Sept. 20, 1938. H. A. BURNS 2,130,729

PACKAGING CIGARS AND THE LIKE

Filed April 28, 1934 2 Sheets-Sheet 1

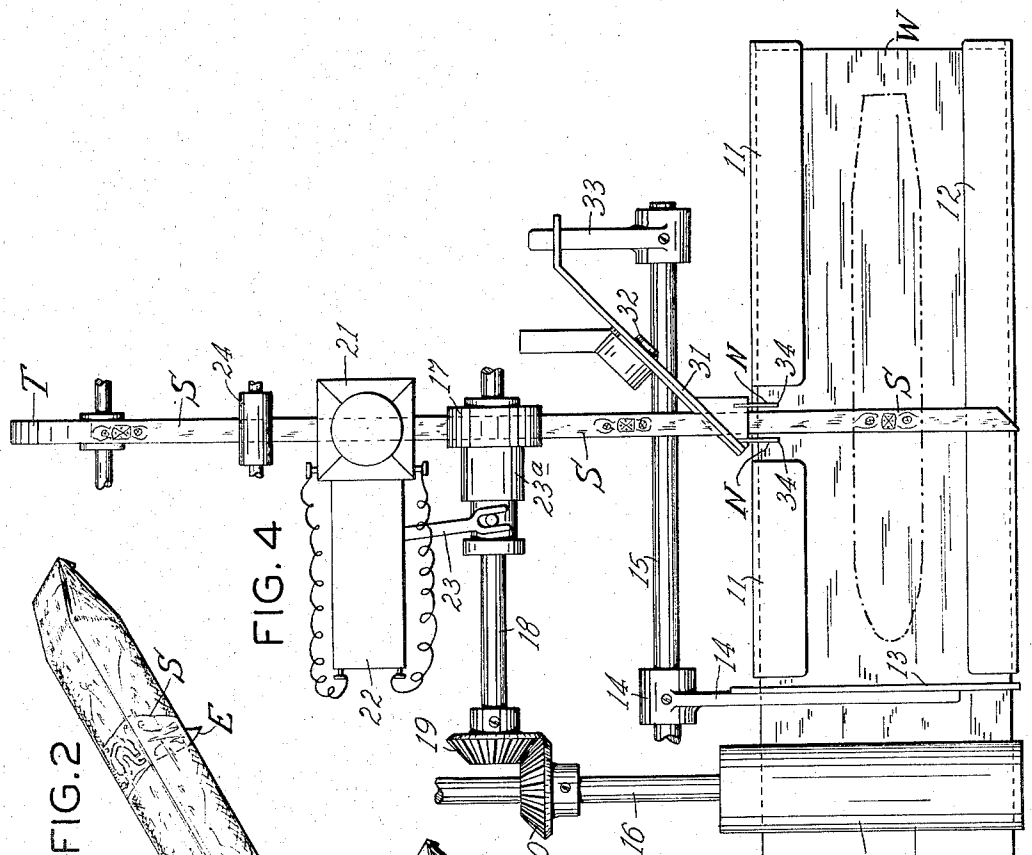


FIG. 4

FIG. 2

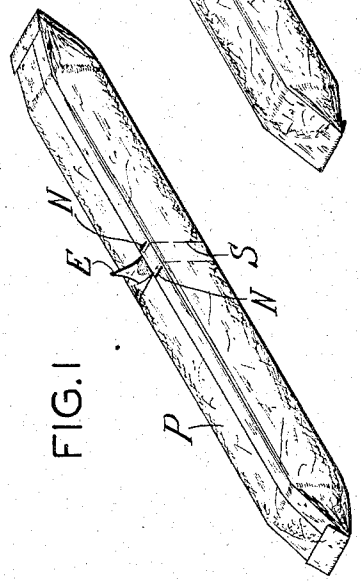


FIG. 1

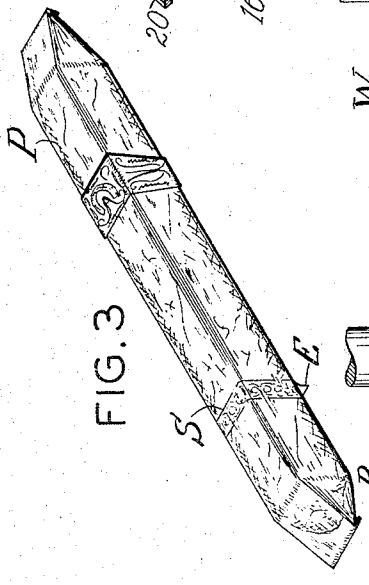


FIG. 3

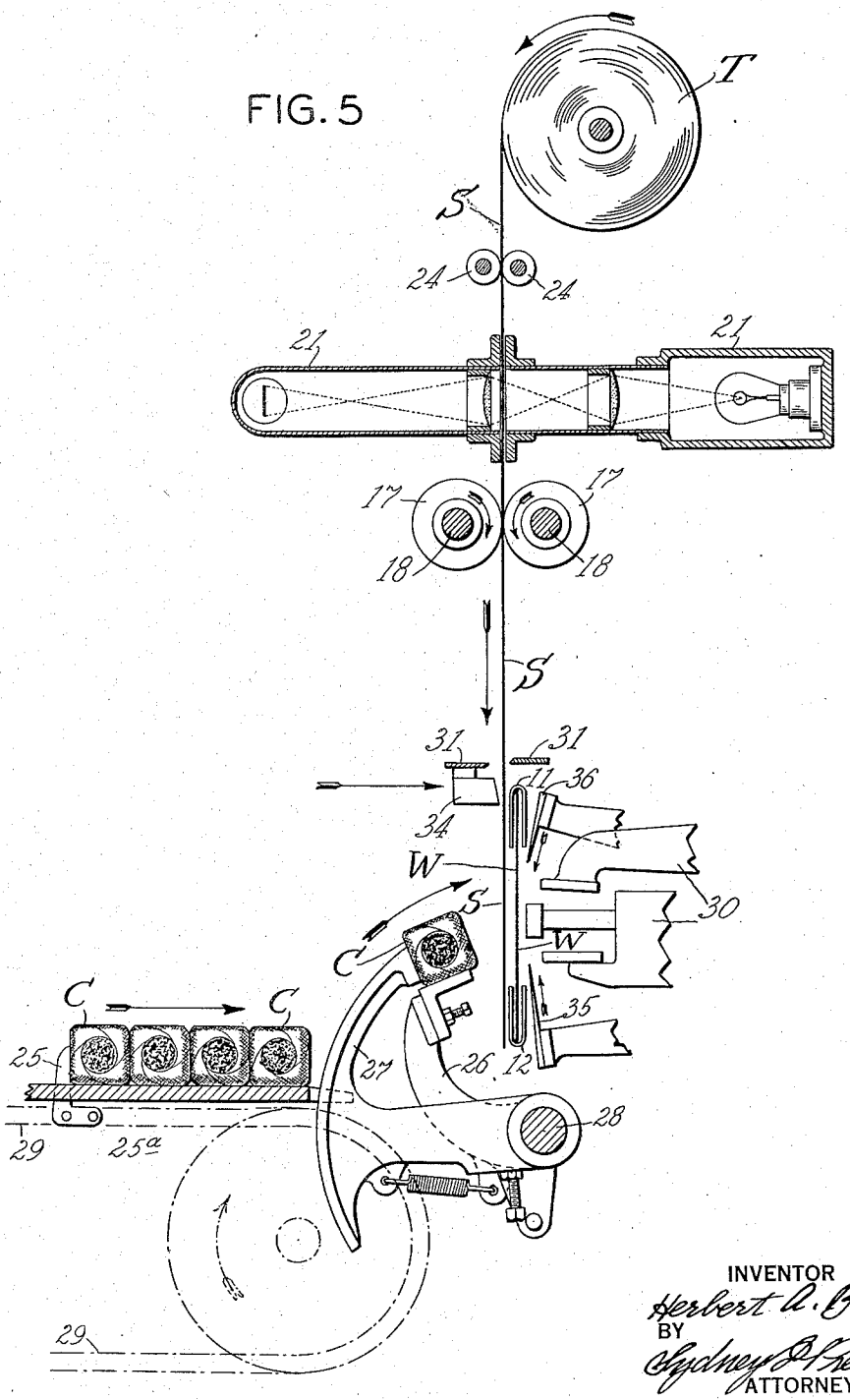
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FIG. 5



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UNITED STATES PATENT OFFICE

2,130,729

PACKAGING CIGARS, AND THE LIKE

Herbert A. Burns, Forest Hills, N. Y., assignor to International Cigar Machinery Company, a corporation of New Jersey

Application April 28, 1934, Serial No. 722,959

19 Claims. (Cl. 93—2)

This invention relates to packages, more particularly to cigar envelopes of regenerated cellulose or similar material wherein individual cigars are sealed, and a novel process and apparatus for producing the same.

The main object of this invention is to provide means for facilitating the removal of the sealed envelope from the cigar without injuring the same.

This object is achieved by placing a strip of suitable sheet material or a piece of string within the envelope and so sealing the same that the end of such strip or string protrudes from the seam of the package in accordance with the improved method and by means of the apparatus of this invention, so that the envelope may easily be torn open by pulling on said protruding end. The tear strip may be so shaped and decorated that it can be used as a substitute for a standard cigar band, thereby obtaining the advantage that upon tearing open the package both the band and the envelope are removed and destroyed in one easy operation and without injury to the relatively fragile cigar. With this and other objects not specifically mentioned in view, the invention consists in certain constructions and combinations hereinafter fully described and then specifically set forth in the claims hereunto appended.

In the accompanying drawings which form a part of this specification and in which like characters of reference indicate the same or like parts:

Fig. 1 is a perspective view of a cigar package bottom up, the end of the tearing strip protruding from the seam of the envelope;

Fig. 2 is a similar view of a cigar package face up, the tearing strip being used as a cigar band;

Fig. 3 is a similar view of a cigar package in which a separate cigar band is used in addition to a tearing strip;

Fig. 4 is a diagram showing the construction employed for making the improved package in accordance with the improved process; and

Fig. 5 is a sectional side view of Fig. 4.

In carrying the invention into effect there is provided a novel method and apparatus for producing a novel package comprising a wrapper enfolded about an article and having its longitudinal edges overlapped to form a seam and a tearing band held between the article and wrapper, one end of the tearing band protruding from the seam and the outer seam edge being nicked at either side of the band. In the best constructions contemplated there is provided a folding pocket, a web feed for feeding a web of wrapping material in front of the pocket longitudinally thereof, means for feeding a strip transversely of the pocket in front of the web, mechanism for severing a wrapper blank and a tearing band from the web and strip, respectively, and nicking the cut wrapper at either side of the cut band, a device for transferring an article sidewise into the pocket, whereby the article is enfolded in the wrapper and the tearing band is held between the wrapper and the article, and folders for folding the longitudinal edges of the wrapper into overlapping relation.

In the best way of carrying out the process the web is fed in front of a folding pocket, a strip is fed transversely of the pocket in the front of the web, a wrapper blank and tearing band are severed from the web and strip, respectively, the cut wrapper is nicked at either side of the cut band, an article is pushed sidewise into the pocket, whereby the article is enfolded in the wrapper and the tearing band is held between the article and the wrapper, and the longitudinal edges of the wrapper are folded into overlapping relation to form a seam.

The particular package, process, and construction selected to illustrate the invention are but a few of many possible concrete embodiments of the same. The invention, therefore, is not to be restricted to the specific package, process, and construction shown and described.

The wrapping material which may be regenerated cellulose or other similar material is fed intermittently in the form of a web W from a reel R by means of a pair of feed rollers 10 into the guide channels 11 and 12, whereupon a length according to the size of the cigar to be wrapped is cut from web W by means of an oscillating knife 13. The latter is mounted on an arm 14 fast to a shaft 15, and one of the feed rollers 10 is keyed to a shaft 16. Both shafts 15 and 16 are operated in properly timed relation from the main drive of the wrapping machine as will be presently described.

The strip S is fed from a reel T crosswise of the regenerated cellulose web W (Fig. 4) by means of a pair of feed rollers 17 mounted on shafts 18. In order to assure properly timed relation between feed rollers 10 and feed rollers 17, one of the shafts 18 is equipped with a bevel gear 19 meshing with a bevel gear 20 on the shaft 16 to which is keyed the roller 10.

In case the material of the strip S is transparent or translucent and provided with printed matter or a label, as contemplated in one form

of the invention, the strip S is led through a photoelectric device 21 for the purpose of registering the design on the strip S with the regenerated cellulose web W. The photoelectric device 21 consists of a lamp on one side of the strip S and a photoelectric cell on the other side of the strip, the lamp projecting a beam of light through the strip onto the photoelectric cell, so that when a printed area obstructs the beam a suitable relay, not shown, in circuit with the photoelectric cell closes the circuit of an electromagnet 22, thus energizing the latter and thereby operating a clutch fork 23 engaging with a standard friction clutch 23a splined on one driven shaft 18 and brought out of coupling engagement with the corresponding feed roller 17 when the clutch fork is operated upon energization of the electromagnet. The strip S is guided into the photoelectric device 21 by means of guide rollers 24.

The cigars C to be wrapped are delivered one by one by means of pusher fingers 25 (Fig. 5), from a feed table 25a to a pair of oscillating transfer arms 26 and 27 supported and operated by shaft 28 actuated from the main drive of the wrapping machine, which may be of the type disclosed in the Patent No. 1,964,411, granted June 26, 1934, on the application of R. J. Beutel. Fingers 25 are attached to an endless chain 29 also driven from the main drive of the wrapping machine. Transfer arms 26 and 27 coact to push the cigar with the cut tearing strip or band and the regenerated cellulose wrapper blank into a folding pocket 30 of the wrapping machine. The tearing band is cut at the moment the cigar touches the same, by means of an angularly mounted pair of scissors 31 pivoted on stud 32 and actuated from a lever 33 (Fig. 4) mounted on shaft 15. To scissors 31 are attached a pair of nicking knives 34 which provide the cut wrapper blank with nicks N at its outer seam edge on both sides of the tearing band or strip S in order to give the same an easier start for tearing the regenerated cellulose when the protruding end E of the strip S is pulled to remove the envelop from the cigar. After the cigar carries the tearing band and the wrapper blank into the folding pocket 30 a pair of folding plates 35 and 36 fold the longitudinal edges of the wrapper into overlapping relation to form the longitudinal seam from which the tearing band protrudes. This operation is performed as the turret on which the folding pocket is formed turns and carries the enfolded cigar into proximity to a cam-operated sealer which is moved into engagement with the outer seam edge, whereby the overlapped longitudinal edges of the wrapper are sealed to each other and the tearing band.

What is claimed is:

1. In a wrapping machine, the combination with a folding pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, photoelectrically controlled means for feeding a printed strip transversely of said pocket in front of said web and registering the printed areas of the strip with said web, mechanism for severing a wrapper blank and a band from said web and strip, respectively, and nicking the cut wrapper at either side of the cut band, a device for transferring an article sidewise into said pocket, whereby the article is enfolded in the wrapper blank and the band is held between the wrapper and the article, and folders for folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost and one end of the band extending between the nicks thereof.

2. In a wrapping machine, the combination with a folding pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, means for feeding a strip transversely of said pocket in front of said web, mechanism for severing a wrapper blank and a tearing band from said web and strip, respectively, and nicking the cut wrapper at either side of the cut band, a device for transferring an article sidewise into said pocket, whereby the article is enfolded in the wrapper and the tearing band is held between the wrapper and the article, and folders for folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost and one end of the tearing band extending between the nicks thereof.

3. In a wrapping machine, the combination with a folding pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, means for feeding a strip transversely of said pocket in front of said web, mechanism for severing a wrapper blank and a tearing band from said web and strip, respectively, and nicking the cut wrapper at either side of the cut band, a device for transferring an article sidewise into said pocket, whereby the article is enfolded in the wrapper and the tearing band is held between the wrapper and the article, and folders for folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost, said mechanism including an oscillatory shaft, a knife on said shaft arranged to sever said web, a pair of scissors adapted to sever said strip beyond said web so that the end of the tearing band will protrude from said seam between the nicks of its outer edge, a lever on said shaft arranged to engage one arm of said scissors to actuate the same, and spaced nicking knives on said scissors coacting to nick said web at either side of said strip when said scissors are actuated.

4. The process of wrapping an article, which comprises feeding a web of wrapping material in front of a folding pocket longitudinally thereof, feeding a printed band strip transversely of said pocket in front of said web and registering the printed areas of the strip with said web, severing a wrapper blank and a band from said web and strip, respectively, nicking the cut wrapper at either side of the cut band, thereafter pushing an article sidewise into said pocket, whereby the article is enfolded in the wrapper and the band is held between the article and wrapper, and folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost and one end of the band extending between the nicks thereof.

5. The process of wrapping an article, which comprises feeding a web of wrapping material in front of a folding pocket longitudinally thereof, feeding a printed band strip transversely of said pocket in front of said web and registering the printed areas of the strip with said web, severing a wrapper blank and a band from said web and strip, respectively nicking the cut wrapper at either side of the cut band, thereafter pushing an article sidewise into said pocket, whereby the article is enfolded in the wrapper and the band is held between the article and wrapper, and folding the longitudinal edges of the wrapper into overlapping relation to form a seam, said

strip being severed beyond the web so that the end of the band will protrude from said seam.

6. The process of wrapping an article, which comprises feeding a web of wrapping material in front of a folding pocket longitudinally thereof, feeding a strip transversely of said pocket in front of said web, severing a wrapper blank and a tearing band from said web and strip, respectively, nicking the cut wrapper at either side of the cut band, thereafter pushing an article sidewise into said pocket, whereby the article will be enfolded in the wrapper and the tearing band will be held between the article and wrapper, and folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost and one end of the band extending between the nicks thereof.

7. The process of wrapping an article, which comprises feeding a web of wrapping material in front of a folding pocket longitudinally thereof, feeding a strip transversely of said pocket in front of said web, severing a wrapper blank and a tearing band from said web and strip, respectively, nicking the cut wrapper at either side of the cut band, thereafter pushing an article sidewise into said pocket, whereby the article will be enfolded in the wrapper and the tearing band will be held between the article and wrapper, and folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost, said strip being severed beyond the web so that the end of the tearing band will protrude from said seam between the nicks of its outer edge.

8. In a wrapping machine, the combination with a folding pocket, of a web feed for feeding a web of wrapping material in front of said pocket longitudinally thereof, means for feeding a tear strip web in front of said wrapper web transversely of said pocket, mechanism for severing a wrapper blank and a tear strip from said webs and nicking one edge of the wrapper web at either side of the tear strip web, a device for transferring an article sidewise into said pocket, whereby the article is enfolded in the wrapper blank and the tear strip is held between the wrapper and the article, folders for folding the longitudinal edges of the wrapper into overlapping relation to form a seam with the nicked edge outermost so that the tear strip protrudes from said seam between the nicks of said outer wrapper edge.

9. In a wrapping machine, the combination with an enveloping material feed for supplying elongated envelop sheets with smooth longitudinal edges, means for feeding a tear strip transversely of said sheet, means for making a tear facilitating break in one of said smooth edges, and mechanism for wrapping said sheet and tear strip with the tear strip inside, circumferentially about an article with the edge having the break exposed and with the end of the tear strip exposed beyond said edge adjacent said break.

10. In a cigar wrapping machine, the combination with an enveloping material feed for supplying elongated envelop sheets with smooth longitudinal edges, means for feeding a tear strip transversely of said sheet, means for making a tear facilitating break in one of said smooth edges, and mechanism for wrapping said sheet and tear strip with the tear strip inside, circumferentially about the cigar with the edge having the break exposed and with the end of the tear strip exposed beyond said edge adjacent said break, said wrapping material feed including means feeding the wrapper material longitudinally of the cigar to be wrapped, and said tear strip feeding means including devices guiding the tear strip transversely of the cigar.

11. In a wrapping machine, the combination with an enveloping material feed for supplying envelop sheets, means for feeding a tear strip transversely of said sheet, and mechanism for wrapping said sheet and within it said tear strip circumferentially about an article with the end of the tear strip exposed beyond said edge, said tear strip feeding means operating to feed a continuous strip of material, and a cutter having an edge arranged diagonally of said strip to sever the tear strip and provide a diagonal cut on said exposed end.

12. In a cigar wrapping machine, the combination with a feed for feeding a continuous strip of transparent cellulose hydrate in a direction parallel to the length of the cigar to be wrapped, means for severing a sufficient length thereof for wrapping a cigar, means for feeding a narrow tear strip transversely of said length, means for severing a portion of said tear strip of a length sufficient to encompass the girth of the cigar, folding means, and mechanism for relatively moving said cigar and said folding means to wrap said sheet and tear strip with the tear strip inside of the sheet, circumferentially about the cigar with the wrapper edges lapped on each other to form a seam and the tear strip protruding from said seam edges.

13. In a cigar wrapping machine, the combination with a feed for feeding wrapping material, means for severing a sufficient length thereof for wrapping a cigar, means for feeding a band transversely of said length, means for severing a portion of said band, folding means, and mechanism for relatively moving said cigar and said folding means to wrap said sheet and band circumferentially about the article said band feeding means operating to feed a continuous strip of material having spaced printing thereon and including devices for stopping feeding of the same with said printing located in predetermined registered relation with said envelop sheet.

14. In a cigar wrapping machine, the combination with a feed for feeding wrapping material, means for severing a sufficient length thereof for wrapping a cigar, means for feeding a band transversely of said length, means for severing a portion of said band, folding means, and mechanism for relatively moving said cigar and said folding means to wrap said sheet and band circumferentially about the article, said band feeding means operating to feed a continuous strip of material having spaced printing thereon and including devices for stopping feeding of the same with said printing located in predetermined registered relation with said envelop sheet, said registering devices comprising a photoelectric control arranged to be actuated by the indicia on said tear strip and controlling the operation of said feeding means.

15. In a cigar wrapping machine, the combination with a feed for feeding a continuous strip of transparent cellulose hydrate in a direction parallel to the length of the cigar to be wrapped, means for severing a sufficient length thereof for wrapping a cigar, means for feeding a narrow tear strip transversely of said length, means for severing a portion of said tear strip, folding means, and mechanism for relatively moving said cigar and said folding means to wrap said sheet and

tear strip with the tear strip inside of the sheet circumferentially about the article with one end of the tear strip exposed beyond the outer edge of the sheet, said tear strip feeding means operating to feed a continuous strip of material having spaced indicia thereon and including devices for intermittently feeding of the same with said indicia located during dwell periods in predetermined registered relation with said envelop sheet.

16. The combination with means for advancing wrapping material into position to be folded about an article, of photoelectrically controlled mechanism for positioning a printed strip in predetermined relation with said wrapping material for enfoldment within the wrapping material and about an article, mechanism for wrapping the article within the positioned strip and wrapping material with the strip protruding from the wrapper, and means for weakening a portion of the wrapping material which will be adjacent the strip enfolded thereunder.

17. The combination with means for advancing wrapping material into position to be folded about an article, of photoelectrically controlled mechanism for positioning a printed strip in predetermined relation with the article and wrapping material for enfoldment within the wrapping material and about an article, and mechanism for wrapping the article within the positioned strip and wrapping material.

18. The combination with means for advancing wrapping material into position to be folded about an article, of photoelectrically controlled mechanism for positioning a printed slip in predetermined relation with the article and wrapping material for enfoldment within the wrapping material and about an article, and mechanism for wrapping the article within the positioned strip and wrapping material, with the strip protruding from the wrapper.

19. The combination with means for advancing wrapping material into position to be folded about an article, of mechanism for positioning a printed strip with its print in predetermined relation to the article and the wrapping material, and mechanism for wrapping the article within the positioned strip and wrapping material.

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