March 16, 1937. L. A. CUNDALL 2,074,167

SHEARING APPARATUS FOR TAPED BAGS AND THE LIKE

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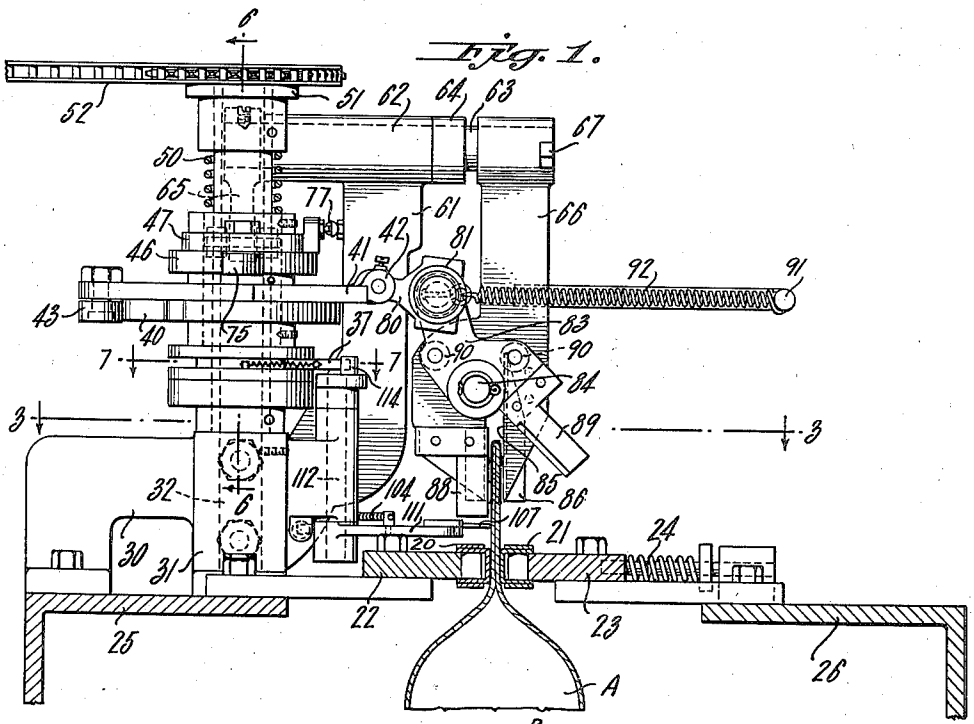


Fig. 1.

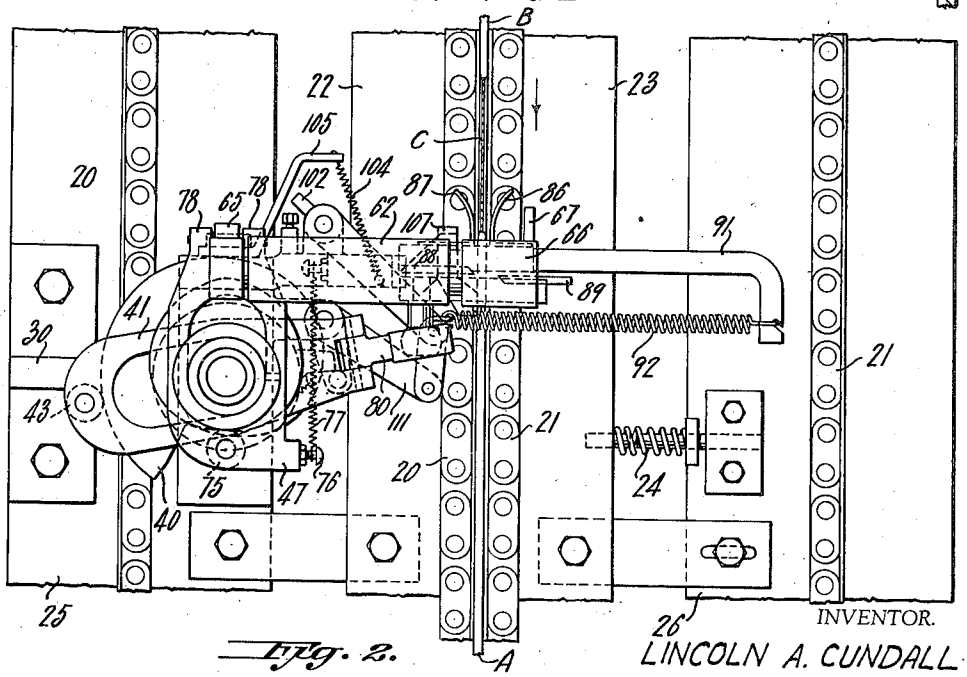


Fig. 2.

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Fig. 3.

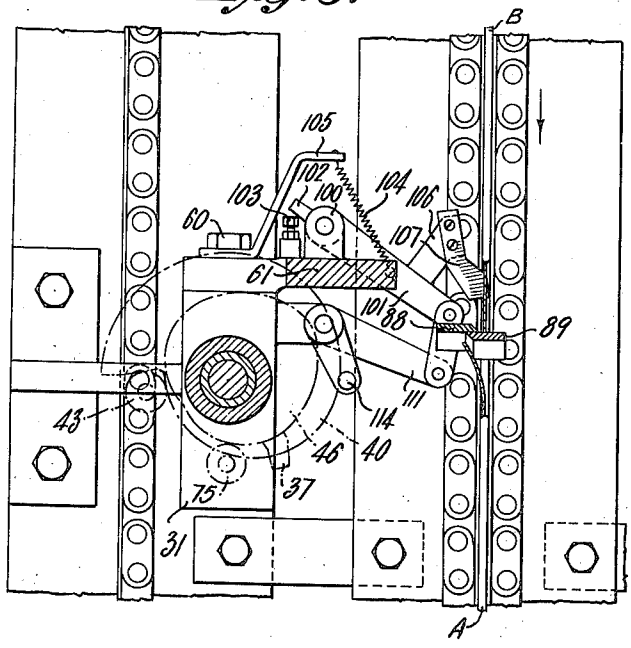


Fig. 5.

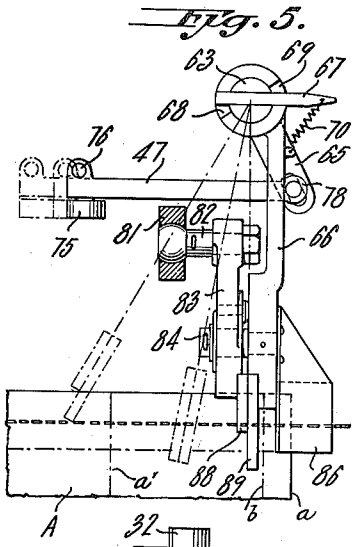
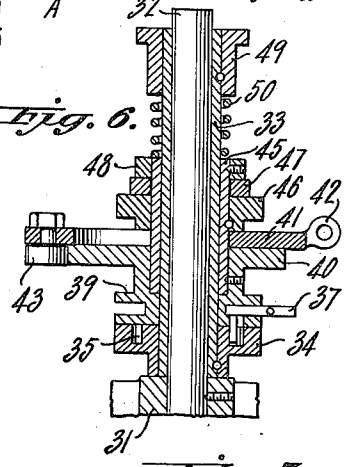


Fig. 6.



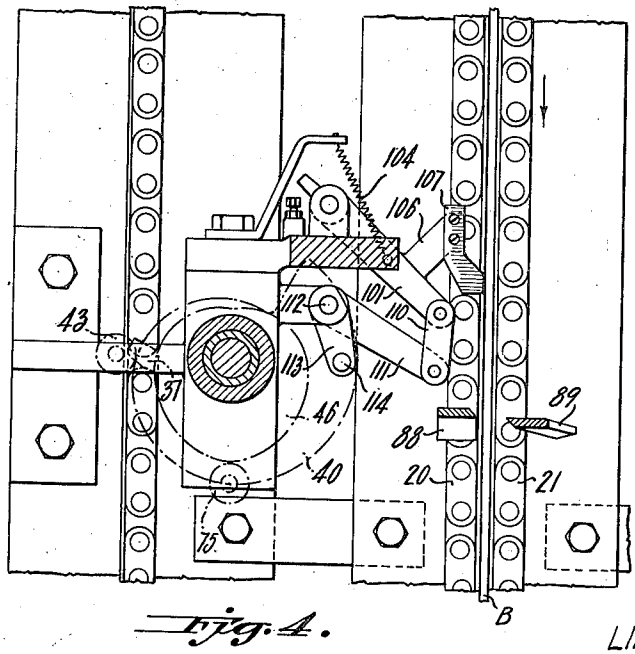
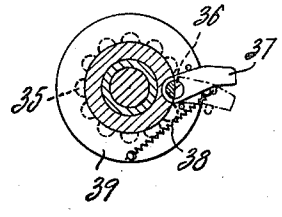


Fig. 4.

Fig. 7.



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Fig. 10.

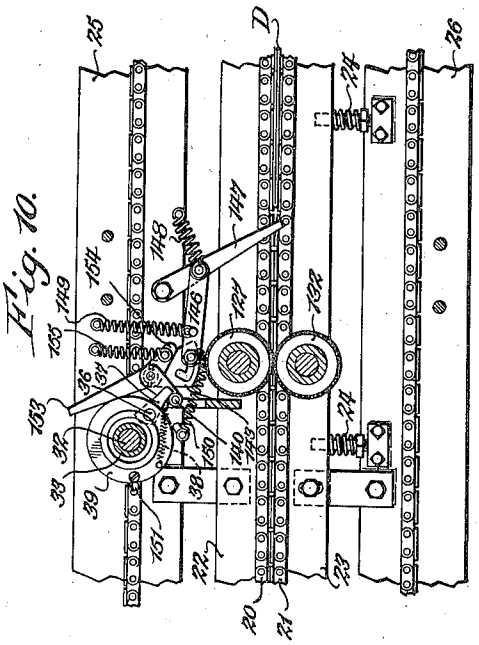


Fig. 11.

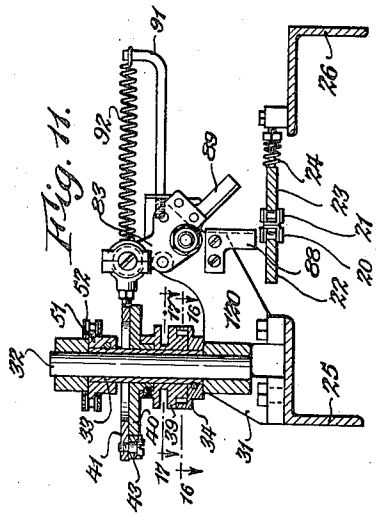


Fig. 8.

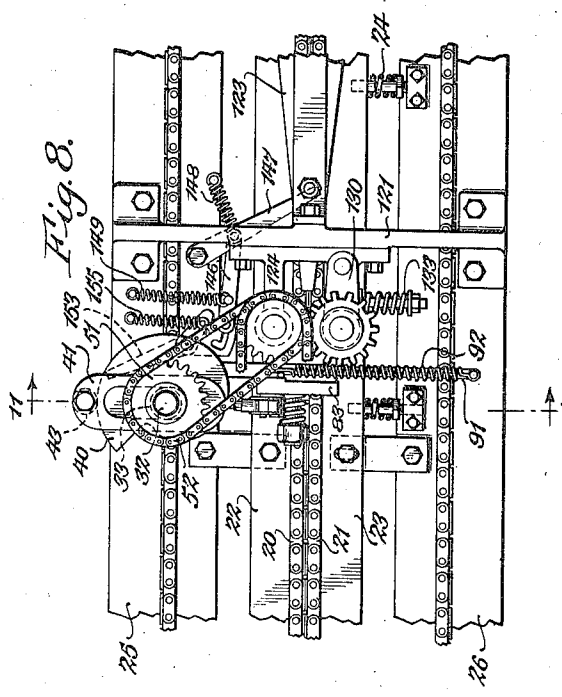
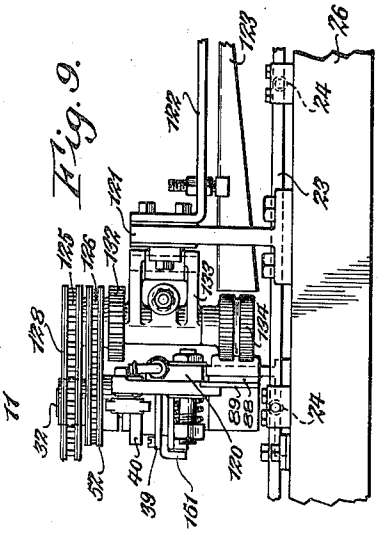


Fig. 9.



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Fig. 15.

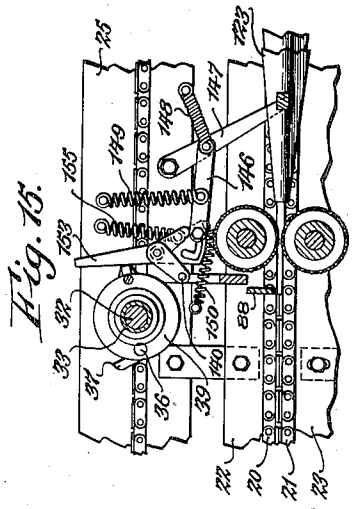


Fig. 16.

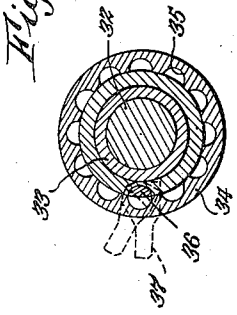


Fig. 17.

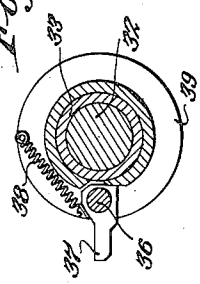


Fig. 13.

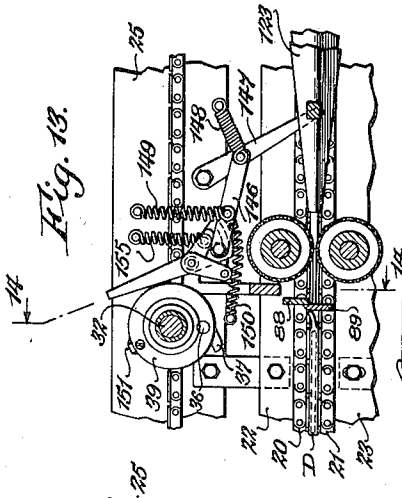


Fig. 12.

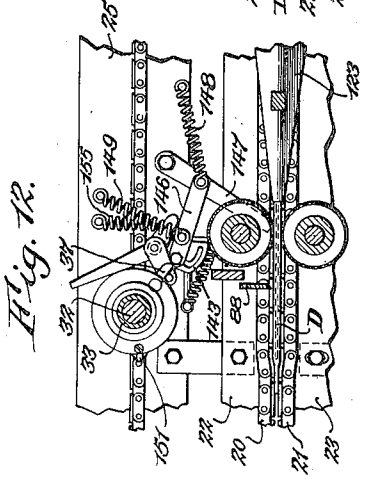
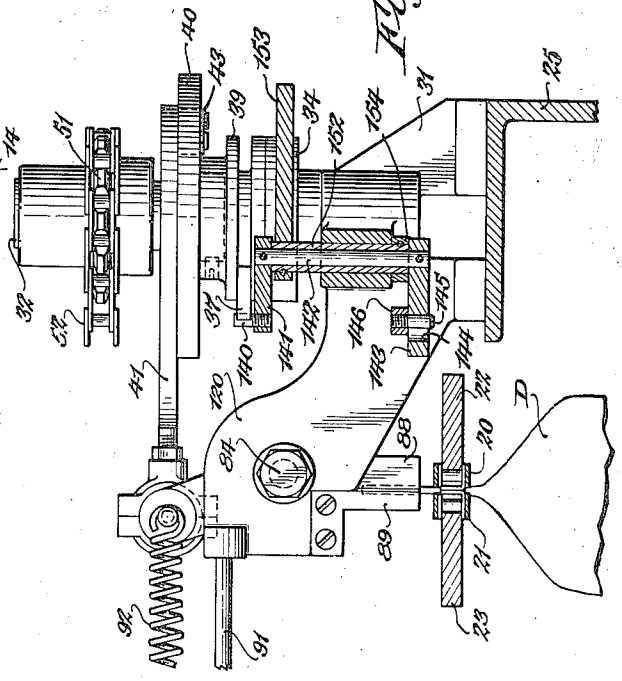


Fig. 14.



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Patented Mar. 16, 1937 2,074,167

UNITED STATES PATENT OFFICE

2,074,167

SHEARING APPARATUS FOR TAPED BAGS AND THE LIKE

Lincoln A. Cundall, Buffalo, N. Y., assignor to Bagpak, Inc., New York, N. Y., a corporation of Delaware

Application March 18, 1935, Serial No. 11,563

7 Claims. (Cl. 164—49)

The present invention relates to mechanism for separating united articles, particularly filled bags joined by a continuous bag closing element, or elements. The invention is particularly designed for use as a tape and/or thread shearing means in a bag filling and/or closing machine such as set forth in the copending application of Robert N. Cundall and Lincoln A. Cundall, Serial No. 688,816, filed September 9, 1933, or the copending application of Robert N. Cundall and Lincoln A. Cundall, Serial No. 757,772, filed December 17, 1934.

In the aforementioned applications, the method of, and means for, closing the mouths of open-mouth filled bags and applying a sealing strip over the sewed mouths are fully set forth. In the said applications, a form of shears is illustrated, or indicated. The present invention is an improved shearing mechanism particularly adapted to be used at the stations indicated. It is the purpose of the present invention to devise a shear which will be efficient in operation and which overcomes objections to prior types of shears.

The machines set forth in the aforementioned applications are designed to be used in a great number of fields and paper bags are becoming more important in a greater number of industries, each requiring a suitable type and size of bag. It is readily apparent that one hundred pounds of fluffy material, such as caustic soda, or cocoa, requires a very much larger bag than one hundred pounds of grain or other relatively heavy, granular materials. Each industry therefore requires a machine which will handle a package of the proper size. Likewise, it is extremely desirable to have a single machine which will handle the same product packed in several sizes of bags. One object of the present invention is to devise a shear which will separate the closed bags in a uniform manner regardless of the width of the bag mouth, thereby enabling the manufacture of a standard shear which can be attached to each and every bag filling and closing machine regardless of the size, or sizes, of the bags to be used therein. Likewise, the present invention enables the closing of more than one size of bag in the same machine without adjustment, thereby eliminating the nuisance of adjusting the shear each time that a change in package size is desired.

Other and further objects of the invention will be apparent from the following description taken in connection with the accompanying drawings, wherein like numerals refer to like parts throughout.

Referring to the drawings:

Fig. 1 is an elevational view of the preferred form of the invention mounted upon the frame of a bag closing machine;

Fig. 2 is a plan view of Fig. 1 and showing the shears ready to operate;

Fig. 3 is a sectional plan view taken along line 3—3 of Fig. 1 and showing the shears at the instant of operation;

Fig. 4 is a view similar to Fig. 3 and showing the shears as they are about to return to ready position;

Fig. 5 is a front elevation, partially in schematic representation, showing the positions of the shears corresponding to Figs. 2, 3 and 4;

Fig. 6 is a vertical section of the shear operating mechanism taken along line 6—6 of Fig. 1;

Fig. 7 is a section in plan of a portion of the shear operating mechanism taken along line 7—7 of Fig. 1;

Fig. 8 is a plan view of a modified form of the invention;

Fig. 9 is a front elevation of the mechanism shown in Fig. 8;

Fig. 10 is a view similar to Fig. 8 with portions removed for clarity, and showing the mechanism in its normal position;

Fig. 11 is a vertical section of Fig. 8 taken along line 11—11 and showing the shears in the position corresponding to Fig. 10;

Fig. 12 is a view similar to Fig. 10 but showing the shears ready to operate;

Fig. 13 is a similar view showing the shears at the instant of operation;

Fig. 14 is an enlarged vertical section taken along line 14—14 of Fig. 13;

Fig. 15 is a view similar to Figs. 10, 12 and 13 but showing the mechanism returning to its normal position;

Fig. 16 is a vertical section of the shear operating mechanism take along line 16—16 of Fig. 11; and

Fig. 17 is a view similar to Fig. 16 taken along line 17—17 of Fig. 11.

Referring to Figs. 1 to 7 inclusive, the preferred form of shear comprises means to separate connecting material between the mouths of filled bags which are substantially uniformly spaced and uniformly conveyed in the machine. In Fig. 2, the bags are shown traveling in the direction of the arrow, a bag A being followed by a bag B and connected thereto by a strip of material C. The bags are conveyed by means of a fixedly guided gripping belt 20 and a resiliently guided gripping belt 21 driven by suitable means (not shown). The belts are guided by guide bars 22 and 23, respectively, the latter being urged toward the former by springs 24. Guide bars 22 and 23 are mounted upon angle beams 25 and 26, respectively, forming a part of the frame of the machine.

A bracket 30, mounted upon angle beam 25, extends toward the path of the bags, terminating in a vertical standard 31 within which is fixedly mounted a post 32. Surrounding post 32 and

freely rotatable thereabout is a sleeve 33 (Fig. 6) resting upon the top of standard 31. Surrounding sleeve 33 is a plurality of operating elements, the lowermost of which comprises a driving clutch member 34 pinned to sleeve 33. The clutch member 34 is provided with a plurality of semicircular pockets 35 within which may be engaged a clutch-pawl 36 mounted upon a clutch-dog 37. The pawl 36 is semicircular in form and, when the dog 37 is in the full-line position of Fig. 7, will be rotated out of engagement with the pockets 35. A spring 38 attached to the dog 37 tends to move it to the broken-line position of Fig. 7 whereupon the pawl 36 will be rotated into engagement with one of the pockets. The dog 37 is mounted upon a driven clutch member 39 having no connection to the sleeve 33 except through the clutch-pawl.

The upper portion of the clutch member 39 comprises a shear operating cam 40 which, when the clutch-pawl is engaged, will operate the shears. Supported upon the top of cam 40 is a shear operating yoke 41 having a pair of pintle ears 42 at one end and a cam following roller 43 at the other end engaging with the edge of cam 40. The driven clutch member 39 is pinned to a second sleeve 45 surrounding sleeve 33. Pinned to sleeve 45 above yoke 41 is a shear swinging cam 46 above which is mounted a shear swinging yoke 47 and a retaining collar 48. A retaining collar 49 is fixed to sleeve 33 at its upper extremity and a large coil spring 50, positioned between retaining collars 48 and 49, holds the shear operating mechanisms in compact relationship. A sprocket 51 driven by a sprocket chain 52 (Fig. 1) is fixed to the top of retaining collar 49 and continuously rotates the sleeve 33 and the driving clutch member 34.

Fixed, by means of bolts 60, to one side of the standard 31 is an upright arm 61 terminating in a horizontally disposed bearing 62 within which is mounted a shear swinging shaft 63 held in proper relation by a collar 64 and a rocking arm 65. The forward extremity of shaft 63 has a shear support 66 mounted thereon. The shear support 66 would be rotatable about shaft 63 were it not for a pin 67 extending crosswise of the end of shaft 63. The bearing of the shear support 66 is provided with opposed radial notches 68 and 69 within which the pin 67 is located. A spring 70 extending between the end of pin 67 and support 66 tends to retain support 66 at a right angle to pin 67. However, any force applied to the support 66 will allow it to rotate relative to shaft 63 against the tension of spring 70 to the full extent allowed by the notches 68 and 69. Any normal movement of support 66 will occur only in case shaft 63 is rocked by the rocking arm 65 as will presently appear.

Cam 46 reciprocates the yoke 47 by means of a roller 75 carried by the yoke and bearing against the edge of the cam. A pin 76 is mounted on the yoke 47 and a spring 77, stretched between it and a pin mounted in the upright arm 61, keeps roller 75 in engagement with the edge of cam 46. The opposite end of yoke 47 is provided with a pair of pintle ears 78 to which the rocking arm 65 is pivotally attached. Rotation of cam 46 upon the engagement of the clutch-pawl will cause reciprocation of yoke 47 and rocking of shaft 63 and the shear support 66, thereby moving the shear support through an arc as indicated by the various positions of Fig. 5.

Pivotally connected to the pintle ears 42 of shear operating yoke 41 is a short connecting link 80 terminating in a socket 81 within which the head of a ball-stud 82 is engaged. Ball-stud 82 is mounted on the movable shear arm 83, which is pivoted to the shear support 66 at 84. The shear support 66 is notched to provide a throat at 85, to the edges of which are fixed flaring guides 86 and 87. A fixed shear blade 88 is fixed to the shear support 66 at the rear of the throat. The movable shear arm 83 extends toward the front of the throat and the movable shear blade 89 is fixed thereto. Suitable adjusting pins 90 are provided which bear against the surface of the shear support 66 and may be adjusted to provide accurate engagement of the cutting edges. An arm 91 is fixed to the shear support 66 and a spring 92 is stretched between its free end and a pin mounted in the ball-stud 82. The spring 92 always tends to snap the movable blade past the fixed blade, but is restrained by reason of the roller 43 bearing against cam 40.

In Fig. 2, the normal position of the mechanism is illustrated. The cam 40 (and the associated mechanism) rotates in a clockwise direction about post 32 as soon as pawl 36 is engaged. The high point of cam 40 is but a short distance from the normal resting position of the roller 43, and immediately upon the pawl being engaged the high point will approach and pass roller 43 (Fig. 3) allowing the spring 92 to actuate the shears. Continued rotation of cam 40 (Fig. 4) causes the opening of the shear blades and the holding of the shear blades in open position as long as cam 40 is not again allowed to rotate beyond the position of Fig. 2.

In Fig. 2 the normal position of roller 75 and the shear swinging cam 46 is indicated in dotted outline. Fig. 5 shows, in full lines, the position of the shear support 66 corresponding to Fig. 2. The roller 75 at this instant is resting in the lowermost part of cam 46, which is substantially heart-shaped. Rotation of cam 46 will take place simultaneously with rotation of cam 40, therefore, during the time that the roller 43 is approaching the shearing position, roller 75 will have been but slightly affected (Fig. 3). At the instant of cut-off arm 65 will have been rocked but slightly and the shear support 66 will have rocked to the intermediate position illustrated in Fig. 5. The remainder of the first 90° of rotation will move arm 66 to the second broken-line position shown in Fig. 5, corresponding to the high point of cam 46 (Fig. 4). The movement of the shear blades is more or less at the same speed as the movement of the bags so that the closed shears will not obstruct the bags as they would if allowed to remain stationary at the position of Fig. 3. From position of Fig. 3 to position of Fig. 4 roller 43 has been forced outward thereby opening the shears as the support 66 is swinging with the bag. The resilient connection afforded by spring 70 allows some differential between the speed of the bag and the speed of swinging so that no jam can occur.

The clutch, as will presently appear, is intended to be a one-revolution clutch and therefore the cams will move from the position of Fig. 4 to the position of Fig. 2 before the clutch disengages. Continued motion will open the shears to their fullest extent and will rock the support 66 back from its broken-line position to the full-line position of Fig. 5, this backward movement against the direction of travel of the bags being permitted since the shears are held open.

The bags, at their various positions, are fully set forth in Fig. 5. In this figure, the full line, *a*, represents the trailing edge of the bag A at the

position corresponding to Fig. 2. The broken line, *a'*, represents the same trailing edge of the same bag A at the instant of shearing corresponding to Fig. 3, and the broken-line, *b*, represents the leading edge of the succeeding bag B at the same instant. At the position of Fig. 4, the bag B will be across the entire width of the figure and bag A will have passed from view. As shown clearly in Fig. 3, the shears clip through the connecting thread and/or tape at a certain distance to the rear of bag A, which is preferably midway between the two bags. Since the bags are equally spaced upon the conveying device, it is a very simple matter to so fix cam 40 that the point of cut-off will be equi-distant of the bags.

If, as in the application of Robert N. Cundall and Lincoln A. Cundall, Serial No. 680,538, filed July 15, 1933, the bags are not equally spaced as they are in the application of Robert N. Cundall, and Lincoln A. Cundall, Serial No. 688,816, filed September 9, 1933, nevertheless, the device is effective since the shears will operate to cut at the same distance behind the bag. Therefore, regardless of the spacing of the bags and of the width of the bags, the present invention may be used.

In order to engage the clutch at the proper instant the following mechanism is provided: At the side of the upright arm 61 there is provided a lug 100 to which is pivoted a lever 101. An extension 102 of the lever engages an adjustable abutment 103 to prevent lever 101 from swinging beyond the position of Fig. 3 under the influence of a spring 104 fixed to an arm 105 bolted to the standard 31. An extension 106 of lever 101 carries a bag-sensing finger 107. The finger is bevelled at an acute angle to the oncoming bags so that the forward edge of the bag, on engaging the finger, will force lever 101 to rock about its pivot against the tension of spring 104 until the lever and finger reach the position of Fig. 4, whereupon the side of the bag will hold the lever in the position illustrated. A link 110 is pivoted to the free end of lever 101 and to the free end of a second lever 111. Lever 111 is fixed to a shaft 112 mounted in a bearing extending from the front of standard 31. The upper end of shaft 112 carries a lever 113 in the free end of which is mounted a clutch-pin 114. In the normal position of Fig. 2 the finger 107 is engaged by the bag A, thereby holding the clutch-pin 114 in the path of the clutch-dog 37. As soon as the trailing edge of bag A passes the end of finger 107 the finger snaps outward to the position of Fig. 3 under the tension of spring 104. Immediately, spring 38 (Fig. 7) causes engagement of clutch-pawl 36 in one of the pockets 35 and the operating cams commence to rotate. Fig. 3, illustrating the instant of cut-off, shows that dog 37 has rotated from the position of Fig. 2 a distance such as to allow the roller 43 to drop from the high point of cam 40. In Fig. 4 bag B has engaged the finger 107, thereby rocking the clutch-pin 114 into the path of the clutch-pawl. During the next 90° of rotation the shears will be returned to the position of Fig. 2 whereupon the pin 114 engaging clutch-dog 37 prevents further rotation of the cams. The shears will now be held until bag B passes the end of finger 107 whereupon a second shearing operation will take place.

If, as in the application of Robert N. Cundall and Lincoln A. Cundall, Serial No. 680,538, filed July 15, 1933, the bags are not evenly spaced no harm will result from the failure of finger 107 to be swung toward the rear, since the shears will continue to operate without cutting anything at all until the bag closing mechanism is stopped. Upon a succeeding bag being passed through the machine the shears will be stopped at the position of Fig. 2 until its trailing edge passes finger 107 whereupon a cut will be made at the proper distance from the rear edge of the bag.

Figs. 8 to 16, inclusive, illustrate a form of the invention designed more particularly to be used in connection with the application of Robert N. Cundall and Lincoln A. Cundall, Serial No. 680,538, filed July 15, 1933, or the application of Robert N. Cundall and Lincoln A. Cundall, Serial No. 757,772, filed December 17, 1934. Nevertheless, the same principles are embodied. In this form of the invention the bag feeding chains 20 and 21, the guide bars 22 and 23, and the angle beams 25 and 26 are the same as in the formerly described form. A post 32 is mounted upon angle beam 25 and supports the shear operating mechanism. Surrounding the post 32 and supported by the standard 31 is a sleeve 33 rotated by a sprocket 51 and sprocket chain 52. Fixed to sleeve 33 is a driving clutch member 34 having pockets 35 within which may be received a clutch-pawl 36 mounted upon a clutch-dog 37, the clutch-dog being carried by a driven clutch member 39 and biased by a spring 38. Fixed to the driven clutch member 39 is a cam 40 against which is held a roller 43 carried by a shear operating yoke 41. Cam 40 and yoke 41 operate in the manner previously described to open and close the pivoted shear blade 89. The fixed shear blade 88 is mounted upon an extension 120 of the standard 31. The pivoted shear blade 89 is operated by a spring 92 extending from the shear lever to an arm 91. A single rotation of cam 40 will open and close the shears exactly as previously described, but in this form of the invention there is no mechanism corresponding to cam 46 and the shear swinging shaft, the reason therefor being presently apparent.

Referring to Figs. 8 and 9, it is seen that a bridge 121 straddles the frame of the machine to which is attached an arm 122 carrying a tape forming device 123 adapted to bend a strip of gummed tape around the mouth of the filled and previously sewed bag, as fully explained in the applications of Robert N. Cundall and Lincoln A. Cundall, Serial No. 680,538, filed July 15, 1933 and Robert N. Cundall and Lincoln A. Cundall, Serial No. 757,772, filed December 17, 1934. Also attached to the bridge 121 is a fixed arm 124 in which is mounted a shaft carrying sprocket gears 125 and 126 and a gear 127. A sprocket chain 128 drives the shaft from a suitable source (not shown). Sprocket gear 126 drives the sprocket chain 52 which rotates the sleeve 33. The lower end of the shaft carries a tape-pressing roll, which roll bears against the rear side of the bag as it emerges from the former 123 with the gummed-tape in contact therewith. A second arm 130 is pivoted to the bridge 121 and a gear 132 fixed to a shaft therein is held in mesh with gear 127 by a spring 133. Gear 132 rotates the front tape-pressing roll 134. The top of the bag as it emerges from the former brings the gummed-tape between the rolls, and the tape will be firmly bonded to the bag thereby. As fully detailed in the said applications, the tape-pressing rolls are not allowed to contact each other, being restrained by an adjustable abutment. For this reason if the tape alone is between the rolls no feeding movement thereof will occur, but as soon

as the chains 20 and 21 bring the mouth of a filled bag through the former 123 the tape and the bag will be fed by the driven tape-pressing rolls. Since the bags are not fed in close, uniform spacing there is no necessity for the swinging mechanism of the first described form, but it is necessary that the shears be ready to operate as soon as a bag is being fed forward and that it shear at the same distance behind the trailing edge of the bag, regardless of its width. Since in this form it is certain that the bag will not be uniformly spaced, there has been provided means for insuring the stopping of the clutch after one revolution.

In Fig. 8 the normal position of the operating mechanism is illustrated with the roller 43 engaged by the high part of cam 40. Fig. 10 corresponds to this position. The clutch-dog 37 is engaged by the clutch-pin 140. The clutch-pin 140 is mounted upon a lever 141 (Fig. 14). This lever is fixed to a rock shaft 142 to which is likewise fixed a tripping plate 143 provided with a bayonet slot 144. A pin 145 is carried by a link 146 and is engaged in the slot 144. Link 146 is pivoted at its other end to a sensing finger 147 pivoted to the frame of the machine and extending into the path of the bags. A spring 148 tends to hold the finger 147 in the position of Fig. 10. A spring 149 attached to the frame and to link 146 tends to draw the link toward the rear of the machine so as to force pin 145 into the hook of bayonet slot 144. A spring 150 attached to the frame and to tripping plate 143 tends to draw the tripping plate from the position of Fig. 10 to the position of Fig. 12, but is prevented from doing so because of the superior strength of spring 148. However, in either position of Fig. 10 or Fig. 12 the clutch-dog 37 is long enough to maintain its engagement with the clutch-pin 140 and the clutch-pawl will be held out of engagement.

As the finger 147 is engaged by the bag C and moved to the position of Fig. 12, the pin 145 will be moved to the left end of slot 144 in the tripping plate and spring 149 will snap it into the hook of the bayonet slot, as shown in Fig. 12. The mechanism is now cocked, ready to operate as soon as the trailing edge of the bag passes finger 147 as at Fig. 13. When this happens, the superior strength of spring 148 overcomes spring 150 and the tripping plate 143 will be rocked to rock pin 140 from the path of the clutch-dog 37. In Fig. 13 the cam 40 has rotated far enough to allow spring 92 to snap the shears shut. Since the bag C is thereby separated from the tape and the tape-pressing rolls are prevented from feeding the tape, there is no necessity for swinging the shears with the bag and it is only necessary to open the shears.

Mounted upon the driven clutch member is a lug 151 which rotates as long as the clutch-pawl is in engagement. A sleeve 152 surrounds shaft 142 and a lever 153 is fixed thereto opposite the lug 151. The lower end of sleeve 152 has a lever 154 fixed thereto, the lever extending over the tripping plate 143 alongside of link 146. A spring 155 is fixed to lever 154 and maintains lever 153 against the surface of the clutch. As lug 151 engages lever 153 (Fig. 15) the lever 154 will engage link 146, thereby moving pin 145 out of the hook of the bayonet slot and allowing spring 150 to snap the tripping plate to the position of Fig. 15 and the clutch-pin into the path of the clutch-dog. In this single revolution, the cam 40 has opened the shears and they will now be held in open position until another bag is moved through the machine.

It is apparent from the foregoing that the primary object of the invention is to shear a connecting element between articles regardless of the width of the articles. In the first form of the invention a high-speed machine, in which uniformly spaced articles are fed, is made possible. In the second form of the invention, a slower machine, in which irregularly and widely spaced articles are fed, is made possible. Each form achieves the primary object of clipping the connecting elements a definite distance from the edge of the article. The primary function of the device is to clip a connecting tape and/or sewing thread between paper bags. However, the invention is suitable for use in connection with cloth bags and other united articles.

It will, of course, be realized that the application of tape and sewing threads to paper bags in their unfilled condition is better accomplished when the bags are laid flat rather than standing in a vertical relation. It is within the province of my invention to clip the connecting elements in a paper bag making machine. In such case the shear operating mechanism could be mounted so as to occupy a substantially horizontal plane rather than vertical, as illustrated. It is also apparent that modification of the device to permit a vertical shear operating mechanism, as illustrated, is possible by the simple expedient of mounting the shear blades at right angles to their present position, as is well known throughout the art.

Other modifications and alterations in detail and arrangement will be apparent to those skilled in the art and the invention is not to be limited except by the following claims which are to be broadly construed.

I claim:

1. Apparatus for severing a tape or other elongated element attached to a bag or other article and extending therefrom comprising, means to feed the article, a fixed shear blade located at one side of the line of travel of the element, a movable shear blade normally poised at the opposite side of the line of travel of the element and adapted to be moved past said fixed shear blade to sever the element, a shear operating cam having a radially extending edge and normally prevented from rotating, a cam follower cooperating with said cam and connected to said movable shear blade to control movement thereof, a spring baising said movable shear blade to keep said cam follower against said cam and to actuate said movable shear blade upon rotation of said cam to an extent sufficient to move said edge past said cam follower, a continuously rotating driving member coaxial with said cam, a coaxially mounted clutch associated therewith to connect said cam to said member upon being engaged, means to control said clutch comprising an article sensing finger projectable into the path of said article, a clutch-pin connected thereto, and a clutch-dog mounted on the driven portion of said clutch and engageable by said clutch-pin upon said finger being retracted due to the presence of an article, said clutch-dog and the radial edge of said cam being so located with reference to each other that the cam is brought to a stop with said radial edge a short distance from said cam follower.

2. Apparatus for severing a tape or other elongated element attached to a bag or other article and extending therefrom comprising, means to

feed the article, a fixed shear blade located at one side of the line of travel of the element, a movable shear blade normally poised at the opposite side of the line of travel of the element and adapted to be moved past said fixed shear blade to sever the element, sid shear blades being pivotally mounted to move bodily in the direction of travel of the article, a shear operating cam having a radially extending edge and normally prevented from rotating, a cam follower cooperating with said cam and connected to said movable shear blade to control movement thereof, a spring biasing said movable shear blade to keep said cam follower against said cam and to actuate said movable shear blade upon rotation of said cam to an extent sufficient to move said edge past said cam follower, a continuously rotating driving member coaxial with said cam, a coaxially mounted clutch associated therewith to connect said cam to said member upon being engaged, means to control said clutch comprising an article sensing finger projectable into the path of said article, a clutch-pin connected thereto, and a clutch-dog mounted on the driven portion of said clutch and engageable by said clutch-pin upon said finger being retracted due to the presence of an article, said clutch-dog and the radial edge of said cam being so located with reference to each other that the cam is brought to a stop with said radial edge a short distance from said cam follower, and coaxially mounted means associated with said cam to swing said shear blades bodily about their pivotal mounting.

3. Apparatus for severing a tape or other elongated element attached to a bag or other article and extended therefrom comprising, means to feed the article, a shear mounting, a shear blade fixed in position upon said mounting and located at one side of the line of travel of the element, a movable shear blade normally poised at the opposite side of the line of travel of the element and pivotally attached to said mounting, means to operate said movable shear blade to sever the element, and means to swing said mounting in the direction of travel of said article during the shearing operation and back to the original position after the shearing operation, said means comprising a plurality of coaxially mounted cams normally prevented from rotating.

4. Apparatus for severing a tape or other elongated element attached to a bag or other article and extended therefrom comprising, means to feed the article, a shear mounting, a shear blade fixed in position upon said mounting and located at one side of the line of travel of the element, a movable shear blade normally poised at the opposite side of the line of travel of the element and pivotally attached to said mounting, means to operate said movable shear blade to sever the element, and means to swing said mounting in the direction of travel of said article during the shearing operation and back to the original position after the shearing operation, said means comprising a plurality of coaxially mounted cams normally prevented from rotating, a continuously rotating driving member and a clutch associated therewith to connect said cams to said member upon being engaged.

5. Apparatus for severing a tape or other elongated element attached to a bag or other article and extended therefrom comprising, means to feed the article, a shear mounting, a shear blade fixed in position upon said mounting and located at one side of the line of travel of the element, a movable shear blade normally poised at the opposite side of the line of travel of the element and pivotally attached to said mounting, means to operate said movable shear blade to sever the element, and means to swing said mounting in the direction of travel of said article during the shearing operation and back to the original position after the shearing operation, said means comprising a plurality of coaxially mounted cams normally prevented from rotating, a continuously rotating driving member, a clutch associated therewith to connect said cams to said member upon being engaged, and means to control said clutch comprising an article sensing finger projectable into the path of said article.

6. Apparatus for severing a tape or other elongated element attached to a bag or other article and extended therefrom comprising, means to feed the article, a shear mounting, a shear blade fixed in position upon said mounting and located at one side of the line of travel of the element, a movable shear blade normally poised at the opposite side of the line of travel of the element and pivotally attached to said mounting, means to operate said movable shear blade to sever the element, and means to swing said mounting in the direction of travel of said article during the shearing operation and back to the original position after the shearing operation, said means comprising a plurality of coaxially mounted cams normally prevented from rotating, a continuously rotating driving member and a clutch associated therewith to connect said cams to said member upon being engaged, means to control said clutch comprising an article sensing finger projectable into the path of said article and a clutch pin connected thereby, and a clutch dog mounted on the driven portion of said clutch and engageable by said clutch pin upon said finger being retracted due to the presence of an article.

7. Apparatus for severing a tape or other elongated element attached to a bag or other article and extended therefrom comprising, means to feed the article, a shear mounting, a shear blade fixed in position upon said mounting and located at one side of the line of travel of the element, a movable shear blade normally poised at the opposite side of the line of travel of the element and pivotally attached to said mounting, means to operate said movable shear blade to sever the element, and means to swing said mounting in the direction of travel of said article during the shearing operation and back to the original position after the shearing operation, said means comprising a plurality of coaxially mounted cams normally prevented from rotating, a continuously rotating driving member and a clutch associated therewith to connect said cams to said member upon being engaged, means to control said clutch comprising an article sensing finger projectable into the path of said article and a clutch pin connected thereby, and a clutch dog mounted on the driven portion of said clutch and engageable by said clutch pin upon said finger being retracted due to the presence of an article, said clutch being held disengaged by said clutch pin as long as said finger is retracted.

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