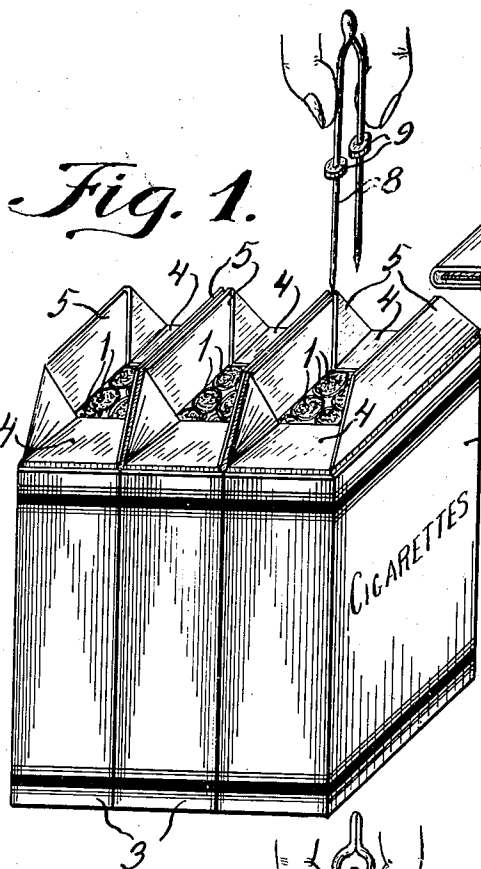
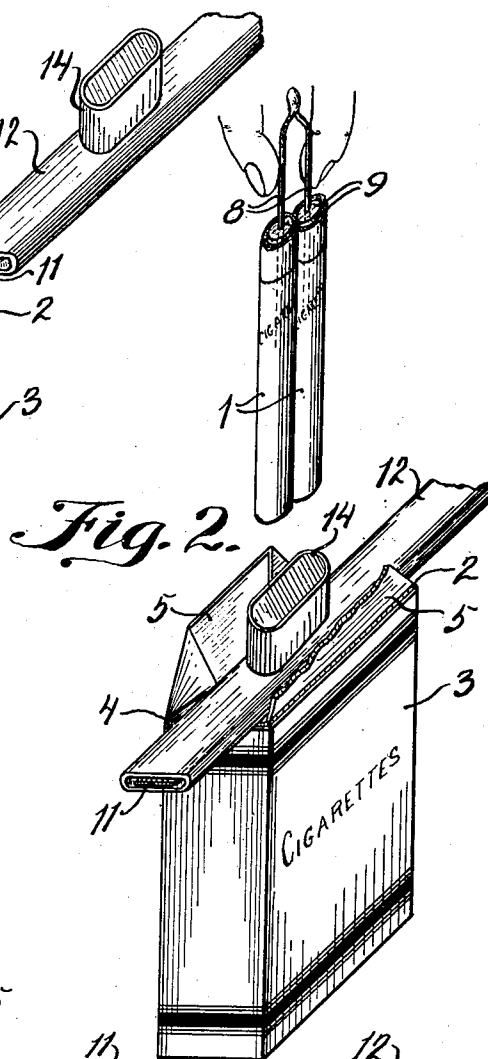
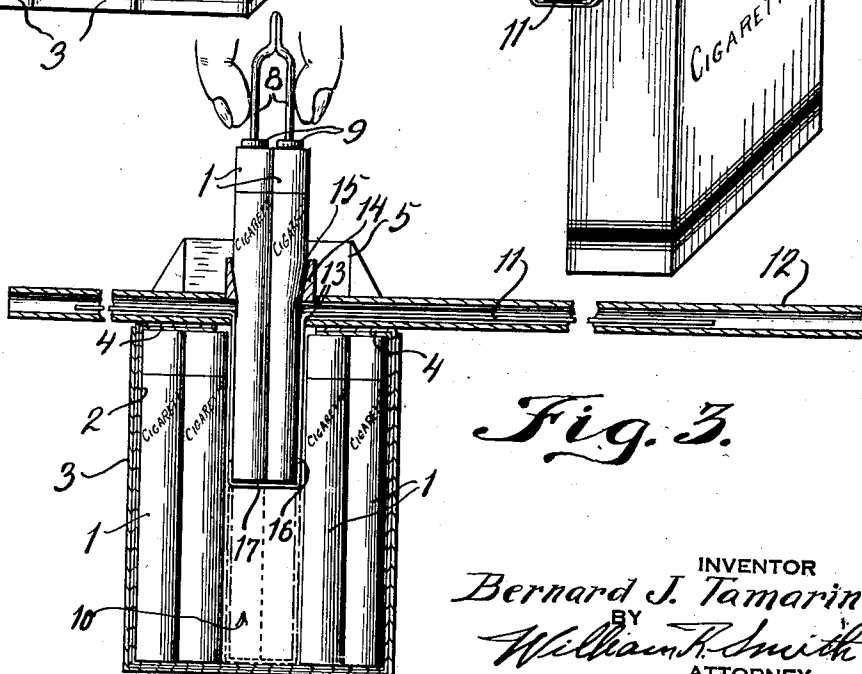


Sept. 13, 1938.

B. J. TAMARIN
METHOD OF SHAPING AND ASSOCIATING A CIGARETTE
EJECTING STRIP WITH A CIGARETTE PACKAGE
Filed Oct. 16, 1937

2,129,888

2 Sheets-Sheet 1



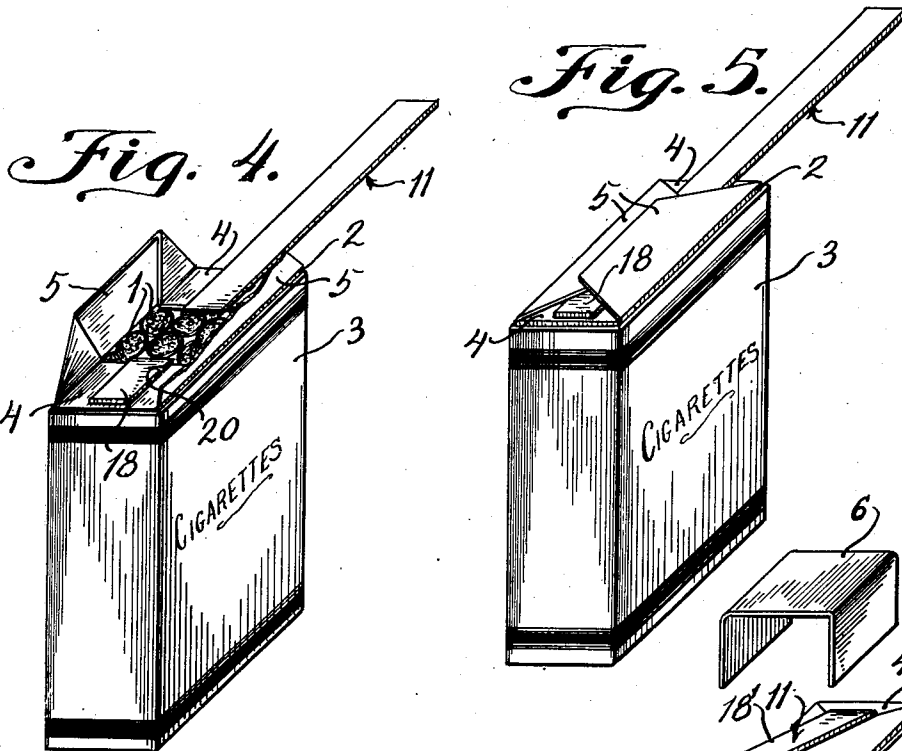
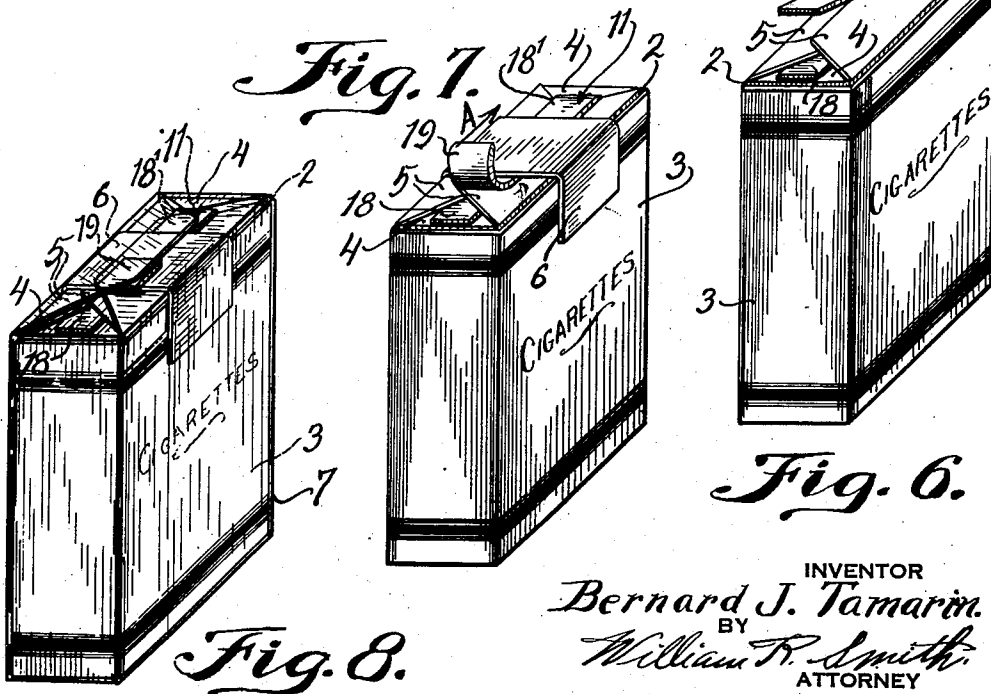
INVENTOR
Bernard J. Tamarin.
BY
William R. Smith
ATTORNEY

Sept. 13, 1938.

B. J. TAMARIN
METHOD OF SHAPING AND ASSOCIATING A CIGARETTE
EJECTING STRIP WITH A CIGARETTE PACKAGE
Filed Oct. 16, 1937

2,129,888

2 Sheets-Sheet 2



INVENTOR
Bernard J. Tamarin
BY
William R. Smith
ATTORNEY

UNITED STATES PATENT OFFICE

2,129,888

METHOD OF SHAPING AND ASSOCIATING A
CIGARETTE EJECTING STRIP WITH A
CIGARETTE PACKAGE

Bernard J. Tamarin, Philadelphia, Pa.

Application October 16, 1937, Serial No. 169,378

13 Claims. (Cl. 93—2)

The present invention relates to a method of shaping and associating a cigarette ejecting strip with a cigarette package and the cigarettes contained therein for the production of a cigarette package of the type shown and described in my co-pending application Serial Number 140,345, filed May 3, 1937.

The invention has for its primary object the provision of a method whereby a strip of suitable flexible material may be so shaped and associated with the seal and flaps of a cigarette package and with the cigarettes therein, that the strip, when subjected to a pull, will perform three successful operations: first, break the seal; second, open the flaps, and thereafter, eject the cigarettes.

Other important objects and advantages of the invention will be in part obvious and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by those skilled in the art, I have shown in the accompanying drawings, wherein like characters of reference are used to designate corresponding parts, the steps which I prefer to follow in practicing the method aforesaid.

In these drawings:

Figure 1 is a perspective illustrating a series of cigarette packages in the tuck stage and in position for the withdrawal of two cigarettes.

Figure 2 is a perspective illustrating the two cigarettes withdrawn from the package and the strip of material in a magazine and disposed to be forced into the package.

Figure 3 is a longitudinal cross section showing the cigarettes being replaced in the package and forcing a part of the strip therein.

Figures 4 to 7 inclusive are perspectives illustrating the various stages in closing and sealing the package.

Figure 8 is a perspective of a closed, sealed, and finished package.

As is well known in the art, cigarettes are packaged by means of a machine which continuously operates to compactly gather a certain number of cigarettes in symmetrical rows; form a package from a foil wrapper 2, which is wider than the length of the cigarettes so as to project beyond the tips of the latter, and from an outer label wrapper 3 which is snugly applied over the foil wrapper, thus forming overlapping end flaps 4 and overlapping side flaps 5, adapted to close the package; affix a sealing stamp over the closing flaps and adjacent sides of the outer

label wrapper; and, finally, enclosing the sealed package in a "Cellophane" jacket 7.

The present method consists of a series of novel related steps whereby a flexible strip may be associated with certain of the cigarettes and with the flaps and stamp of the cigarette package, in a manner that a continuous pull in a single direction upon the strip will successfully: first, tear the seal; second, open the flaps; and third, eject the cigarettes. Thus the cigarettes are not subjected to strain or mutilating actions during the unsealing and opening of the flaps.

The initial step of the method relates to removing one or more cigarettes from the package. For that purpose, I prefer to utilize a pair of pointed pins 8, united in tweezer-like fashion, and adapted to impale the cigarettes. Each pin 8 is provided with a stop 9 which, as shown, may be in the form of a disc acting to prevent the pins 8 from penetrating into the cigarettes any deeper than is necessary to effect a firm anchorage and also acting as a pusher when the cigarettes are returned into the package, in the manner and for the purpose to be later specified.

It will be understood that by slightly squeezing the pins 8 after they have engaged the cigarettes, the same are tightly gripped and may be withdrawn from the package without disturbing the cigarettes remaining therein, accordingly leaving an open space 10 (Figure 3).

Subsequent to the removal or withdrawal of the cigarettes, a length of suitable flexible material, preferably a strip of "Cellophane" 11, is placed longitudinally across the upper end of the package over the folded end flaps 4 thereof so that the intermediate portion of the strip covers said open space 10. In order to assure proper positioning of the strip 11, I find it advantageous to utilize a flat tube-like magazine 12 into which is introduced the strip 11 and adapted to be received between the upstanding side flaps 5 of the cigarette package.

Formed at the intermediate portion of the magazine 12 and in the diametrically opposed flat surfaces thereof are registering openings 13 having a general elliptical formation, through which the withdrawn cigarettes may pass when being returned into the package.

An important step in the method to which this invention pertains consists in varying the relative circumferential areas of the withdrawn cigarettes and of the space created by their removal, simultaneously with the return of said cigarettes in the package and the introduction of the package opening and cigarette ejecting strip 11.

It will be appreciated that the mentioned variation in area may be accomplished either by increasing the circumferential area of the open space with respect to the circumferential area of the cigarettes, or by decreasing the circumferential area of the cigarettes in relation to the circumferential area of the open space. Of these two possibilities, the latter is probably the most practical and, accordingly, I have shown herein one suitable means capable of reducing the circumferential area of the cigarettes simultaneously with their return to the package.

As represented in the drawings, an elliptical shaped collar 14 is arranged upon one surface of the magazine 12 and projects outwardly from the opening cut therein 13. The internal wall of the collar 14 is slightly tapered, as more clearly shown at 15 in Figure 3, so that said wall will act to slightly contract the cigarettes as they are guided into the package. Since the strip 11 is disposed within the magazine 12 and extends throughout the length thereof, it will be appreciated that a portion of said strip is exposed through the openings 13 in the magazine 12 and, therefore, when the cigarettes are passed in said openings, the exposed portion of the strip is engaged by the cigarettes and thereby forced into the opening, thus assuming a general U shape formation which constitutes a looped portion 16 and an ejecting element 17 adapted to eject the cigarettes in engagement therewith in the manner hereinafter stated.

After the cigarettes have been completely returned into the package with the portion of the strip 11 forced therein, the pins 8 are withdrawn and the magazine 12 removed so that the opposite end portions of said strip project for a distance out of the package. As is clearly shown in Figure 4 of the drawings, one projecting end portion of the strip 11 is longer than the other end portion and, in practice, it is desirable, in order to eliminate waste and facilitate handling, to determine the length of the strip to be used; (with the present-day cigarette package size, I find that a strip measuring approximately 9" in length is sufficient,) and to so dispose the openings 11 and collar 14 that when the intermediate portion of the strip 11 has been positioned within the package, the projecting shorter end portion of the strip will be substantially flush with the adjacent edge of the package. This short end portion of the strip is adapted to form an attaching tab 18 which is suitably affixed by means of glue, heat application, or otherwise, to the adjacent folded end flap 4.

The opposed side flaps 5 are then folded in overlapping relation to close the package, as represented in Figure 5, and the free long end of the strip 11 is brought back to lie over said flaps, as shown in Figure 6.

The sealing stamp 6, which may be the usual Government tax stamp, is then placed transversely across the top of the package to cover the closed side flaps 5, and the portion of the strip 11 brought back thereover, which portion then forms an opening element 18, in the manner more fully illustrated in Figure 7. The free end of the strip 11 is adapted to constitute a finger tab 19 and is preferably folded over the stamp, the complete package then being enclosed in the "Cellophane" jacket 7 which acts to maintain said finger tab 19 in position, in the manner represented in Figure 8.

From the foregoing, and as is explained in detail in my co-pending application, Serial Num-

ber 140,456, filed May 3, 1937, it will be understood that when it is desired to open a cigarette package made in accordance with the invention, the "Cellophane" jacket 7 is first opened, then by gripping the finger tab 19 and pulling it lengthwise in the general direction indicated by the arrow A in Figure 7, the opening element 18 of the strip 11 tears the sealing stamp 6 and opens the flaps. A continued pull on the strip 11 gradually straightens out the loop portion 16 of the ejecting element 17 and thereafter causes the cigarettes in engagement therewith to slide out of the package so that the ejected cigarettes may be readily taken out for use.

It will be understood that after the cigarettes ejected by my combined opener and ejector are removed, the strip 11 may be discarded, but ready access may be had to the remaining cigarettes because, with the removal of the ejected cigarettes, the tightness of the package is relieved so that said remaining cigarettes become free. For the purpose of facilitating the severing of the strip 11 from the package, a tearing notch may be cut in one edge of said strip adjacent the securing tab 18, as shown at 20 in Figure 4 of the drawings.

What I claim is:

1. The herein described method, consisting of removing cigarettes from the package, laying the intermediate portion of a flexible strip across the opening formed by the removal of the cigarettes, attaching one end of the strip to the cigarette package, contacting the strip with the removed cigarettes and simultaneously forcing the removed cigarettes and strip into said opening, and looping the intermediate portion of the strip under and over certain of the flaps of the cigarette package, and under the seal of the package.

2. The herein described method, consisting of removing one or more cigarettes from the package, laying a flexible strip across the opening formed by the removal of the cigarettes, contacting said strip with the removed cigarettes, then returning the cigarettes into the opening and, simultaneously therewith, forcing the intermediate portion of the strip into the opening, and convoluting one end portion of the strip under and over certain of the flaps and under the seal of the cigarette package.

3. The herein described method, consisting of removing one or more cigarettes from the package, laying a flexible strip across the opening formed by the removal of the cigarettes, contacting said strip with the removed cigarettes, then returning the cigarettes into the opening and, simultaneously therewith, forcing the intermediate portion of the strip into the opening, convoluting one end portion of the strip under and over certain of the flaps and under the seal of the cigarette package, and permanently attaching one end portion of the strip to the cigarette package.

4. The herein described method which consists of removing cigarettes from the package, to form an opening in the cigarette package, laying a flexible strip across said opening, changing the relative relationship of the size of the withdrawn cigarettes and the opening formed by their removal, contacting the removed cigarettes with the strip and forcing the cigarettes and the strip into said opening, and convoluting one end portion of the strip under and over certain of the flaps and under the seal of the cigarette package.

5. The herein described method which consists of

of removing cigarettes from the package, to form an opening in the cigarette package, laying a strip across said opening, changing the relative relationship of the circumferential areas of the cigarettes and of the open space formed by their removal, simultaneously therewith contacting the removed cigarettes with the strip and forcing the same into said opening, convoluting a portion of said strip under and above certain of the flaps and under the seal and exposing the extreme end portion of the strip, and firmly attaching the other end portion to the cigarette package.

6. The herein described method comprising: withdrawing a number of cigarettes from the package, thereby leaving an open space therein, placing a strip of flexible material over the package so that its intermediate portion covers said open space, changing the relative areas of the circumferential surface of the withdrawn cigarettes and of the open space formed by their withdrawal; contacting the withdrawn cigarettes with the intermediate portion of the strip and returning the cigarettes into said space, thereby forcing the intermediate portion of the strip within the package.

7. The herein described method comprising: withdrawing a number of cigarettes from the package, thereby leaving an open space therein; placing a strip of flexible material over the package so that its intermediate portion covers said open space; changing the circumferential areas of the withdrawn cigarettes and of the open space formed by their removal; contacting the withdrawn cigarettes with the intermediate portion of the strip and, simultaneously therewith, returning the cigarettes into said space, thereby forcing the intermediate portion of the strip within the package, and sealing one end portion of the strip to the package.

8. The herein described method of shaping and associating a cigarette ejecting strip with a cigarette package having closed end flaps and opened side flaps comprising: withdrawing a number of cigarettes from the package, thereby leaving an open space therein; placing a strip of flexible material over the closed end flaps of the package so that the intermediate portion of the strip covers said open space; reducing the circumferential area of the withdrawn cigarettes; contacting the withdrawn cigarettes with the intermediate portion of the strip and, simultaneously therewith, returning the cigarettes into said space, thereby forcing the intermediate portion of the strip within the package.

9. The herein described method of shaping and associating a cigarette ejecting strip with a cigarette package having closed end flaps and opened side flaps comprising: withdrawing a number of cigarettes from the package, thereby leaving an open space therein; placing a strip of flexible material over the closed end flaps of the package so that the intermediate portion of the strip covers said open space; reducing the circumferential area of the withdrawn cigarettes; contacting the withdrawn cigarettes with the intermediate portion of the strip, simultaneously therewith reducing the cigarettes into said space, thereby forcing the intermediate portion of the strip within the package; fixing one end portion of the strip to the package; folding the side flaps to close the package; folding the free end por-

tion of the strip over the folded side flaps; applying a seal over the side flaps to enclose a part of the folded free end portion of the strip; folding the remaining part of the folded portion of the strip back over the seal; and enclosing the entire package in an outer jacket to maintain said last mentioned folded part of the strip in position.

10. The method of packaging cigarettes comprising: enclosing a quantity of cigarettes in a package having a pair of end flaps and a pair of side flaps; folding the end flaps; withdrawing a number of cigarettes from the package; placing a strip of flexible material over the folded end flaps so that the intermediate portion of said strip covers the opening formed by the withdrawal of the cigarettes; reducing the circumferential area of the withdrawn cigarettes; contacting the withdrawn cigarettes with the intermediate portion of the strip end, simultaneously therewith, returning the cigarettes into said space, thereby forcing the intermediate portion of the strip within the package; and folding the side flaps to close the package.

11. The method of packaging cigarettes comprising: enclosing a quantity of cigarettes in a package having a pair of end flaps and a pair of side flaps; folding the end flaps; withdrawing a number of cigarettes from the package; placing a strip of flexible material over the folded end flaps so that the intermediate portion of said strip covers the opening formed by the withdrawal of the cigarettes; reducing the circumferential area of the cigarettes, contacting the withdrawn cigarettes with the intermediate portion of the strip and, simultaneously therewith, returning the strip within the package; folding the side flaps to close the package; folding a portion of the strip over the folded side flaps; applying a seal over the side flaps to enclose a part of the folded portion of the strip; and folding the remaining part of the strip back over the seal to form a pulling tab.

12. The herein described method, consisting of removing cigarettes from the package; laying the intermediate portion of a flexible strip across the opening formed by the removal of the cigarettes; attaching one end of the strip to the cigarette package; forcing the intermediate portion of the strip into said opening; returning the removed cigarettes into the opening in contact with the portion of the strip therein; and looping the other end portion of the strip under and over certain of the flaps of the cigarette package and under the seal of the package.

13. The herein described method which consists in removing cigarettes from the package to form an opening in the cigarette package; laying a flexible strip across said opening; changing the relative relationship of the circumferential areas of the cigarettes and of the open space formed by their removal; forcing the intermediate portion of the strip into said opening; returning the removed cigarettes into the opening in contact with the portion of the strip therein; convoluting a portion of said strip under and above certain of the flaps and under the seal, and exposing the extreme end portion of the strip; and firmly attaching the other end portion of the strip to the cigarette package.

BERNARD J. TAMARIN.