

Aug. 14, 1956

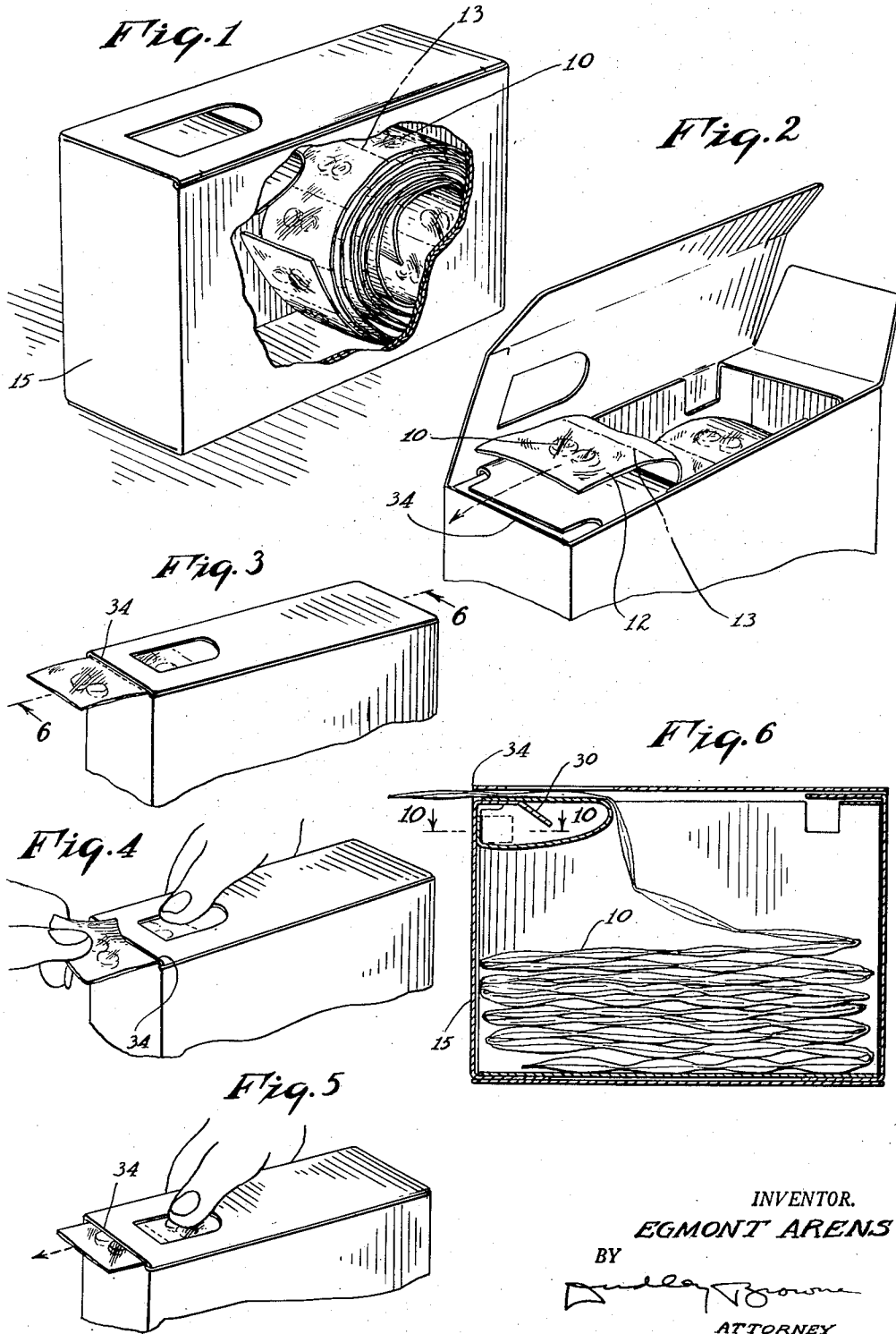
E. ARENS

2,758,710

STRIP DISPENSER

Filed April 2, 1953

2 Sheets-Sheet 1



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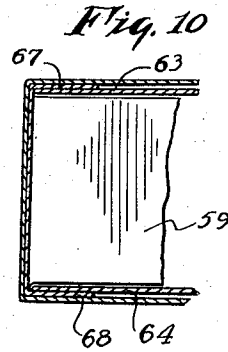
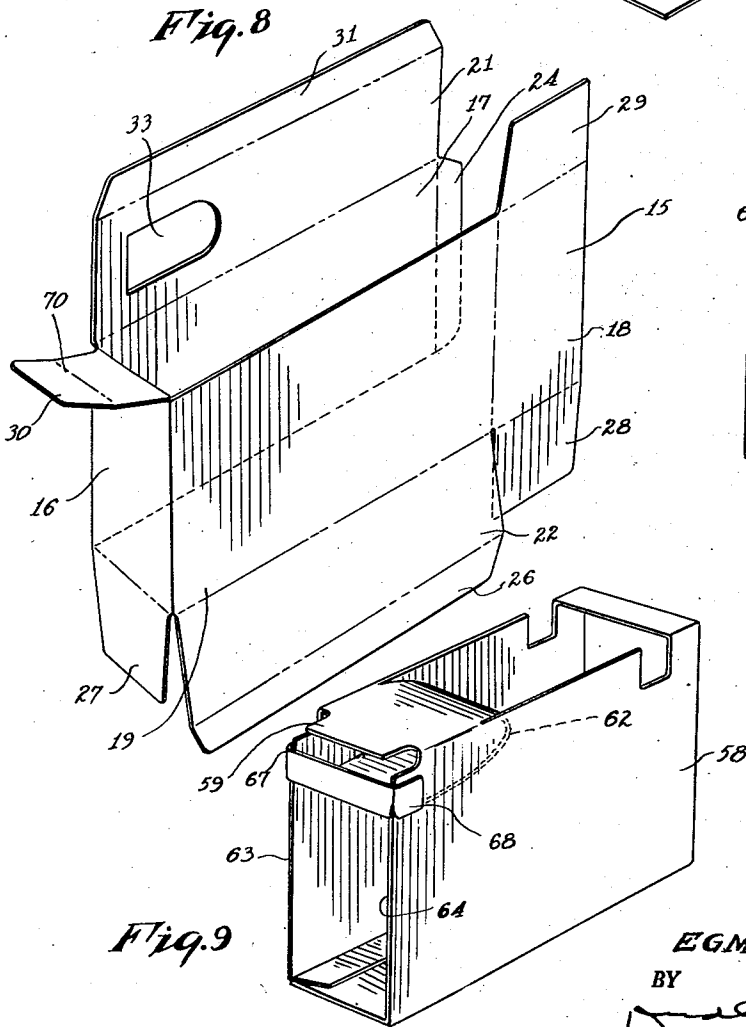
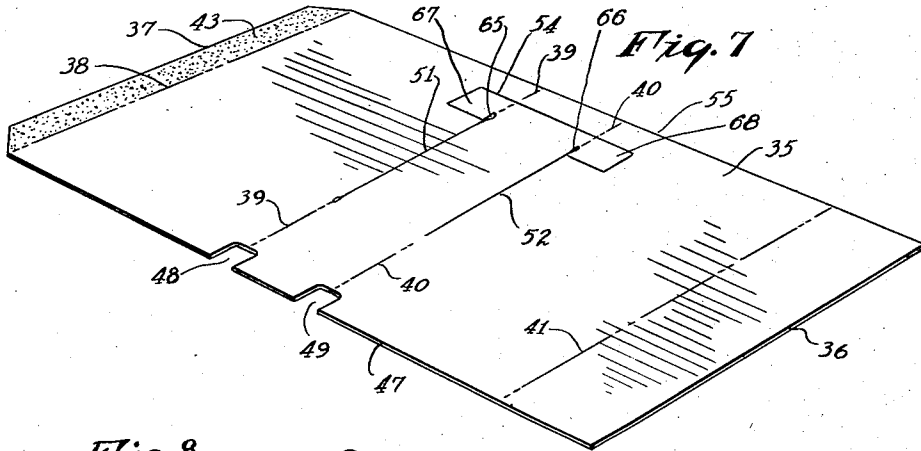


Fig. 9

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2,758,710

STRIP DISPENSER

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1 Claim. (Cl. 206—56)

This invention relates to a dispensing device for dispensing small individually-packaged articles which are adapted to be torn off and thus severed from a continuous strip or roll of such packages.

More particularly, it relates to a dispensing apparatus for dispensing individually-packaged tablets, capsules or pills which, for purposes of sanitation and preservation, are encased in a wrapping material which is formed in a long continuous strip, each such strip being provided with partially perforated or scored portions to assist in tearing off the individually-packaged tablets, capsules or pills.

My new and improved continuous strip dispenser may be constructed of cardboard or other light paper-like material, and it provides for the effective dispensing of such articles as analgesic tablets, medicinal capsules, or vitamin pills from the interior thereof, wherein the long continuous strip of individually-packaged tablets, capsules or pills is housed as a roll, or in the form of multiple folds.

In the dispensing of articles, such as analgesic tablets, capsules or pills, it is customary to wrap the tablets, pills or capsules in a continuous strip of pliable wrapping material, preferably in a transparent or translucent wrapping material such as cellophane. The material is sealed around the individual pills, tablets or capsules, thereby providing a plurality of small envelopes containing one, two, or more of the medicament units. The continuous strip or web of individually-packaged elements thus resulting is partially perforated or scored at fixed intervals, thereby permitting the severance of each individually-packaged medicament unit from the remainder of the web simply by tearing it off from the continuous strip.

In dispensing individually-packaged tablets, capsules or pills from such a continuous strip of wrapping material, scored or perforated to permit tearing off the individually-packaged units, it is usual to place the continuous strip in a dispensing container so that it is stored in a completely sanitary condition until it is desired to sever one of the packaged units. Previously these dispensing containers have been relatively heavy and expensive devices made out of metal. It is a primary object of my invention to provide a dispensing container which is formed of ordinary paperboard or cardboard, with all the advantages of such a light and inexpensive material as compared with more expensive and cumbersome containers. As is well known in the cardboard container industry, such dispensing containers may be shipped flat, and then assembled by folding into the proper shape at the point of use.

Dispensing devices of the type now available for dispensing individually-wrapped tablets, capsules or pills in the form of a continuous strip have sometimes included some resilient means for forcing the web of packaged elements against the top of the dispensing container in order to permit ready severance of each individually-packaged unit by tearing along a perforated or scored line. While a resilient means of this type is highly de-

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sirable, and permits the person tearing off the individually-packaged medicament unit to press the web thereagainst during the tearing-off operation, some of the dispensing devices which are now available have utilized for this purpose a separate metallic resilient element. While they are effective, such resilient elements made of metal are expensive, add unnecessary and undesirable weight to the dispenser, and introduce an additional complexity in what should be a relatively simple dispenser.

I have avoided the use of such separate metallic spring-like means as a part of the continuous strip dispensing device by providing a separate cardboard element which, when suitably folded, assembled, and placed within the cardboard container, provides an inexpensive and effective resilient means for holding the continuous strip of packaged medicament against the underside of the upper cover or flap of the container during the severing operation.

Accordingly, it is another object of my invention to provide a resilient dispensing lip element which is formed of cardboard or some other paper-like material, which dispensing lip element serves as a support for the web of packaged medicament as it emerges from the dispensing container, at the same time resiliently urging this web against the interior upper surface of the container to permit easy tearing off of each individual package of analgesic tablets, vitamin pills, capsules, or other medicament which is being dispensed.

Other objects and features of the invention will be apparent from the ensuing description of a preferred form of my improved continuous strip dispensing apparatus.

My invention may be best understood in connection with the annexed drawing, wherein:

Fig. 1 is a perspective view of the completely assembled dispenser, a portion of the side thereof being removed for clearness in illustration. This view shows the continuous strip of individually-wrapped tablets, pills, or capsules positioned within the dispenser in the form of a roll;

Fig. 2 shows the upper portion of the dispenser of Fig. 1, with the upper flaps folded back to show the U-shaped element whose terminal outer edge portion provides the resilient dispensing lip over which the continuous strip passes during the dispensing operation;

Fig. 3 is a partial view wherein one individually-wrapped package or envelope containing the medicament has emerged from the dispenser, preparatory to its being torn off from the rest of the continuous strip or web along the perforated or scored tear line;

Fig. 4 is a partial view similar to Fig. 3 showing the operation of tearing off one individually-packaged envelope of medicament from the rest of the continuous strip;

Fig. 5 is a partial view similar to Fig. 4, illustrating the operation of moving forward an additional individually-packaged dosage unit, which will subsequently be severed from the remainder of the continuous strip as shown in Fig. 4;

Fig. 6 is a cross-sectional view, certain elements being shown in elevation, taken along the line 6—6 of Fig. 3. In this view, however, the continuous strip of pills, tablets, or capsules wrapped in transparent wrapping material such as cellophane is shown positioned within the dispenser in the form of multiple folds;

Fig. 7 is a perspective view of the flat cardboard blank which is cut and folded to provide the inner container insert element which goes inside of the dispensing carton and provides the U-shaped element whose terminal outer edge portion provides the resilient dispensing lip;

Fig. 8 is a view illustrating the assembly of the card-

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board box which provides the container element of the dispensing unit shown in Figs. 1 and 2;

Fig. 9 is a view showing the completely folded and assembled cardboard blank of Fig. 7; folded to provide the inner container or insert element supplying the resilient dispensing lip, which element is adapted to be inserted within the dispensing carton of Fig. 8;

Fig. 10 is a partial cross-sectional view of the assembled dispenser, certain elements being shown in elevation, this view being taken along the line 10-10 of Fig. 6.

Referring more specifically to Figs. 1 and 2, the pills or capsules 10 are spaced between two layers of transparent material, which may be cellophane, waxed paper, or other similar cellulosic material; wherein they are sealed in small pockets, thereby providing the continuous strip 12 from which the tablets or pills are dispensed. As shown, a unit dose 10 of the medicament, such as two tablets of an analgesic, may be brought together and individually packaged, the partially perforated or scored tear lines 13 between the individual packages permitting the severing of each individually packaged dosage unit from the remainder of the continuous web.

The container of the dispensing carton from which the pills, tablets, or capsules are dispensed may be formed of a cardboard blank 15 of usual type, this cardboard blank including side panels 16, 17, 18 and 19; top panel 21; and bottom panel 22. The blank is readily assembled in carton or box-like form having elongated sides and narrow front and rear walls by means of the glued flap 24, and fold-over flaps 26, 27, 28, 29, 30 and 31. As shown in Fig. 4, for example, an opening 33 is provided in the top panel 21 adjacent the front wall of the container for a person's thumb, so that the continuous strip of packaged medicament may be pressed against the resilient dispensing lip 59 to permit tearing off an individually packaged dose, which operation is illustrated in Figs. 3 to 5.

As shown best in Figs. 1 and 6, the continuous strip or web 12 containing the tablets or pills 10 may either be loosely placed within the dispensing carton 15 with the end of the web projecting from one end thereof to permit for ready dispensing (the dispensing being shown schematically in Figs. 2 to 5 inclusive), or it may be folded back in accordion-like fashion to provide a plurality of flat folds which rest on the bottom of the dispensing carton, as shown in Fig. 6. Regardless of the particular scheme of housing the continuous strip which is selected, the dispensing carton serves to retain the continuous strip or web of individually packaged elements in a sanitary condition within the carton, and to permit easy dispensing thereof by tearing off each individually packaged unit against one edge of the carton, which thereby provides a dispensing or tearing edge 34, as shown in Figs. 3 to 5.

The blank 35 shown in Figs. 7 is generally rectangular in shape, and it is so arranged as to fit snugly within the dispensing carton 15 when folded and assembled to provide an inner container having open front and rear ends. The blank 35 is provided with the fold lines 38, 39, 40 and 41 running parallel to the transverse edges 36 and 37 of the blank, the fold line 38 providing, when folded over, a flap portion 43 containing glue or some other adhesive. The fold line 41 is so spaced with reference to transverse end 36 of the blank that it provides a width for the insert which just fits within the dispensing carton 15, this also being true of the positioning of fold lines 39 and 40 with reference to each other and to other portions of the cardboard blank 35.

Along the longitudinal edge 47 of the blank 35, equally positioned on either side of the fold lines 39 and 40, notches 48 and 49 are cut. These notches may be roughly square in shape. Along the fold lines 39 and 40, beginning at a point which is approximately one-third of the way up along these fold lines from the longitudinal edge 47 of the blank 35, the fold lines are slit to provide severed portions 51 and 52. As shown in Fig. 7, these

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severed portions terminate in a generally rectangular severed portion 54, which is positioned a short distance from the upper longitudinally extending edge 55 of the blank 35. The remainder of the way along each fold line, from the rectangular cut-out portion 54 to the edge 55 of the blank, the fold lines 39 and 40 continue unsevered. However, as shown, the severed portions 51 and 52 extend a short way into the rectangular severed portion 54, these extensions being numbered 65 and 66 respectively.

As shown in Fig. 9, the blank of Fig. 7 is adapted to be folded and assembled to provide the inner container 58, which fits within the dispensing carton 15; this insert providing the U-shaped or folded-over strip 62, one terminal edge portion of which provides the resilient dispensing lip 59 which is adjacent the dispensing end of the carton 15, and which lip serves to press the continuous strip or web of packages up against the upper flap 21 of the carton as the web passes over it; thereby permitting application of the thumb to the upper surface of the web through aperture 33 to permit easy tearing off of an individually packaged dosage unit against dispensing edge 34, as illustrated schematically in Figs. 3 to 5.

In folding over the blank 35 to provide the inner container 58, the blank is first folded along fold lines 38, 39, 40 and 41, and the flap 43 containing adhesive is joined to the rest of the blank along the transverse edge portion 36, as will be apparent from an inspection of the lower part of Fig. 9. The severed portions 51 and 52, along the edges of the top wall 62 of the inner container 58, together with the rectangular cut-out portion 54, are then pushed out and folded downwardly to provide a flap cut from an intermediate portion of the top wall, which flap extends downwardly and forwardly in a smooth curve which is generally U-shaped in outline, and is in spaced, substantially parallel relation to the front portion of the top wall of inner container 58. This brings the rectangular cut-out portion 54 over underneath the external portion of the dispensing lip 59; adjacent the longitudinal edge 47 of the blank 35, as folded to provide edges 63 and 64 of the finished inner container 58. This rectangular portion is then folded over against the edges 63 and 64; the severed portions 65 and 66 extending within the rectangle 54 permitting bending over of the laterally extending end flaps 67 and 68; whereby the resilient strip 62 providing the dispensing lip 59 is firmly held in place adjacent to the rest of the inner container 58. This inner container 58 is then positioned within the folded dispensing carton 15, as shown for example in Figs. 2, 6 and 10; and the continuous strip or web of packaged medicament is drawn out across the dispensing lip 59 before the flap 21 containing the aperture 33 is folded over to provide the top of the dispenser. As shown in Fig. 6, the end flap 30 of the dispensing carton 15 is preferably folded down beneath the upper portion of the looped U-shaped strip 62, being provided with an additional fold line 70 (Fig. 8) so that this may be readily accomplished.

When it is desired to dispense an individually packaged pill, capsule or tablet, or a group of pills, tablets or capsules, the web 12 is pulled out so that the fold line 13 is adjacent the dispensing edge 34 of the dispensing carton 15, as shown in Fig. 3. The person who desires to tear off the packaged unit then presses his thumb through the aperture 33, holding the continuous strip firmly against the resilient dispensing lip 59, thereby permitting him to tear off a single individually packaged unit against the dispensing edge 34 of the carton 15. He then pushes the continuous strip forward, as shown in Fig. 5, until the next individually packaged element has been moved to the position shown in Fig. 3, ready for subsequent tearing off and dispensing.

Since various changes and modifications may be made in my invention as disclosed herein, without departing from the scope thereof, it is my intention that such changes and modifications as may be within the scope of

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the appended claim will be regarded as part of my invention.

I claim:

A dispensing device adapted to hold and dispense a plurality of individually-wrapped elements which are carried by a continuous strip of pliable material, said dispensing device comprising, in combination: an open-top outer container having elongated sides and narrow front and rear walls adapted to hold said continuous strip of pliable material, said open-top outer container being provided with a closure flap adapted to close the upper end thereof, said closure flap being formed with an opening therein adjacent said front wall, the upper edge of said front wall constituting a dispensing edge for said strip; an inner open-ended container having side, and top and bottom panels snugly positioned within said outer container and adapted to retain therewithin the undispensed portion of said strip, said inner container being open at its front and rear ends, and being provided with a further opening extending the full width of the top panel through which said strip passes as it leaves said inner container, said latter opening being formed by a flap cut from an intermediate portion of the top wall and extending in a smooth curve downwardly and forwardly in spaced, sub-

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stantially parallel relation to the front portion of said top wall, the terminal end portion of said latter flap extending outwardly of said inner container and in face contact with said front wall, said terminal end portion having laterally-extending flaps folded back into frictional engagement between the side panels of said inner container and the sides of said outer container, said opening in said closure flap of said outer container overlying the front end portion of said top panel so as to permit the application of pressure to said strip when it is in contact with the front end portion of said top panel, thereby assisting in the dispensing of said strip and said elements carried thereby.

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