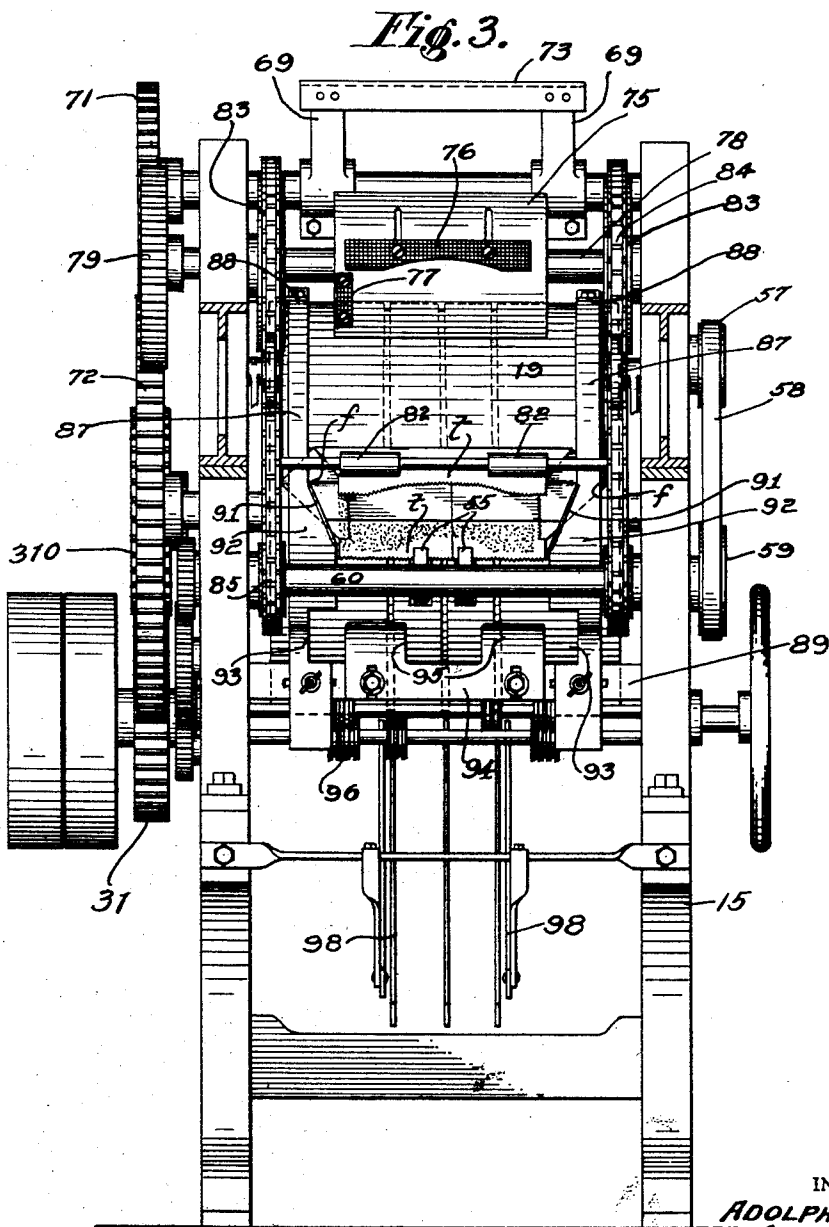
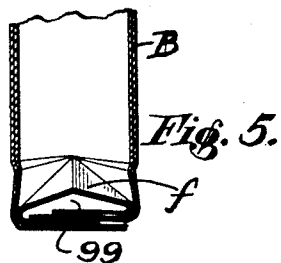
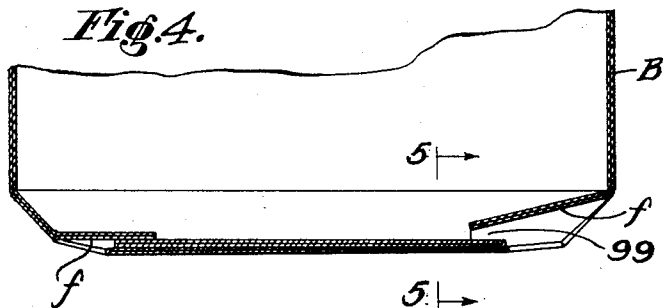
A. POTDEVIN

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BAG MAKING MACHINE

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3 Sheets-Sheet 2



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3 Sheets-Sheet 3

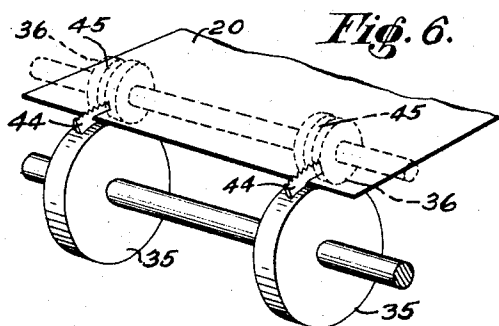


Fig. 6.

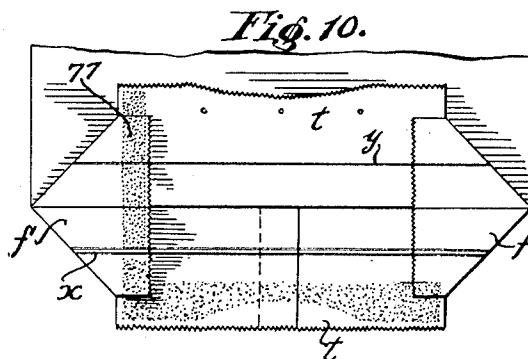


Fig. 10.

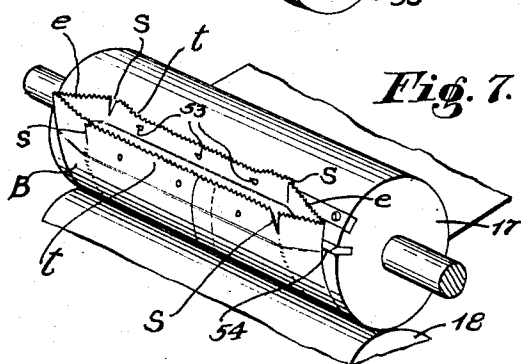


Fig. 7.

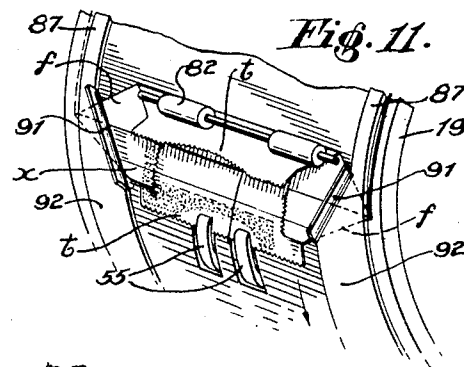


Fig. 11.

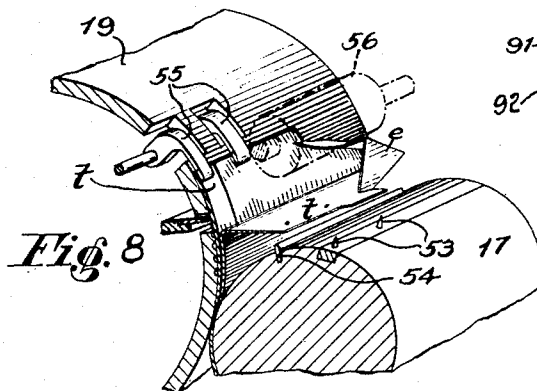


Fig. 8.

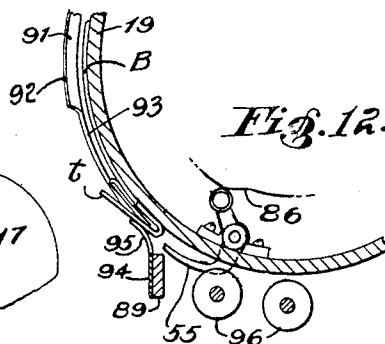


Fig. 12.

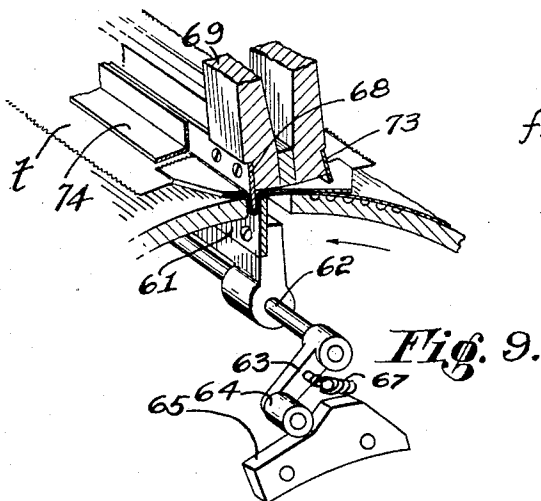


Fig. 9.

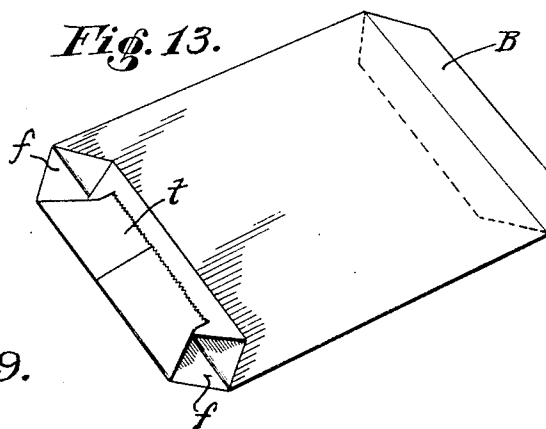


Fig. 13.

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UNITED STATES PATENT OFFICE

ADOLPH POTDEVIN, OF GARDEN CITY, NEW YORK, ASSIGNOR TO POTDEVIN MACHINE COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK

BAG-MAKING MACHINE

Application filed November 2, 1928. Serial No. 316,657.

This invention relates to bag-making machines, and particularly to mechanism for forming the tops or bottoms of large heavy bags such as are used for holding cement.

Owing to the thickness and resistance of the paper of which cement and similar bags are composed, and also the large dimensions of the bags, it has been a problem heretofore to form and fold the multi-ply end flaps in correct pasting position. This I have solved by a modification of and improvement in the bottom-forming mechanism of the bag-making machine illustrated in my Letters Patent of the United States No. 1,176,163, dated March 21, 1916, and by adapting such mechanism to operate efficiently upon the end or ends of each succeeding bag or bag tube delivered to the machine.

The principal object of my invention is the provision, in a bag machine, of simple and efficient means for holding down the folded rear or trailing flap of a bag end until the adjacent leading flap is folded to overlie the trailing flap.

Another object of my invention is to provide, in a bag machine, means whereby bags or tube blanks of plicated thick material are rapidly and accurately delivered to the forwarding mechanism of the machine.

Another object of my invention is the provision, in a bag machine, of a resilient pressure element mounted in co-operative relation to a tucking blade and gripper cylinder, and adapted, as the blade approaches the bag or tube blank, to bear yieldingly upon the opposing flap and hold it positively in place until the material has been indented by the blade and engaged by the proximate gripper.

With these and other objects in view my invention embodies novel features of construction and combinations of parts which will be hereinafter described; the scope of the invention being defined in the appended claims.

The machine herein illustrated is especially designed for folding and pasting together the open top of a bag similarly to a satchel-bottom, (excepting that a small portion of the overlapping folds may be left unpasted to afford a passage therebetween for a nozzle

through which cement or other powder may be blown into the bag) and the closed top of the bag, like the bottom, is folded against the body of the bag, thus facilitating the stacking of the bags. It is to be understood, however, that mechanism embodying my invention may be advantageously employed for forming satchel bottoms for bags either before or after the top closing operation.

In the drawings—

Figure 1 is a longitudinal vertical section of a bag machine embodying my invention in a form adapted to close the tops of pre-formed satchel-bottom bags.

Fig. 2 is a view of an open top of a satchel bag.

Fig. 3 is a rear end view, partly in section, of the machine.

Fig. 4 is a longitudinal section of the closed top of the bag as expanded and inverted, showing at the right the space for the passage of a cement charging nozzle.

Fig. 5 is a transverse vertical section of the bag top, as on the line 5—5 of Fig. 4.

Fig. 6 is a sectional detail in perspective of the slitting rolls for the leading end of the bag.

Fig. 7 is a similar view of the upper forwarding roll, showing the points thereof as engaged with one of the tongues formed between the parallel slits in the upper side of the bag.

Fig. 8 is a similar view of a portion of the cylinder and the upper forwarding roll, showing one of the tongues of the bag engaged by the cylinder grippers and the other tongue as just released from the points of the forwarding roll.

Fig. 9 is a similar view of portions of the cylinder, the transverse creasing gripper and a rotating tucker blade coacting with the latter.

Fig. 10 is a view of the partially folded and pasted end of the bag.

Fig. 11 is a detail, in perspective, of a portion of the gripper cylinder and the partially folded bag top thereon, showing the inturned end folds as engaged with lateral retaining members, and the trailing flap as being folded by a travelling presser roll.

Fig. 12 is a transverse section of a portion of the cylinder, showing one of the lateral retaining members and also a stationary folding blade which effects the folding of the leading flap, together with stationary presser rolls effective to iron the associated and pasted folds during the discharge of the bag from the machine.

Fig. 13 is a view of the completed bag.

Referring to the drawings, 15 designates the main frame of a bag machine, and 16 the drive shaft journaled in suitable bearings in standards on the frame. 17, 18 designate bag forwarding rolls, and 19 designates a gripper cylinder adjacent thereto adapted to grip the open leading end of a pre-formed bag, B, and carry it bodily to and through the top folding instrumentalities. These rolls and the cylinder are co-operatively geared together and to the main shaft, and, excepting as hereinafter pointed out, they are or may be substantially as described in my previous patent.

Any suitable means for feeding the bags to present their leading open ends to the forwarding rolls may be employed. In the present instance the bags are successively deposited on a bed or table 20 which is supported on the main frame sufficiently remote from and in line with the forwarding rolls, and each succeeding bag is advanced by means of reciprocating pusher fingers 21 between a pair of transverse feed rolls 22, 23 at the delivery end of the bed. The pusher fingers 21 are carried by a cross-head 24 slidable on horizontal guide rods 25 fixed beneath the receiving end of the bed, which head is connected by means of a link 26 to up-standing arms (one, 27, of which is shown) on a rock-shaft 28 mounted in and between the sides of the main frame. Fast on the rock-shaft is a depending arm 29 eccentrically connected by means of a rod 30 with a gear 31 in mesh with a gear 310 on the main shaft. Hence during the operation of the machine the fingers 21 are horizontally reciprocated in a manner to bear against the opposing bottom of each succeeding bag deposited on the bed 20, thus pushing the bag between the feed rolls 22, 23.

The rolls 22, 23 are mounted on parallel shafts 32 which are journaled in standards 320 on the main frame and are equipped with meshing gears 33 which are included in a gear train from the main shaft, whereby the rolls are continuously rotated at the same speed. The upper roll is formed with a segmental acting surface 34 which intermittently grips and releases the opposing bag, thus advancing the bag a limited extent and into the bite of suitably-disposed feed rolls 35, 36, the shaft of the lower or larger roll having a gear 37 included in the gear train.

Owing to the thickness of the material in the case of cement bags and the like, and the

fact that the open end of the bag or tube has a front and a back composed of several plies of paper, it is desirable to engage the leading end of the tube, not at its very edge but at some distance in rear thereof. While the individual plies are pasted together near the open end of the bag, the front and back of the latter are not pasted together and are therefore free to slide against each other, thus being liable to buckle if the leading edge were pushed directly into the bite of cylindrical feed rolls. Hence the upper feed roll 23 is formed with a segmental acting surface as previously mentioned.

Before the bag on the bed is engaged by the gripping surface 34 its leading end contacts with a pair of vibratory straightener fingers 38 which are movable into and from the path of the bag. These fingers are formed on the free ends of rods 39 which are fixed to a rock-bar 40 supported by and journaled in arms 41 on the standards 320. The bar 40 has affixed thereto a depending arm 42 provided at its lower end with a lateral roll which is maintained in contact with a cam 43 fast on the shaft of the lower rolls 35 by a suitably-arranged spring 420. The contour of the cam is such that the arm 42 is moved at regular intervals, thus effecting the periodical raising of the straightener fingers 38 to permit the bag to clear the latter.

The feed rolls 35, which are suitably spaced apart, are provided on their peripheries with segmental cutters 44 and the upper rolls, similarly spaced, are provided with grooves 45 for the passage of the cutters. (See Figs. 1 and 6.) The cutters are so arranged and actuated in timed relation to the travel of the bag that the sides of the open end of the bag are longitudinally slitted thereby, as at s (Fig. 7) to provide the requisite closure folds.

The shaft of the upper roll 36 is journaled in vertically slidable boxes 46 in the standards 320. These boxes are yieldably supported by suitable springs (one of which is indicated at 47), which maintain lateral rolls 48 on the boxes normally in contact with a pair of cams, (one of which is indicated at 49) on an overlying shaft 50 journaled in boxes in the standards. The shaft 50, being provided with a gear 51 in mesh with the gear 52 of the upper roll, rotates the cams concurrently with the roll.

The peripheral contours of the cams 49 are such that the spring elevated upper roll is normally caused to lie above the path of the bag, but the instant the leading end of the bag passes between the feed rolls 35, 36 the upper roll is depressed by the action of the cams 49, whereupon the bag is advanced by such feed rolls into the bite of the forwarding rolls 17, 18. The upper feed roll 36 is raised or lowered at predetermined intervals in order to release the feeding action of

the rolls when the thicker bottom portion (B, Fig. 2) of the bag passes between the feed rolls 35, 36.

The upper forwarding roll 17 is provided with a series of spaced-apart peripheral points 53 which, when the leading end of the bag enters the bite of the rolls, penetrate the opposing tongues formed between the parallel slits (*s*) in the sides of the bag and thus carry the blank against the surface of the upper roll. The periphery of this roll 17 is provided in spaced relation to the points with a creasing rib 54 which engages the opposing surface of the progressing bag, and, in conjunction with a correspondingly located groove in the lower roll, creases the bag transversely to produce in its respective sides a fold line suitably spaced from the open end of the bag.

In the upward movement of the bag with the roll 17 the free outer edge of the tongue, *t*, formed between the parallel slits in the under side of the bag, springs against the opposing periphery of the cylinder 19 and is at once grasped by a pair of vibratory gripper fingers 55 which extend through openings in the periphery of the cylinder. These fingers are similar in construction and operation to the corresponding gripper fingers described in my previous patent and include actuating arms which co-act with a suitably arranged actuating cam.

The leading end of the bag, when its opposite tongues *t* are held by the roll points 53 and cylinder grippers 55, respectively, is gradually spread by the opposite rotary travel of the points and grippers, thereby producing V-shaped end members *e* (Figs. 7 and 8), which, as the tension on the paper is increased, are folded inward and downward upon the respective rear and trailing flaps including the tongues *t*. These end members thus form folds *f* (Fig. 10) of general V-shape, upon which the oppositely extending flaps, including the tongues *t*, are subsequently folded in proper order, one upon the other, and pasted together to complete a top closure similar to a satchel-bottom, as will hereinafter appear.

When the tongues, *t*, have been drawn sufficiently apart by the receding points and grippers to produce the folds, *f*, the trailing tongue *t* is released from the points, whereupon the bag, thus partially folded, is bodily carried rearward with the cylinder. In the present instance the trailing tongue *t* is released from the points by the lifting action of an oscillating stripper plate 530. This plate is fast on a rock-shaft 531 journaled in suitably-disposed lugs 532 and provided with a lever arm 533 having at its free end a roll which is maintained in operative contact with an appropriate cam 534 on the shaft of the roll 17 by means of a suitably-disposed spring 535. (See Fig. 1.)

As the bag progresses the oppositely extending tongues *t* and the V-shaped folds *f* pass beneath a roll 56 which overlies the peripheral path of the cylinder, which roll thus presses down the ends folds and the trailing tongue in flatwise condition upon the periphery of the cylinder. The shaft of the roll 56 is journaled in bearings in standards on the sides of the supporting frame, and is provided with a pulley 57 which is connected by means of a belt 58 with a pulley 59 on a driven shaft 60, hereinafter referred to, at the rear of the cylinder. Thus the roll 56 is continuously driven in a manner to iron out the partially folded leading top of the bag.

Mounted on the cylinder immediately in advance of the gripper 55, is a gripper which is designed to receive the leading flap throughout its length, after it passes the roll 56, the crease line thus produced being indicated at *x*. The creasing gripper comprises a jaw bar 61 which extends into a slot in the wall of the cylinder and co-operates with one of the walls of the slot. The jaw bar, which is normally closed, is carried by a rock-shaft 62 journaled in lugs on the inner wall of the cylinder, and one end of the shaft is provided with an arm 63 bearing a roll 64, which at predetermined intervals contacts with suitably located cam blocks 65, 66 and is thereby actuated to open the jaw in opposition to the action of a suitably disposed spring 67.

The cam block 65 is fixedly supported vertically above the axis of the cylinder, so as to effect the opening of the gripper at this location and then permit its closing. When the gripper is open a rotary tucking blade 68 impinges against the leading flap, transversely of the bag, and thereby tucks it into the open jaws of the gripper. As the rotating blade recedes from the intucked bag portion, the jaws, closing, forcibly grasp and transversely crease the latter. (See Fig. 9.) The blade 68 is carried by an arm 69 on a cross-shaft 70 which has its bearings in boxes in standards on the sides of the main frame, said shaft being actuated through a gear 71 in mesh with a gear 72 on the cylinder shaft.

The arm 69 is also equipped with a tucking blade 73 in spaced parallel relation to the blade 68, which blade 73, as the blade 68 recedes from the intucked bag portion, impinges upon the trailing flap transversely thereof, to crease and upwardly bend such flap along the line *y*. (See Figs. 9 and 10.) The surface of the cylinder is preferably indented to facilitate the creasing action of the blade 73.

The paper of which the bag is composed being relatively heavy and resistant, particularly in the area of the overlapping seamed back of the bag, tends to spring from the gripper 61 and the blade 68 as the latter is receding from the gripper, thus impairing the uniformity of the final end fold. To

overcome this objection, I affix to the arm 69 just in advance of the tucking blade 68 a resilient metal blade 74 of substantial width, which blade 74, as the blade 68 approaches the bag bears yieldingly upon the opposing flap and holds it positively in place upon the cylinder until the paper has been indented by the tucking blade 73.

As the cylinder continues its movement, with the partially folded top of the bag held by the grippers 55, 61, the bag is carried into the path of a rotatable sector head 75 having suitably-disposed pads 76, 77 which apply paste to one of the folds *f* and to the leading tongue *t* respectively. (See Figs. 3 and 10). The sector is fast on a cross-shaft 78 which has its bearings in standards on the sides of the main frame, and has at one end a gear 79 in mesh with the gear 72 of the cylinder shaft. The pads of the head 75 are supplied with paste from a suitably-disposed paste tank 80 by means of interposed transfer rolls 81 in the usual manner. (See Fig. 1).

A folder and presser roll 82 supported by and between a pair of travelling endless chains 83 mounted adjacent the respective ends of the cylinder, impinges against the up-standing trailing flap of the progressing bag on the cylinder and folds the flap down upon and in close contact with the adjacent folded portions of the bag top, thereby causing such flap to adhere to the paste surface of the fold *f*. These chains pass about sprocket wheels 84 on the shaft 78 and about similar wheels 85 on the lower shaft 60 hereinbefore referred to.

As described in my previous patent the chains 83 are driven at a speed somewhat greater than the surface speed of the cylinder and hence the presser roll 82 as it approaches the periphery of the cylinder contacts with and folds the up-projecting trailing flap, finally passing outwardly around the lower sprocket wheels. Also as the roll 82 approaches its lower limit of travel the grippers 61 and 55 are opened to release the bag; that is to say the actuating arm of the gripper 61 encounters the cam 66 previously referred to and the actuating arm of the grippers 55 encounters a suitably-disposed segment cam 86 within the cylinder.

Owing to the thickness and resiliency of the plications of the paper, the trailing flap *t*, when it is freed from the folding roll 82, tends to snap bodily upward along the fold line *y* as a hinge, thus interfering with the correct folding and pasting of the leading flap. To overcome this objection, I arrange at the rear of the cylinder, adjacent its respective sides, a pair of stationary segmental guides 87 which are slightly spaced from, and are concentric with the periphery of the cylinder. These guides are conveniently secured at their upper ends to brackets 88 extending from the adjacent side standards, and at their

lower ends to a cross-bar 89 fixed to and between the sides of the frame.

The upper extremities of the guides 87 are slightly flared or offset, as at 90 (Fig. 1), and are so located relatively to the rotating creasing blades 68, 73 as to receive and overlie the outer ends of the V-folds *f* of the bag top, immediately after the creasing has been effected. As the bag progresses the ends of the folds *f*, together with the longitudinal edges of the bag, are caused to hug the periphery of the cylinder by the overlying portions of the guide segments. Such portions are relatively narrow from their upper ends to a plane adjacent the path where the roll 82 initially acts upon the trailing flap. Here the inner edges of the segments are inclined downwardly and inwardly to provide diagonal portions 91 which merge in wider lower portions 92 of the respective segments, which wider portions are recessed or offset, as at 93, adjacent the fixed cross-bar 89. On this cross-bar is adjustably secured a plate 94 having spaced upstanding members 95 constituting final folding blades which lie in the path of the tongue *t* of the leading flap of the bag top.

The co-operative relation of the parts just described is such that as the trailing flap of the progressing bag is being folded by the roll 82 the wider surfaces 92 of the segmental guides are presented to the V-folds *f* so as to overlie the extremities of the crease or fold line *y*, and hence when the trailing flap is released by the roller 82 the latter flap is positively held in down position (as seen in Figs. 3 and 11) until the leading tongue *t* which is now released from the grippers 55 and projects outward, impinges against and is partially folded by the upstanding blades 95, whereupon the fold line *x* passes to the recessed portions 93 of the guides where the correct bodily folding of the flap is effected by the action of the blades 95.

The overlapping flaps pass between ironing rolls 96 mounted in brackets 97 adjustably supported at or near the bottom of the peripheral path of the cylinder, which rolls effect the close contact of the contiguous folds of the bag top, and also flatten the satchel-like top and bottom against the respective sides of the bag. Thence the bag is discharged from the machine through suitable deflecting guides 98.

From the foregoing it will be seen that the inwardly extending segmental guides 87 afford simple and efficient means (other than the folding element such as the roller 82) holding down the folded rear or trailing flap *t* until the leading flap is folded to overlie the former flap; it being noted that before the folding roller leaves the folded trailing flap, the outer edges of such flap are engaged by the diagonal portions 91, 92 of the respective

guides and are thereby held against reopening until the leading flap *t* has been closed.

It is also to be noted that the provision of the openings 93 permits the unrestricted folding of the leading flap *t* while the folded trailing flap is still held and engaged by the guide portions 91, 92. Further, that the grippers 55 do not open or release the leading flap *t* until just before they reach the stationary folding members 95 of the plate 94, while the gripper 61 releases the tucked part of the bag only after it has passed under the first ironing roll 96. (Fig. 1.)

It is also to be noted that since in the formation of the bag top the paste is omitted from one of the V-folds *f* thereof and also from the adjacent portions of the tongues *t*, the overlapping folds are left unpasted at one side of the bag top, thus affording a passage 99 (Figs. 4 and 5) through which, when the closed top is expanded, cement or other powder can be readily blown into the bag.

It is also to be noted that the bag when delivered by the machine can be readily stacked, in that the top, similarly to the satchel-bottom, is flattened against the body of the bag. (See Fig. 13.)

As is common in bag making machines the diameter of the cylinder herein illustrated is such that several successive bags may be progressively acted upon thereby at the same time, the cylinder accordingly being provided with a plurality of complementary sets of gripping devices and suitably-disposed actuating means therefor.

I claim—

1. In a bag machine, the combination with a cylinder, means co-operating therewith to form oppositely-extending front and back flaps and V-shaped end folds on tubular bag material carried by the cylinder, said means including a gripper on the cylinder for engaging the leading flap, means for folding the trailing flap upon the end folds, and means for folding the leading flap upon the end folds and the folding trailing flap, of guide members arranged to receive and guide the apices of the respective end folds and the longitudinal edges of the bag material, said members including portions arranged to overlie the end folds to a substantial extent and to hold the folded back flap until the front flap is folded.

2. In a bag machine, the combination with a cylinder, means co-operating therewith to form oppositely-extending front and back flaps and V-shaped end folds on tubular bag material carried by the cylinder, said means including a gripper on the cylinder for engaging the leading flap, means for folding the trailing flap upon the end folds, and means for folding the leading flap upon the end folds and the folded trailing flap, of segmental strips mounted adjacent the respective ends of the cylinder to overlie the latter and

afford guides beneath which the apices of the end folds and the longitudinal edges of the bag material are guided, said strips having inwardly projecting portions arranged and adapted to overlie the end folds to a substantial extent and to hold the folded back flap until the front flap is folded.

3. In a bag machine, the combination of forwarding means including devices for temporarily holding the trailing end flap of tubular bag material, a cylinder including a gripper for the leading flap of the said material, said holding devices and grippers co-operating to pull the flaps in opposite directions longitudinally of the path of travel of the material on the cylinder, thereby producing V-shaped end folds, means for folding the trailing flap upon the end folds, means for folding the leading flap upon the end folds and the folded trailing flap, and guide members arranged to receive and guide the apices of the respective end folds and the longitudinal edges of the bag material, said members including portions arranged to overlie the end folds to a substantial extent and to hold the folded back flap until the front flap is folded.

4. In a bag machine, the combination of forwarding means including devices for temporarily holding the trailing end flap of tubular bag material, a cylinder including a gripper for the leading flap of the said material, said holding devices and gripper co-operating to pull the flaps in opposite directions longitudinally of the path of travel of the material on the cylinder, a second gripper arranged on the cylinder in spaced relation to the first-named gripper, means for independently actuating said grippers in timed relation, a rotary blade adapted and arranged to impinge against said leading flap and tuck it into the second gripper, whereby such flap while it is held by the first-named gripper is creased throughout the width of the bag, means for folding the trailing flap upon the end folds, means for folding the leading flap upon the end folds and the folded trailing flap, and guide members arranged in spaced relation to the cylinder and adapted to receive and guide the apices of the respective V-folds and the longitudinal edges of the bag material, said members including portions arranged to overlie the end folds to a substantial extent and hold the folded rear flap until the front flap is folded.

5. In a bag machine, the combination of forwarding means including devices for temporarily holding the trailing end flap of tubular bag material, a cylinder including a gripper for the leading flap of the said material, said holding devices and gripper co-operating to pull the flaps in opposite directions longitudinally of the path of travel of the material on the cylinder, thereby pro-

5 ducing V-shaped end folds, means for fold-
 ing the trailing flap upon the end folds,
 means for folding the leading flap upon the
 end folds and the folded trailing flap, and
 10 segmental strips fixed adjacent the respec-
 tive ends of the cylinder so as to overlie the
 cylinder and afford guides beneath which the
 apices of the end folds and the longitudinal
 edges of the bag material are guided, said
 15 strips having inwardly projecting portions
 arranged and adapted to overlie the end
 folds to a substantial extent and hold the
 folded rear flap until the front flap is folded.

6. In a bag machine, the combination with
 20 a cylinder, means co-operating therewith to
 form oppositely-extending front and back
 flaps and V-shaped end folds on tubular bag
 material carried by the cylinder, said means
 including a gripper on the cylinder for en-
 25 gaging the leading flap, means for applying
 adhesive to one of the end folds and the lead-
 ing flap whereby when the flaps are folded
 and united a passage is formed between one
 of the V-folds and the overlapping flaps,
 30 means for folding the trailing flap upon the
 end folds, and means for folding the leading
 flap upon the end folds and the folded trail-
 ing flap, of guide members arranged to re-
 ceive and guide the apices of the respective
 35 end folds and the longitudinal edges of the
 bag material, said members including por-
 tions arranged to overlie the end folds to a
 substantial extent and hold the folded rear
 flap until the front flap is folded.

7. In a bag machine, the combination with
 40 bag forwarding means, of feed rolls in ad-
 vance thereof, means for successively deliv-
 ering bags, with their open ends leading, to
 the feed rolls, and means for periodically
 separating the said feed rolls to release their
 feeding action upon the closed rear end of
 each succeeding bag when the open end
 thereof is engaged by the forwarding means.

8. In a bag machine, the combination with
 45 two sets of feed rolls, whereof one set is ar-
 ranged in advance of the other and whereof
 one of the rolls of the first set is provided
 with a segmental acting surface, means for
 continuously rotating the first set of rolls at
 50 the same speed, means for successively deliv-
 ering bags, with their open ends leading,
 between the first set of rolls, a movable stop
 for the leading end of each succeeding bag,
 said stop located between the two sets of
 55 feed rolls, and means for periodically rais-
 ing and lowering said stop.

9. In a bag machine, the combination with
 60 bag forwarding means, of two sets of feed
 rolls, whereof one set is arranged in advance
 of the other and whereof one of the rolls of
 the first set is provided with a segmental
 acting surface, means for successively deliv-
 ering bags with their open ends leading, be-
 65 tween the first set of rolls, a movable stop for
 the leading end of each succeeding bag, said

stop located between the two sets of rolls,
 means for periodically raising and lowering
 said stop, and means for periodically sepa-
 rating the second set of feed rolls to release
 their feeding action upon the bag.

10. In a bag machine, the combination of
 forwarding means including devices for tem-
 70 porarily holding the trailing end flap of
 tubular bag material, a cylinder including a
 gripper for the leading flap of the said ma-
 75 terial, said holding devices and gripper co-
 operating to pull the flaps in opposite direc-
 tions longitudinally of the path of travel of
 the material on the cylinder, a second grip-
 per arranged on the cylinder in spaced rela-
 80 tion to the first-named gripper, means for
 independently actuating said grippers in
 timed relation, a rotary blade adapted and
 arranged to impinge against said leading
 flap and tuck it into the second gripper, 85
 whereby such flap while it is held by the
 first-named gripper is creased throughout
 the width of the bag material, and a resilient
 pressure element for the flap mounted on said
 blade in co-operative relation to the second 90
 gripper.

Signed at city of New York in the county
 of Kings and State of New York, this 24th
 day of October, A. D. 1928.

ADOLPH POTDEVIN.

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