May 24, 1938. S. E. BUTLER 2,118,488

CARTON

Filed April 22, 1936 2 Sheets-Sheet 1

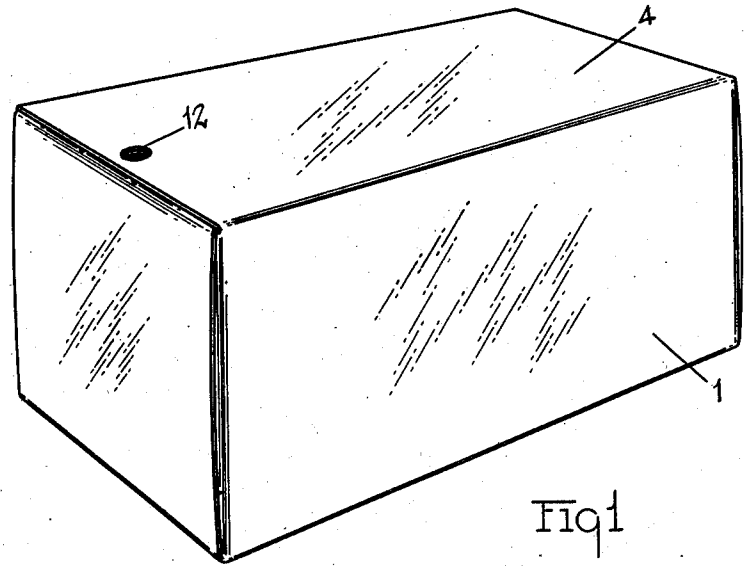


Fig1

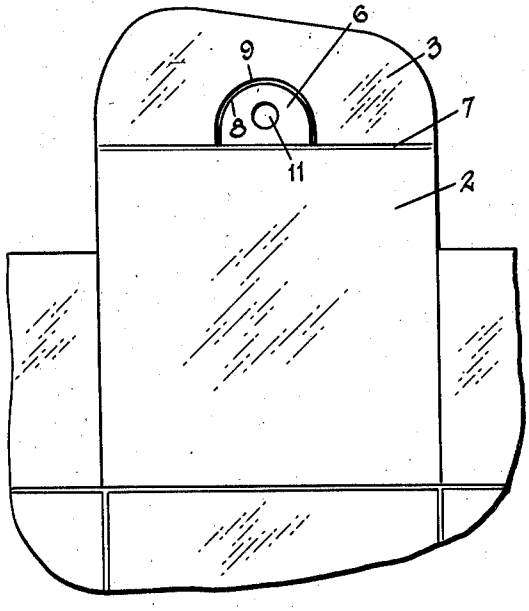


Fig2

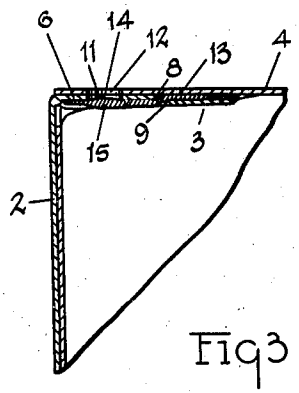


Fig3

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CARTON

Filed April 22, 1936 2 Sheets-Sheet 2

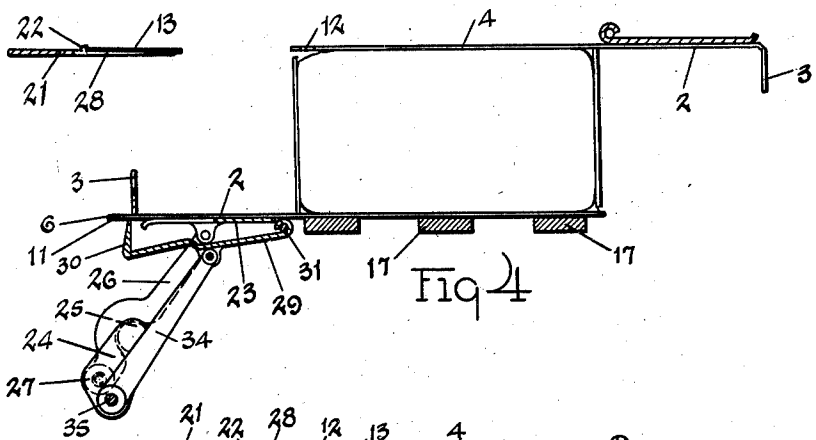


Fig 4

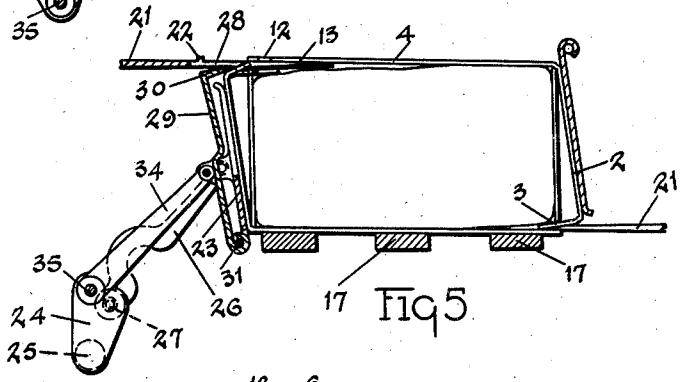


Fig 5

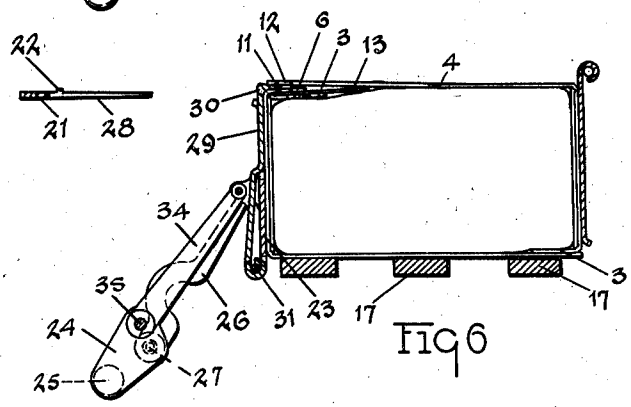


Fig 6

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Patented May 24, 1938

2,118,488

UNITED STATES PATENT OFFICE

2,118,488

CARTON

Silas E. Butler, Toledo, Ohio, assignor to Butler Paper Products Company, Toledo, Ohio, a corporation of Ohio

Application April 22, 1936, Serial No. 75,778

1 Claim. (Cl. 229—38)

My invention has for its object to provide a carton for containing material or articles, and which is so formed that packets or cards, or other articles or advertising material may be inserted and secured in position such that they may be viewed from the exterior of the package when the package is closed. The invention also provides a method for thus enclosing or enfolding the packet or article during the closure of the carton. The carton of my invention is particularly advantageous for containing oleomargarine, and wherein a packet containing coloring material for coloring the oleomargarine may be secured in position that it may be seen from the exterior of the carton when the carton is closed. Thus, the customer, when purchasing oleomargarine, may be assured that the coloring material is enclosed.

The invention may be contained in cartons and cardboard boxes of different forms and for containing material or articles of different kinds. To illustrate a practical application of the invention, I have selected a carton of the type commonly used for the commercial dispensation of butter and oleomargarine. The particular carton selected is shown in the accompanying drawings.

Fig. 1 illustrates a perspective view of the carton. Fig. 2 illustrates a part of the blank from which the carton shown in Fig. 1 is formed, and particularly illustrates the means for securing the auxiliary packet in the carton. Fig. 3 is a view of a section of the carton showing the packet or other article disposed in the position in which it is secured by the parts of the carton. Fig. 4 illustrates an arrangement of mechanical elements that may be used for mechanically enclosing and securing the packet in position, the elements being shown substantially at their initial positions in advance of insertion of the packet and the closing of the carton. Fig. 5 illustrates an intermediate step in the operation of the mechanical elements. Fig. 6 illustrates the position of the elements upon complete insertion of the packet and closure of the carton.

The particular container shown in the drawings is formed from a blank scored and cut to form side and end parts. Certain of the said side parts are provided with the usual tongues that may overlap and when erected to form the carton extend in a direction crosswise the ends of the carton. The end parts 2 are provided with flaps 3 that are insertable intermediate the edges of the tongues and one of the side parts located intermediate the side parts from which the tongues extend, in the manner well known in the art. The flaps 3 and the end parts 2 have substantially the same width and also the same width as the side part or top 4, so that the end parts are maintained in their closed positions by the relatively tight fitting of the edges of the flaps between the corners of the carton formed by the contiguous side parts.

A tongue 6 is cut preferably from a central part of one of the flaps 3. In the form of construction shown, the cut extends from the scored line 7 that divides the flap 3 and the end part 2, and thus the tongue 6 is foldable along the same score line along which the flap 3 is foldable. Preferably the tongue is formed by a double cut in the flap 3 to space the edge 8 of the tongue from the corresponding edge 9 of the flap to enable free movement of the flap and tongue relative to each other in the operation of securing the auxiliary packet during the closing of the end of the carton.

Preferably the tongue 6 is located intermediate the packet and the top and the tongue and the top may be provided with the openings 11 and 12. The openings are located in registration when the carton is closed, and thus the packet may be viewed through the openings 11 and 12.

If desired, the side part or top 4 of the carton may be provided with a notch, or recess in that portion of the top 4 contiguous to the location of the packet in order that the packet may be seen when the carton is closed. Thus, the packet may be located intermediate the flap and the tongue, the flap being located above the packet, and viewed through the notch or opening in the top of the carton and the space formed by the cut to produce the tongue, the recess or notch or opening in the top being located in registration with the tongue when the end part is closed. Also if desired, the packet may be of a color strikingly different from the color of the carton in order to render noticeable the presence or absence of the packet within the carton.

The material contained within the paper packet 13 is ordinarily a pulverulent material which renders the paper packet pliable. To insert the packet in the carton, the packet is layed upon the flap 3. The tongue 6 is then bent along the score line 7 until it engages the surface of the packet 13. Preferably the tongue 6 is pressed against the paper packet which depresses the packet into the opening in the flap 3 to produce the bulge 15, and also by the pressure of the tongue 6 on the top surface of the packet, the material within the packet ordinarily will raise the paper of the packet within the area of the

edge of the opening 11 to produce the bulge 14. The packet, together with the flap 3 and the tongue 6, is then inserted into the carton.

When the insertion has been made, the flaps and the tongue will maintain this relation of the packet with respect to the openings in the flap and the carton. Also, placing one or more cartons on top of each other will by the pressure increase the bulging of the portions of the packet into the openings and consequently in the handling of the carton containing the oleomargarine and the packet, the packet will not readily slip from its position with respect to the openings and will ordinarily be maintained in its position where it may be viewed through the openings 11 and 12 and thus insure delivery of the coloring material with the oleomargarine to the customer.

The enfolding of the packet by the flap and the tongue and the closure of the carton may be performed manually or by a machine having mechanical elements suitable for manipulating the packet, the flap, the tongue, and the end part to produce the proper location of the packet and the closure of the member. In Figs. 4, 5, and 6 is shown conventionally a machine for manipulating the packet and the parts of the carton.

When the machine illustrated in the drawings is used for closing cartons containing oleomargarine, the flaps 3 of the carton ordinarily folded to positions to locate them substantially at right angles to the end part 2 as they are moved along a guideway 17. When they reach the point of closure, the end parts 2 are folded toward their closed positions and the flaps are directed intermediate the top and bottom parts of the carton and the surfaces of the oleomargarine. Ordinarily the central part of one end of each of the top and bottom parts of the carton is bowed outward by mechanically operated blades, such as the blades 21, to enable free movement of the flaps 3 into the carton. Where the packet material is to be inserted in the carton, it may be located on the top of one of the blades 21, the blade 21 being provided with a suitable stop or stops 22. When, therefore, the blade 21 is inserted intermediate the top and the block of oleomargarine, the packet 13 is inserted in the container, and the end part 2 is closed by means of the finger 23 which raises the flap 3 beneath the blade that directs it beneath the top 4 of the container. The finger 23 may be operated by an oscillatable member 24 supported on a suitable shaft 25. The finger 23 is connected to the member 24 by means of a link 26 at the point 27. The blade 21 may be provided with a suitable slot 28 through which the tongue 6 may be passed as the flap 3 moves under the blade 21. The tongue 6 will engage the outer edge of the packet 13 in the vicinity of the stop or stops 22 and thus move the packet along the top of the blade 21 as the flap 3 is moved along the under surface of the blade. In advance of the completion of the insertion of the packet, the tongue 6 is bent to engage the top surface of the packet 13 by the bent finger 29. The finger 29 is connected to the oscillatable member 24 by means of the link 34 which is in turn pivotally connected to the oscillatable member by the pin 35 so as to produce substantially simultaneous raised movements of the fingers 23 and 29 until near the completion of the oscillatory movement of the member 24, whereupon the finger 29 presses against the tongue 6 to fold it on the score line 7 to a point extending at right angles to the end part 2 and over the packet 13 as illustrated in Fig. 5. Upon continuing movement of the oscillatable member 24, the fingers 29 and 30 move together to completely close the carton by closing the end part 2. Thus, by reason of the position of the end portion 30 of the finger 29 relative to the center 31 of its oscillation, the tongue 6 will be pressed against the packet, and the packet against the blade, and as the blade is withdrawn, the packet will be pressed against the flap 3, the flap 3 being pressed against the top of the brick of oleomargarine which forces the material and the enclosing paper of the packet into the spaces of the openings of the tongue and the flap. The return oscillatory movement of the member 24 removes the fingers from the carton. The carton is then moved along the guideway by any suitable mechanism in the manner well known in the art.

I claim:

A carton formed of a scored blank and having end and side parts, a flap connected to one end of an end part and removably insertable in the carton, a tongue formed from within the area of the flap and located contiguous to one of the side parts and within the carton upon closing the end part of the carton with which the tongue is associated for securing an article intermediate the flap and the tongue and within the carton, the said side part and the said tongue having registering openings for viewing the article secured by the flap and the tongue when inserted in the carton.

SILAS E. BUTLER.