

April 13, 1954

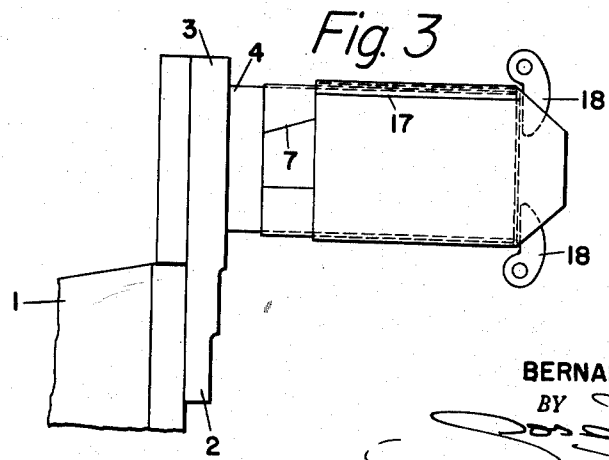
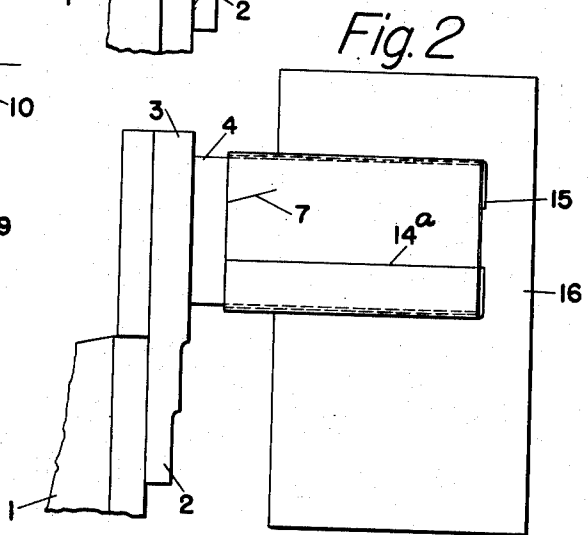
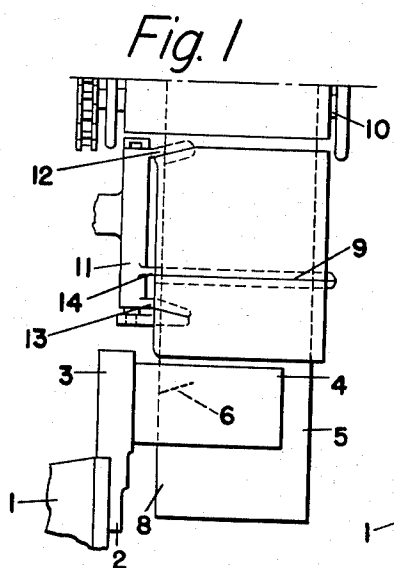
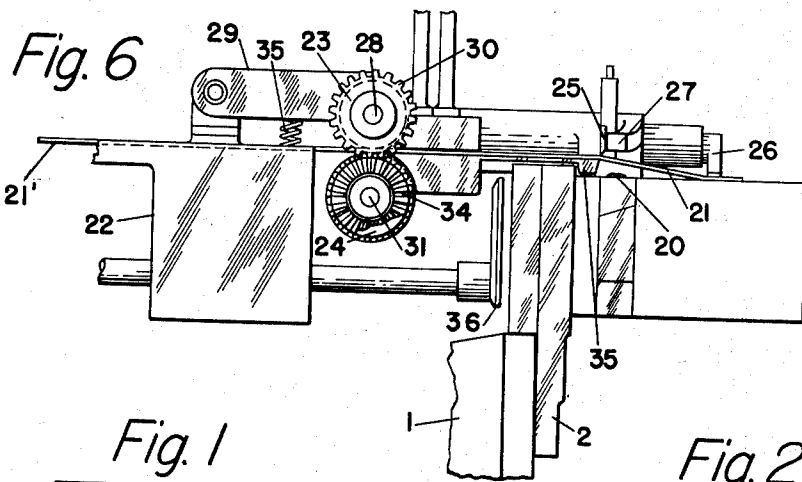
B. J. TAMARIN

2,675,169

CIGARETTE PACKAGE AND METHOD OF MAKING THE SAME

Filed Sept. 23, 1948

4 Sheets-Sheet 1



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BERNARD J. TAMARIN
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CIGARETTE PACKAGE AND METHOD OF MAKING THE SAME

Filed Sept. 23, 1948

4 Sheets-Sheet 2

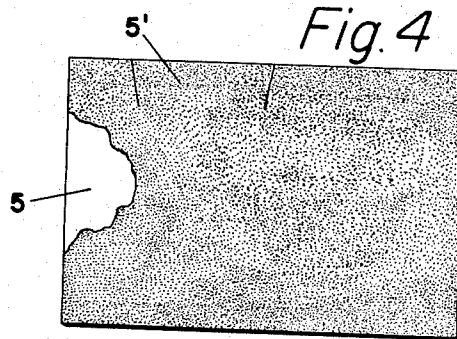
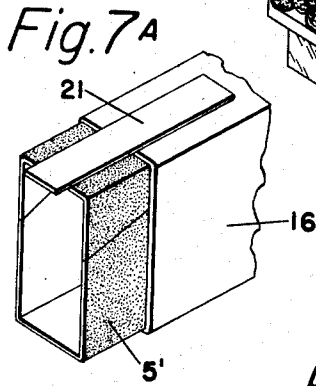
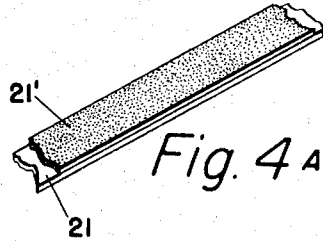
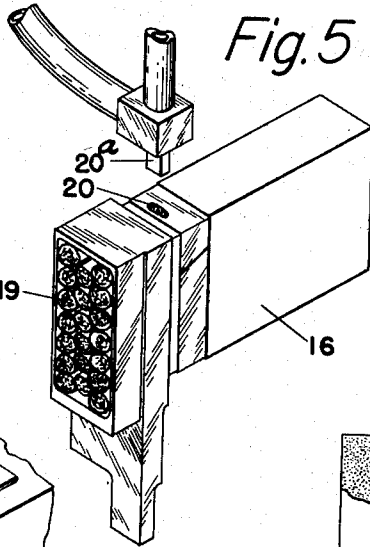


Fig. 5A

Fig. 10A

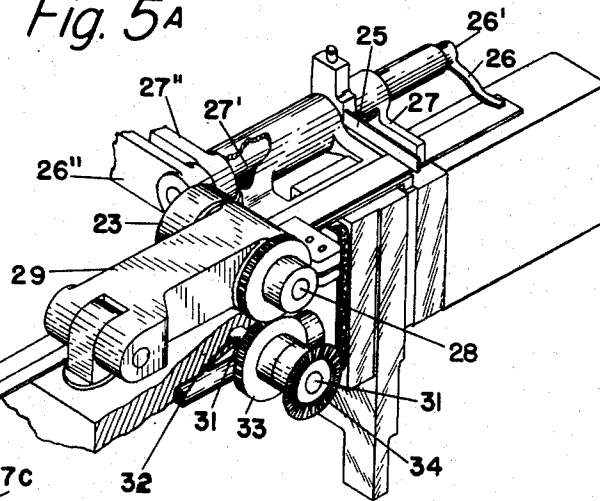
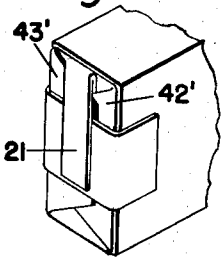
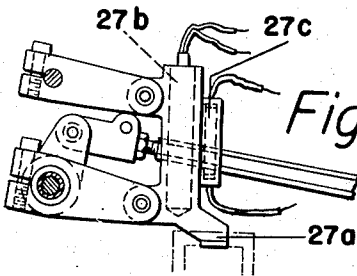


Fig. 5B



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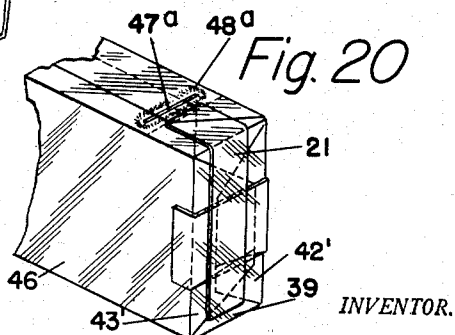
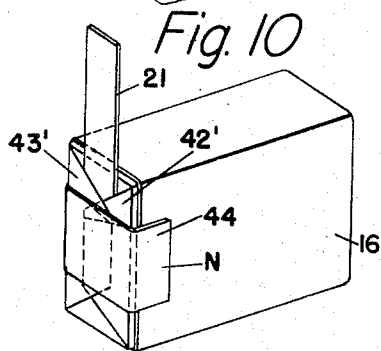
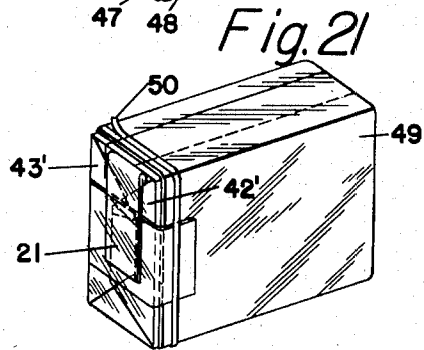
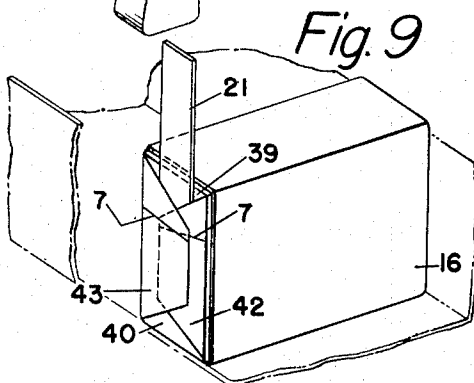
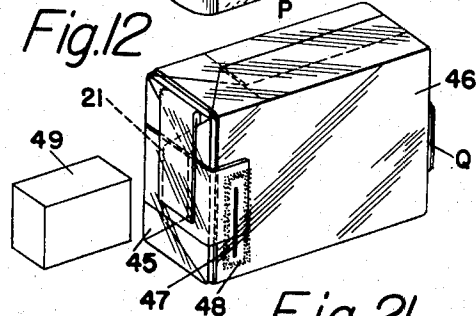
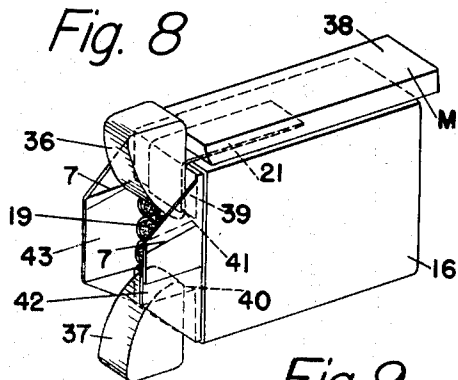
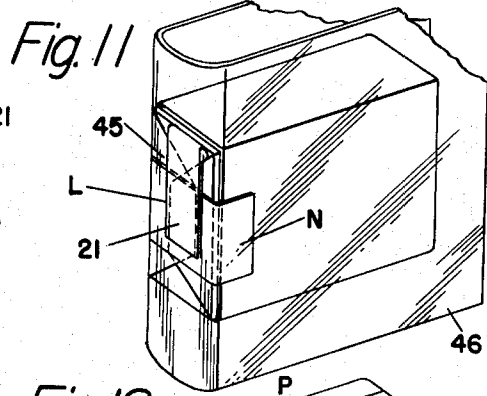
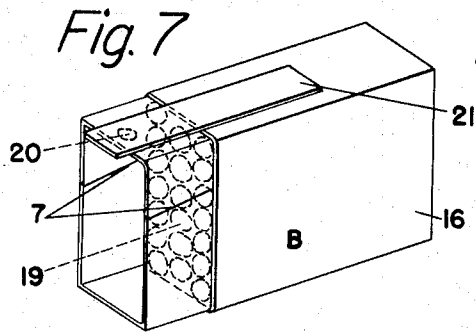
B. J. TAMARIN

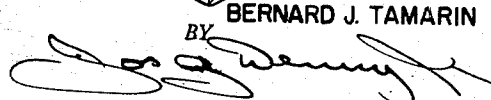
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CIGARETTE PACKAGE AND METHOD OF MAKING THE SAME

Filed Sept. 23, 1948

4 Sheets-Sheet 3



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CIGARETTE PACKAGE AND METHOD OF MAKING THE SAME

Filed Sept. 23, 1948

4 Sheets-Sheet 4

Fig. 13

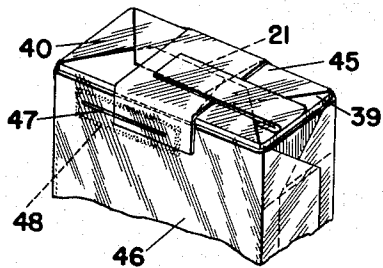


Fig. 16

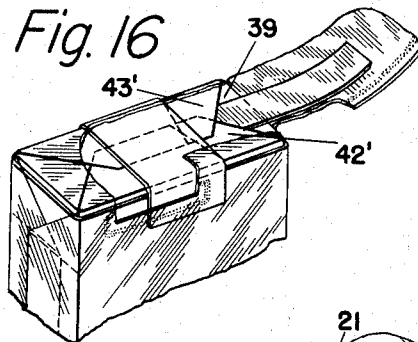


Fig. 14

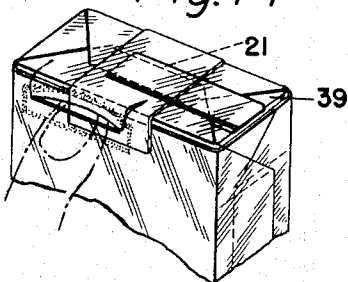


Fig. 17

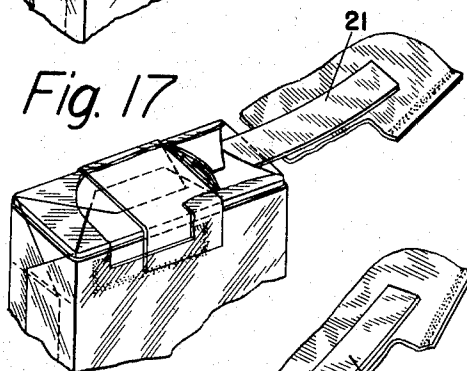


Fig. 15

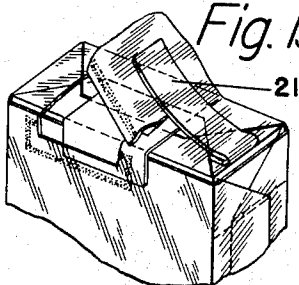


Fig. 18

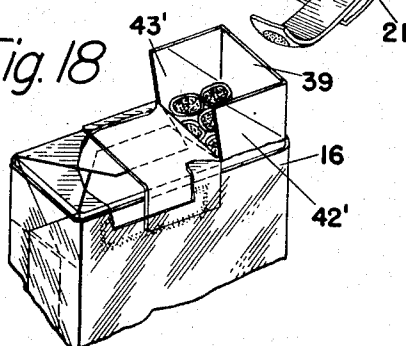
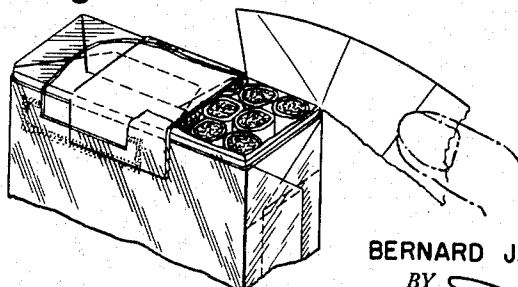


Fig. 19



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UNITED STATES PATENT OFFICE

2,675,169

CIGARETTE PACKAGE AND METHOD OF MAKING THE SAME

Bernard J. Tamarin, Whitemarsh, Pa., assignor to Pull-Packaging, Inc., a corporation of Pennsylvania

Application September 23, 1948, Serial No. 50,823

19 Claims. (Cl. 229—51)

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My invention is a package provided with an opening pull-strip, which is preferably attached to both a closure member of an inner shell and to an outer sheath. In such a package, the pull-strip is so positioned and attached that it acts as a guide for removing an area of the sheath over the closure member and thereby provides clearance for the free unfolding of such member.

My invention is particularly applicable to a cigarette package or similar portable container having an end closure normal to the body of the package, and which may be only partially opened to form a spout by pulling the pull-strip attached to the closure. The pull-strip is so attached to the closure that continuance of pulling, after the spout is opened, peels the pull-strip from the spout and completely detaches the pull-strip from the package without mutilation of the latter.

In one embodiment of my invention, a group of cigarettes or other rod-like articles, are housed within a soft shell formed from an inner wrapper or foil telescoped within a jacket or encircling label having a sealed end and an open end. The end of the inner shell adjacent to the open end of the jacket has its closure formed from a pair of narrow flaps and a pair of wide flaps containing slits. The narrow flaps are folded to form tucks overlaid by the wide flaps with their slits adjacent to the inner end of one of the tucks; and as used herein the term tuck designates the portion of the end closure formed from a folded-down extension of one of the narrower side walls of the pouch.

The tuck adjacent to the slits in the flaps has a pull-strip peelably connected thereto near its inner end. The pull-strip extends from such point of attachment toward the side of the package and is preferably bent over, parallel with its attached section, and attached to a sheeted cellulose acetate (cellophane) wrap. In such construction the pull-strip is overlaid by and overlies the folded wide flaps and may overlie a stamp or sticker which is secured to the jacket for holding the flaps in closed position.

My invention also comprises a method of making such a package by folding blanks to form a shell composed of an inner wrapper partially encased in a jacket and having a slitted extension projecting therefrom; filling the shell thus formed; bonding a pull-strip to a section of the inner-wrapper-extension; and folding the extension, adjacent to the top edge of the jacket, to form a tuck from the portion to which the pull-strip is attached and to form wide flaps from the portions containing slits. The wide flaps

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have sections partially overlying the tuck and pull-strip and the slits in such flaps are disposed adjacent to the inner edge of the tuck.

The surfaces of the flap sections are not attached to the tuck surface or to the pull-strip section which they overlie, but such flap sections may be yieldingly held in place by an overlying edge section of a revenue stamp, or the like, attached to the jacket. Consequently, when the pull-strip is pulled, the inner edge of the tuck is raised, due to the resistance to shear of the pull-strip bond, and moves the overlying flap sections from beneath the edge of the stamp, and the tuck and flap sections turn upward along their crease junctions with the wrapper body. Continued pulling peels the pull-strip from the tuck surface, due to the change in the angle at which the stress is then applied to the bond.

A package so formed is preferably sheathed in an outer wrap. The sheath tends to impede the unfolding of the closure members, and to overcome this, the sheath may be slit to facilitate tearing off a section thereof (covering the unfoldable closure members) along spaced tear lines. Such sheaths are commonly formed from sheeted cellulose acetate (cellophane) in which tear lines tend to converge together within a short distance unless guided by a crease or underlying tear strip. Such convergence must be prevented, as otherwise residual flaps of cellophane overlying the unfoldable closure members may obstruct the unfolding of such members and cause premature peeling of the pull-strip.

Convergence of the tear lines may be prevented in various ways. For instance, the sheath may be provided with a zip tape encircling the package so that when the zip-tape is pulled a section of the sheath is severed. Or a preformed slit may be so positioned in the cellophane sheath that a tear initiated from one end of the slit and extending transversely of the slit will be intersected by a pull-strip section attached to the underside of the top of the sheath whereas a complementary tear initiated from the other end of the preformed slit and extending transversely of the slit will pass the pull-strip section and will be intersected by a crease at the far side of the top of the sheath. The crease and pull-strip edge will then guide the tear along the top of the package so as to uncover the unfoldable members, but leaving the opposite tuck covered by a section of the outer wrapper so as to lock it on the package.

The torn off section of the outer wrapper may be used as a grip for pulling on the pull-strip

and thereby lifting the uncovered tuck and the separable flap sections folded thereover to form a species of spout without disturbing the contents of the package.

The principles of my invention and the best modes in which I have contemplated applying such principles will further appear from the following description and the accompanying drawing in illustration thereof:

In the drawings, Fig. 1 is a somewhat diagrammatic view illustrating the slitting of the edge and the severance of laminated foil and paper to form an inner wrapper blank and the positioning of it on a former; Fig. 2 illustrates diagrammatically the application of a sheet, suitable for formation of a jacket or label, to the wrapper or shell formed from the blank of Fig. 1; Fig. 3 illustrates the closing of the bottom of the jacket after the formation thereof from the sheet shown in Fig. 2, with the slitted top extension of the inner wrapper projecting from the open end of the jacket; Fig. 4 is an outside elevation of a blank such as shown in Fig. 1 with a coating thereon for bonding a pull-strip thereto; Fig. 4A is a fragmentary, perspective view of a pull-strip with a coating thereon for bonding it to a wrapper; Fig. 5 illustrates diagrammatically the provision of an adhesive spot on the inner wrapper by the application of an adhesive or by the activation of a small area of coating, thermally or by a solvent, after partial insertion of a group of cigarettes into the wrapper; Fig. 5A is a perspective showing the application of a pull-strip to the package; Fig. 5B is a fragmentary detached view of a heater and presser by which the coating on either the wrapper or on the pull-strip, or on both, may be activated through the pull-strip; Fig. 6 is a side elevation of the principal parts shown in Fig. 5A; Fig. 7 is a perspective view of a package having a severed pull-strip attached thereto by such a spot as indicated in Fig. 5; Fig. 7A is a fragmentary perspective view of the end of a package having a pull-strip and wrapper bonded together by a coating on one, or both, of them; Fig. 8 is a diagrammatic view illustrating the tucking of a projecting end section of the inner wrapper after attachment of a pull-strip as in Fig. 7 or 7A; Fig. 9 is a perspective view showing the slitted flaps folded over the end tucks and over part of the pull-strip; Fig. 10 is a perspective view of the package shown in Fig. 9 with a revenue stamp applied thereto; Fig. 10A is a fragmentary perspective view of the end of a package with the pull-strip folded over on itself and which may be lightly tacked to the outer surfaces of the outer flaps; Fig. 11 is a perspective view showing the application to the package of a transparent, moisture repellent outer wrapper whose bight overlaps the package top and pull-strip, and herein referred to as an end-wrap package; Fig. 12 is a perspective view showing a package with the outer wrap shown in Fig. 11, sealed and containing a thumb slit; Fig. 13 shows the upper part of the package of Fig. 12 positioned for opening; Figs. 14 to 19 illustrate diagrammatically the steps involved in the opening of the package of Fig. 13; Fig. 20 shows a package similar to that shown in Fig. 12 but with the thumb slit on the side instead of on the face of the package; and Fig. 21 shows a package similar to that of Fig. 10A enclosed in an outer wrapper having its bight applied to the side of the package and herein referred to as a side-wrap package.

The steps of the method of my invention may be practiced manually but are preferably practiced with the aid of attachments applied to a conventional type of cigarette packer comprising a step-by-step rotatable drum 1 to which is attached a series of radially projecting arms 2 each forming a rim 3 about an end of a hollow former 4.

In the packaging of cigarettes, for example, an inner shell is formed on each former 4 from a rectangular wrapper blank 5, which, in accordance with my invention contains slits 6 and 7 inclined inward from the edge 8 of the blank and converging toward one another when the blank is flat.

Such wrapper blanks may consist of any desired type of sheet material but are preferably made from strips of laminated paper and metal foil whose exterior surface may be wholly or partly coated with a soluble or thermotropic, colorless, tasteless and odorless coating 5', such as a vinyl lacquer.

In making a wrapper blank, a laminated strip is preferably cut to form the slit 6 before the severance of the wrapper blank from a strip, and the strip is then cut to simultaneously form the slit 7 and sever the wrapper blank from the strip along the line 9.

The slitting and severance of a wrapper blank may be performed in any desired manner but is conveniently effected, as shown in Fig. 1, by feeding a laminated strip over conventional rollers 10 into the path of a cutter 11 having short diagonal end blades 12 and 13 and an intermediate long blade 14. When the laminated strip and cutter are brought into cutting relationship, the blade 12 cuts a diagonal slit 6 in an unsevered section of the strip; the blade 14 severs a section from the strip to form a wrapper blank 5 and simultaneously with such severance the blade 13 cuts a slit 7 in the wrapper blank 5 being severed; such wrapper 5 already containing a slit 6 cut during the severance of a preceding wrapper blank.

The blank 5 is bent circumferentially around the former 4, with the coated surface outside, if the blank is coated, and the juxtaposed transverse edges of the wrapper 5 form a seam 14a. The portion of the wrapper 5 projecting beyond the outer end of the former 4 may be tucked and folded in any usual manner to form a bottom closure 15 for the soft shell thus formed from the wrapper 5, as shown in Fig. 2. The slits 6 and 7 were so positioned in the blank as to position them in substantial alignment on opposite sides of the soft shell formed on the former by the wrapping of the blank 5 thereon.

The initially formed soft shell may be sheathed in a jacket or printed label by bending a second wrapper blank 16, of somewhat less width than the wrapper 5, circumferentially around the initial soft shell on the former 4, as indicated in Figs. 2 and 3. The juxtaposed transverse edges of the wrapper blank 16 are adhesively connected to form a seam 17 near one of the longitudinal edges of the package.

The outer end of the wrapper blank 16 may be tucked in any usual manner, as for instance by tuckers 18, and the flaps between the tucks then folded and secured together.

By combining the shell and jacket there is provided a double walled pouch on the former 4.

After the pouch has been formed, a pull-strip 21 is bonded to the protruding edge section of the wrapper 5 between the slits 6 and 7. The pull-

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strip preferably comprises a strip of heat-sealing cellulose acetate (cellophane) which may have one face coated with a coating 21', such as a thermoplastic vinyl lacquer, or a soluble adhesive, to facilitate attachment of the strip securely to metal foil to supplement a coating on the foil or take the place thereof when an uncoated wrapper is used. The bonding coating on the wrapper or pull-strip, or both, may be rendered tacky by the application of heat immediately prior to, or after, bringing the wrapper and pull-strip into contact, or a solvent fluid adhesive may be applied to form a tacky spot immediately preceding contact. The pouch may be filled with cigarettes in any usual manner before or after the attachment of the pull-strip.

As illustrated diagrammatically in Fig. 5, an adhesive spot 20 may be formed on the end extension of the inner shell by an oscillating, hollow tool 20a through which a drop of solvent may be deposited upon a wrapper having a soluble coating, or heat may be applied to a wrapper having a thermotropic coating. The pull-strip 21, with or without the coating 21', may be laid on the jacket 16 and on the tacky spot 20 on the extension of the wrapper 5 and pressure applied thereto as indicated in Fig. 5A: or a pull-strip may be laid on an end extension of the wrapper 5 and on the jacket 16, and pull-strip and extension bonded together by the application of heat by a thermostatically controlled electric heater and presser, as indicated in Fig. 5B; one or both of the members to which heat is applied being thermotropic or having a thermotropic coating.

The pull-strip 21 may be laid on the jacket and projecting section of the inner shell in any suitable manner, and after or without the prior formation of a tacky spot 20, but is preferably projected from the open end of the shell toward the closed end of the jacket when a loaded former 4 is moved into alignment with a tape-shooting, tape-severing, and pressing or heating attachment applied to a conventional packer.

As illustrated in Figs. 5 and 6, this attachment includes a bracket 22 which is mounted on a usual housing (not shown) which normally overlies the rearwardly extending portion of the turret 1 of the conventional cigarette packer, and the feeding mechanism of the attachment is preferably aligned with the position commonly designated station XII of such packer.

The tape feeding mechanism preferably comprises a pair of peripheral contacting feed rollers 23 and 24 for intermittently advancing the pull tape 21; a cutter 25 for cutting from the tape 21 a length sufficient for a pull after delivery thereof to a package at position XII, and a pair of spaced presser fingers 26 and 27. The finger 26 is moved into engagement with the front of the pull-strip 21 and presses it against the jacket immediately before the severance of the tape by the cutter 25 and the arm 27 moves the opposite end of the pull-strip against the extending end of the wrapper 5 immediately after severance of the pull-strip and holds the latter until it is firmly tacked. The arm 27 may be heated to expedite drying an adhesive solution or to activate a thermotropic bonding material. As indicated in Fig. 5B, a presser foot 27a may be substituted for the presser arm 27 and heated by an electric coil 27b controlled by a thermostat 27c.

The finger 26 may be manipulated by the shaft 26' and lever 26'' and the members 25 and 27 by a sleeve 27' and lever 27''.

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Preferably the tape 21 is creased longitudinally (Fig. 5) before being fed to the rollers 23 and 24 so as to impart to the tape a tendency to assume a channel shape or V-cross section imparting greater longitudinal rigidity to the tape.

The feed wheel 23 is fixed to a shaft 28 which is journaled to a swinging arm 29 fulcrumed on the bracket 22. The shaft 28 has a gear 30 fixed to an end thereof. The feed wheel 24 is fixed on a shaft 31 journaled in a bearing 32. The shaft 31 has fixed thereon a gear 33 meshing with the gear 30 and a bevel gear 34 connected with a driving source (not shown). The arm 29 is normally biased downwardly by its own weight or by a spring 35 to regulate the traction between the peripheries of the feed wheels 23 and 24.

The gears 33 and 30 mesh with one another to effect their simultaneous rotation, and may be manually positioned relatively by lifting the arm 29 to regulate the initial position of the wheels 23 and 24 relative to the tape 21. The length of the tape fed per revolution of the wheels 23 and 24 may be varied by the use of feed wheels of different diameters.

During the projection of the tape 21, it is supported above the wrapper extension by the shear bar 35 which is adapted to coact with the cutter 25 to shear the tape as soon as an appropriate length thereof has been delivered. The free end of the tape is meanwhile held by the finger 26 and the severed end is engaged and pressed by the finger 27 against the adhesive spot 20 or the spot it is to be tacked by the bonding thermotropic coating.

Immediately following these operations, a plunger 36 is advanced against the cigarette bundle 19 to bottom these in the shell formed by the inner wrapper and to then strip the package from the former 4. This movement transfers the filled package into the entrance of the usual delivery guideway of a conventional cigarette packer, indicated in dotted lines in Fig. 9, and into position to be acted upon by tuckers 36 and 37, while the pull-strip 21 is held against the package by a keeper 38. The stripped former 4 is now ready for the positioning and cutting of a new wrapper 5 and for a cycle of operations by which a pouch is formed and filled with cigarettes in the usual manner and a pull-strip attached thereto in accordance with my invention.

The tuckers 36 and 37 simultaneously bend a section of the strip 21 and the sides of the protruding section of the wrapper 5 perpendicularly to their former positions so as to form tucks 39 and 40. The inner edge 41 of the tuck 39 is adjacent to the slits 7, as shown in Fig. 8. Flaps 42 and 43, formed by the front and back of the projecting section of the wrapper 5, are then folded over as shown in Fig. 9 so as to partially overlie the pull-strip 21 and the tucks 39 and 40. A revenue stamp or sticker 44 is adhesively attached to the front and back of the jacket 16 to form a bight overlying the flaps 42 and 43; one edge portion of the stamp 44 overlying the slits 7 whose outer ends terminate adjacent to the edge of the stamp, and at or slightly below the top edge of the package, as shown in Fig. 10. Tapering portions of the severed flap sections 42' and 43' are thus overlaid by the stamp 44 but may be readily withdrawn therefrom.

In the preferred form of my invention, the pull-strip section projecting from between the flap sections 42' and 43' is bent over upon itself as indicated in Fig. 10A. The bent over section may

be tacked to the flap members 42', 43' if the latter are coated. While the pull-strip is thus bent so as to overlie the flaps 42 and 43 and the stamp 44, with a coated section 21' thereof exposed, it is covered by the bight 45 of an end wrap 46, preferably composed of a sheet of transparent water-repellent cellulose acetate, or where the side-wrap sheath is used, as shown in Fig. 21, the strip 21 may be folded over before or during the application of the sheath.

The cellulose sheet 46 may be tucked and folded, as shown in Figs. 11 and 12, to form a protective casing which has a slit 47 in the front panel thereof. The slit is isolated by a wax frame 48. The bight 45 and pull-strip 21 are securely connected to one another, preferably by the application of a heated element 49 thereto to cause thermal fusion of the strip and/or wrap.

The slit 47 is so positioned on the front of the sheath formed by the wrapper 46 of the end-wrap package that a tear line started at one end of the slit and extending around the top of the package will intersect the pull 21, and a tear line starting from the other end of the slit and extending around the top of the package will clear the end of the pull 21, as indicated in Figs. 14 and 15.

As shown in Figs. 13 to 19 inclusive, such a package may be readily opened by inserting a thumb nail into the slit 47 and initiating tears of the sheet 46 at the ends of the slit 47 and through the wax frame 48. The left hand tear line (Fig. 14) will continue until it reaches the crease along the back edge of the top and will turn to the right and follow such crease. The course of the right hand tear line will be interrupted by the edge of the attached pull strip 21 and will turn to the right and follow such edge. Movement of the pull-strip toward the right, breaks any light bond there may be between it and the closure by a peeling action and tears off an area of the bight section of the wrapper 46 to uncover the flap sections 42' and 43' and the tuck 39 and provides a grip facilitating the pulling of the strip 21 to lift the tuck 39 and withdraw the flap sections 42' and 43' from beneath the edge of the stamp 44 and splits any bond there. The removal of the sheath section between tear lines permits free unfolding of the tuck 39 and flap sections 42' and 43' along their creases or hinge lines adjacent to the edge of the jacket 46 so as to form a spout which may be refolded to reclose the package or may be torn off as shown in Fig. 19. The continued pulling of the pull 21 after turning the tuck 39 on its crease line readily peels the pull from the tuck, without disturbing the contents of the package, as indicated in Fig. 18. The bond between the pull-strip and tuck strongly resists sheer when the direction of pull is substantially parallel with the plane of the surfaces of the pull-strip and tuck but the bond is readily split by a pull transverse to such plane to cause the peeling of the pull-strip from the tuck.

It will be noted that the left hand end of the slit 47 is spaced from the edge of the package and that when the cellophane cover 46 is torn it leaves a narrow rim of the cellophane wrap over the top of the tuck 40 and flaps folded thereover so as to retain the cellophane wrap on the package and retain in place the tuck 40 and the flaps overlying it.

As illustrated in Fig. 20, the tearing of the cellophane wrap may be initiated by substituting a slit 47a and wax isolating frame 48a in the side of the cellophane wrap and extending the end of a wide pull-strip 21 to a position adjacent to such

slit. When the thumb nail is inserted in the slit 47a to tear the cellophane and lift a tongue thereof which can be grasped, the strip 21, which is bonded to the inside of the cellophane wrap, acts as a guide for tearing a wide strip out of the top of the cellophane wrap to permit the unfolding of the tuck and flap sections as above described without substantial impedance by the cellophane wrap.

In Fig. 21 there is illustrated the application of a side wrap cellophane cover 49 and rip tape 50 to a package embodying my pull-strip 21 and severed flap sections 42' and 43'. In both Figs. 12, 20 and 21, the pull-strip is bonded to the tuck 39 as above described and is bonded to the cellophane wrap where the pull-strip is to both rupture the sheath and open the package. But where the sheath is independently ruptured, as in the form shown in Fig. 21, it is not essential to bond the sheath and pull-tape together since the latter is of sufficient size to itself provide a firm grip.

However, where a package embodying the pull-strip 21 and slit flaps 42' and 43' is enclosed in a side wrap sheath 49 provided with a zip tape 50, as shown in Fig. 21, the opening of the package is greatly facilitated by bonding the pull strip 21 to the top of the sheath, so that upon severing the encircling zip tape 50, the detached top remains attached to the strip 21 and provides a grip for setting in motion the series of progressive package opening stages shown in Figs. 15-19.

Having described my invention, I claim:

1. A package comprising a wrapper forming a body having front, back, and side walls and an end closure transverse to said body and comprising extensions of the front, back, and side walls of the body, a pull-strip in laminated relation to one of said extensions of a side wall aforesaid near the free edge thereof and bonded thereto, said pull-strip having a section projecting away from said free edge and said pull-strip being peelable from said wall extension by a pull on said pull-strip section, the extensions of said front and back wall sections containing slits adjacent to the free edge of the extension of the last named side wall section, and said front and back wall extensions being folded down transversely to said body with sections thereof overlying at least partially the attached section of said pull-strip and a stamp securing said front and back wall extensions in folded down position and having a section overlying said slits.

2. A package having an end closure including a down-folded tuck and flaps having separable sections folded over but freely unfoldable from said tuck, and a pull-strip bonded to the outer surface only of said tuck and peelable therefrom by continuance of a stress tending to unfold said tuck.

3. A package comprising a shell including an end closure having a section unfoldable relatively to the remainder thereof, a sheath enclosing said shell and having a section overlying said closure, a pull-strip tacked to the outer surface only of said unfoldable section and to said last named sheath section, and a rip tape for severing said last named sheath section to form a grip for pulling said pull-strip and unfolding said unfoldable end closure section in the direction of movement of said pull-strip, said pull-strip being detachable from said unfoldable section by a continuing pull thereon in the direction causing the unfolding of said section.

4. A package comprising a filled pouch having an end closure having an unfoldable section, a sheath enclosing said pouch, and having a tearable section overlying said unfoldable section, and a pull-strip bonded to the outer surface only of said unfoldable section and tearable section and forming a guide for tearing the tearable section and combining therewith to form a pull for unfolding the unfoldable section.

5. A package comprising a shell having an end closure including a down-folded tuck and flaps having separable sections folded over but unfoldable relatively to said tuck, a sheath enclosing said shell, and a pull-strip attached to the outer surface only of said tuck and to a section of the sheath overlying said end closure, said sheath having tear guiding means including said pull-strip for facilitating detachment of an area of the sheath overlying said tuck and thereby unfolding said tuck and separable flap sections while the remainder of said flaps are held folded by the remainder of said sheath.

6. A package comprising a shell having an end closure including a down-folded tuck and flaps having separable sections folded over but unfoldable relatively to said tuck, a sheath enclosing said shell and having a section overlying said end closure, and a pull-strip bonded to the outer surface only of said tuck and to said overlying sheath section, said sheath having means facilitating the starting of tears running across said shell on opposite sides of said pull-strip.

7. A package comprising a shell having front and back walls and an end closure having a section unfoldable relatively to the remainder thereof, a stamp attached to said walls and restraining said closure, a sheath enclosing said shell and having a section overlying said unfoldable section, and pull-strip bonded to the outer surface only of said unfoldable section and to said sheath, said sheath containing means adjacent to said stamp facilitating the initiation of tears running on opposite sides of said strip.

8. A package comprising a group of rod-like articles, an inner wrapper enveloping said articles, a jacket positioning said wrapper and having an open end, an outer wrapper enveloping said inner wrapper and jacket, and a flexible pull-strip attached to the outer surface only of the inner wrapper and to a bight of the outer wrapper, said inner wrapper having an end closure adjacent to the open end of said jacket and including an unfoldable extension folded along the open end of said jacket to form a hinged tuck having an outer surface to which said pull-strip is bonded, said end closure also including wrapper extensions having separable sections folded over part of said tuck and unfoldable therefrom by a pull on said bight section without unfolding the remainder of said last-named extensions.

9. A package comprising a shell having front and back walls and an end closure having a section unfoldable relatively to the remainder thereof, a stamp attached to said walls and restraining said closure, a sheath enclosing said shell and having a bight overlying said unfoldable section, and a pull-strip bonded to the outer surface only of said unfoldable section and to said bight, said sheath containing means adjacent to the outer end of said pull-strip facilitating the initiation of tears running along said bight section overlying said closure and on opposite sides of said strip.

10. A package comprising a shell having front, back and side walls and an end closure having a section unfoldable relatively to the remainder thereof, a stamp attached to said front and back walls and restraining said closure, a sheath enclosing said shell and having an unseamed bight overlying said unfoldable section and seamed sections overlying said side walls, and a pull-strip bonded to the outer surface only of said unfoldable section and to said bight, one of the seamed sections of said sheath containing means for initiating tears running on opposite sides of and along tacked edges of said strip.

11. In the art of packaging, the steps which include forming a pouch with an open mouth and slits extending inward from the edge of said mouth inserting rod-like articles into said mouth, bonding a pull-strip to a section of the outer surface only of said pouch between said slits, and turning sections of said pouch and strip to form an end closure, said end closure including said pouch section to which said pull strip is bonded and said pull strip projecting therefrom for unfolding the pouch section bonded thereto and the pouch sections between said last named section and said slits.

12. In the art of packaging, the steps which include adhesively attaching a strip to the outer surface only of a wrapper section, bending the adherent section of said strip and said wrapper section transversely to their previous positions to form a tuck, folding wrapper sections along both sides of said tuck down over said tuck, said last named sections having edges adjacent to the inner end of said tuck and being movable relatively thereto, bending a further wrapper around said tucked and folded sections, and bonding said strip to said further wrapper.

13. In the art of packaging, the steps which include moving a strip along the outer surface of one of the sides of a shell formed from a bent wrapper having complementary slits in opposite walls thereof, tacking together said strip and the outer surface of said side between said slits, bending the tacked section of said strip and a section of said wrapper transversely to their previous positions and down between said slitted walls to form a tuck, and folding the slitted walls over said previously bent strip section and tuck with said slits adjacent to the end of said tuck.

14. In the art of packaging, the steps which include moving a pull-strip along the outer surface of the side of a pouch having an open mouth and a bondable area adjacent thereto, pressing said strip and bondable area together, bending said bondable area and a section of said strip transversely to their previous positions to form a tuck, folding portions of said pouch over the previously bent section of said strip and over said tuck, bending said strip to position a section thereof over said folded portions and substantially parallel to the previously bent section of said strip, and folding a sheath section over said last bent strip section.

15. In the art of packaging, the steps which include making tacky a section of a wrapper projecting from a jacket, laying a pull-strip on said tacky section and over said jacket, bending said projecting section and a section of said strip transversely to their previous positions, folding another section of said wrapper over the previously bent sections of said wrapper and strip, bending said strip to position a section thereof in a plane substantially parallel to the plane of the previously bent section thereof, and folding a

wrapper section over said last bent strip section and thereby positioning it adjacent to said last folded wrapper section.

16. In the art of packaging, the steps which include moving a strip rectilinearly along the outer surface of a side of a shell having an open mouth, tacking together a section of said strip and the outer surface of the shell adjacent to the open mouth thereof, turning a section of said shell and a section of said strip transversely to their previous positions to form a tuck, and folding other sections of said shell along both longitudinal edges of said tuck over the tacked-together sections of said strip and shell.

17. In the art of packaging, the steps which include projecting a strip rectilinearly along the outer surface of a side of a wrapper bent to form a shell, cutting said strip adjacent to the end of said wrapper, tacking together the section of said strip adjacent to its cut and the wrapper adjacent to the end thereof, bending a section of said wrapper and a section of said strip transversely to their previous positions to form a tuck, and folding other sections of said wrapper along both sides of said tuck over the tacked-together sections of said strip and wrapper.

18. A method of packaging rod-like articles which comprises slitting an edge of a sheet, wrapping the sheet around a former to form a pouch having a mouth and a bottom and an end section for forming a closure for said mouth, moving a strip relatively to said pouch and depositing it on the exterior surface of said section between said slits and over a side of said pouch, cutting said strip adjacent to the open mouth, tacking said strip to the outer surface of said section, bending said strip and section to position portions thereof transversely to their former positions and form a tuck, and folding other portions of said section on both sides of said tuck

down over said tuck and strip to form a closure for said mouth.

19. A method of packaging rod-like articles which comprises slitting an edge of a sheet, wrapping the sheet around a rectangular former, wrapping a jacket around said wrapper and leaving exposed an end section of the wrapper, positioning a strip over said exposed section and over said jacket, cutting said strip adjacent to the end of said wrapper, bonding said strip to the exposed section of said wrapper, bending a section of said strip and a portion of said exposed section transversely to their former positions, folding other portions of said exposed section over the previously bent portion thereof and over the bonded portion of said strip, bending said strip to position a portion thereof substantially parallel to the bonded portion thereof, enclosing the aforesaid wrapper, jacket and strip in a sheath, and bonding said sheath to said second named portion of said strip.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,682,104	Andros	Aug. 28, 1928
1,785,639	Maurer	Dec. 16, 1930
1,824,948	Fields	Sept. 29, 1931
1,836,228	Dryer	Dec. 15, 1931
1,948,593	Patterson	Feb. 27, 1934
1,976,211	Bickford	Oct. 9, 1934
2,106,388	Wise	Jan. 25, 1938
2,268,970	Tindal	Jan. 6, 1942
2,283,102	Stephano	May 12, 1942
2,291,050	Malhiot	July 28, 1942
2,295,231	Milmoe et al.	Sept. 8, 1942
2,334,381	Brenander	Nov. 16, 1943
2,522,868	Goodwin	Sept. 19, 1950