Sept. 16, 1930. A. W. MINER 1,775,863

CARTON

Filed Nov. 19, 1928

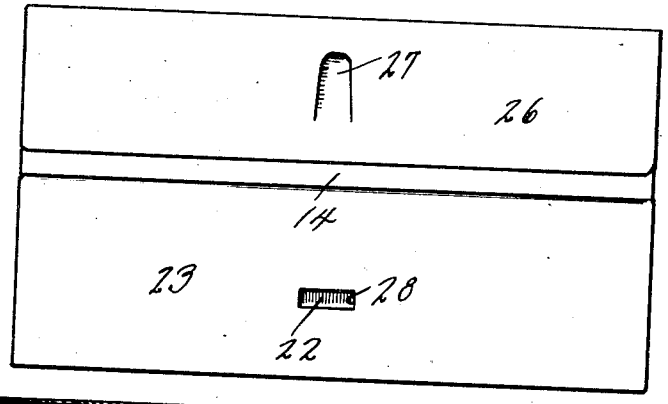


Fig. 5

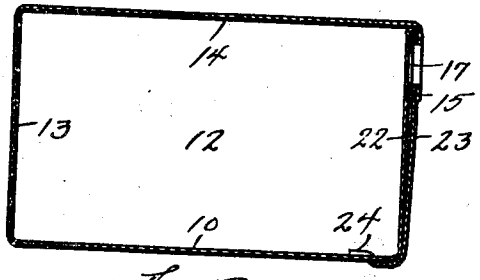


Fig. 3

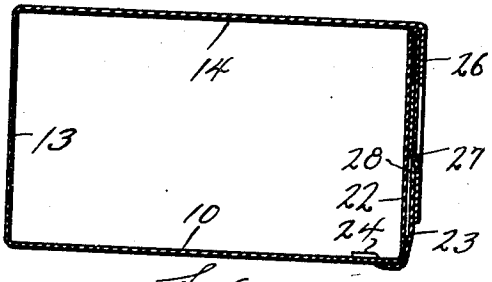


Fig. 6

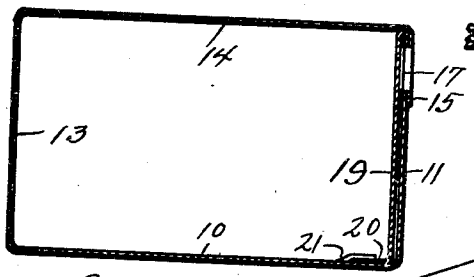


Fig. 2

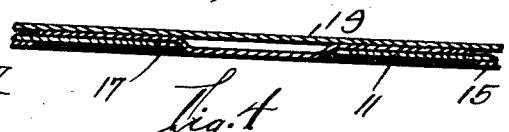


Fig. 4

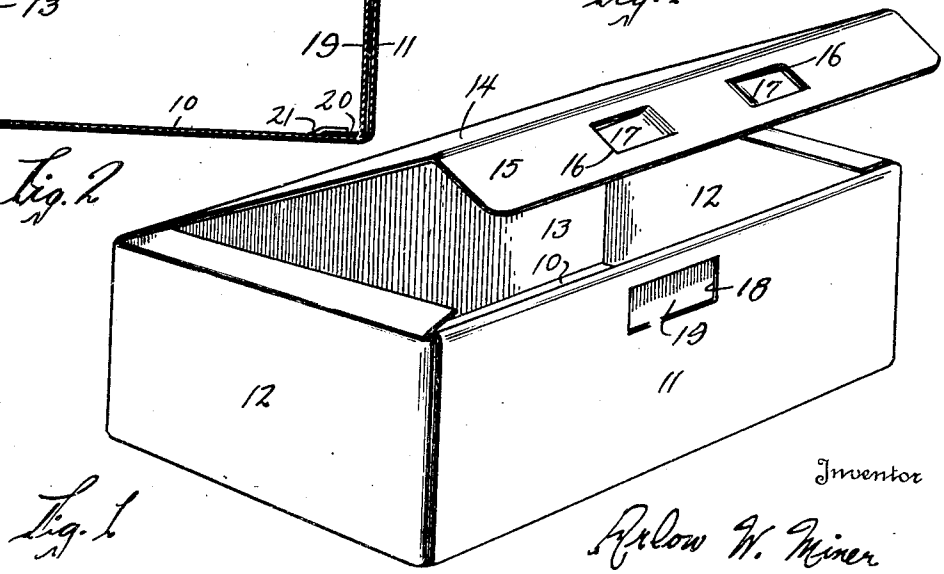


Fig. 1

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Patented Sept. 16, 1930 1,775,863

UNITED STATES PATENT OFFICE

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CARTON

Application filed November 19, 1928. Serial No. 320,329.

My invention relates to cartons such as, for instance, those used as containers for foods for candies, bakery goods, suit boxes, laundry boxes, etc., and has for its general object to provide a carton having a novel means for securing the lid to the body of the carton.

More specifically, my invention provides a carton having a lid and a flap at the free end of the lid, the flap being adapted to overlap the front wall of the carton and the securing means being formed as part of the flap. In order to obtain cheapness and simplicity of construction, which is also an object of my invention, a securing means is formed as a tongue struck out of the flap just mentioned and adapted to enter an opening or slot in the front wall of the carton.

My invention further contemplates providing means for guiding the tongue into the slot which receives it and for engaging and holding the tongue in the slot so as to securely lock the lid of the carton against accidental displacement.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims, and illustrated in the accompanying drawings, in which:

Fig. 1 is a perspective view of one form of my invention.

Fig. 2 is a transverse, sectional view of the same.

Fig. 3 is a transverse, sectional view of a slightly modified form of the invention.

Fig. 4 is a longitudinal, sectional view through the securing device and adjacent portions of the carton.

Fig. 5 is a front elevation of a modified form of the invention.

Fig. 6 is a transverse, sectional view of the same.

In the accompanying drawings, I have used the reference character 10 to indicate the bottom of a carton of common construction, the front wall 11 and walls 12, rear wall 13 and hinge lid 14 being all formed integrally of the same blank of material, cut to the proper shape and fitted together to form the complete carton illustrated.

Inasmuch as my invention does not reside in the construction of the carton proper, with the exception of the front wall, which will later be more specifically referred to, the details of construction of the carton are not disclosed.

The carton shown is an ordinary paper carton, constructed of rather heavy stiff paper but might be made of any material having the necessary qualifications of stiffness, strength and foldability.

The flap 15, which is bent downwardly from the lid 14, is a feature common to many old types of cartons but in my invention the flap furnishes a means from which the securing device or devices are formed.

These securing devices in the preferred form of my invention shown in Fig. 1 are formed by cutting U shaped slots 16 in the flap 15, thereby striking out the tongues 17.

The tongues 17 are designed to pass through an opening 18 in the front wall 11 of the box, which opening is of sufficient depth to receive the tongues and somewhat wider than the solid section of flap 15, which separates the tongues 17. It may be understood in this connection that although a single opening 18 is shown extending the full width of the distance between the flaps 17, a pair of vertical slits or narrow openings might be employed, positioned approximately the same distance apart as the extremities of the opening 18 and separated by a solid web of material.

The tongues 17 extend away from each other so that when inserted in the opening 18, they will be received behind the portions of the wall 11 bordering the sides of the opening 18.

In order to retain the tongues 17 so that some force will be necessary to remove them, I provide a secondary wall construction, lying immediately behind the wall 11 and completely covering the opening 18. This wall in the form of my invention shown in Figs. 1 and 2 is formed by bending the wall 11 inwardly and folding it downwardly against the wall 11 to form the inner wall

19 which may be secured at its lower edge by means of a flange 20, secured under fingers 21, struck up from the bottom 10. The inner wall 19 lies substantially in contact with the wall 11 but not connected therewith, thereby leaving a space to receive the tongues 17 between two walls.

The frictional engagement of the tongues 17 between the wall 19 and the wall 11 will securely hold the tongues against accidental removal.

The wall 19 further serves to guide the tongues 17 into place during insertion of the tongues through the opening 18. This is a very important feature of my invention for the reason that the time necessary for securing the lid to the body of the carton is materially reduced with the aid of the wall 19. It is only necessary to bend the tips of the tongues 17 toward each other until they will enter the opening 18, to then allow them to spring apart, engaging the side extremities of the opening and the wall 19 and then to press inwardly against the web of material separating the tongues, which latter action will force the tongues apart into the space between the walls 19 and 11. This action may be accomplished very rapidly and as quickly as the web of material between the tongues has been forced flat against the wall 11, the carton will be properly closed and locked.

It will be readily seen that it is not essential that the opening 18 be placed in the wall of the carton if the portion which is continued upwardly from the bottom 10 is considered as the wall proper of the carton. The opening might be formed in a flap bent outwardly from the front wall of the carton and downwardly against the front wall. Such a construction is shown in Fig. 3, in which the front wall of the carton is referred to by the reference character 22 and the outwardly bent flap by the reference character 23. This flap may or may not be secured to the carton at its extremity but is shown in the drawings as being provided with tongues 24, extended through suitable slots in the bottom or some wall of the carton, whereby the flap 23 may be secured against the front wall 22.

The flaps 23 and 19 may or may not extend entirely to the bottom of the box 10. The chief requirement for these flaps is that they be folded over and retained in closely spaced relation to the front wall of the carton. This may be attained either by use of the tongues 21 or 24 by gluing or pasting, by the engagement of other parts of the carton or, in some instances, merely by folding.

For the purpose of describing this construction in my claims, the front wall and the adjacent flap may be considered as a double wall construction comprising two walls lying closely adjacent each other. The preferable method of forming this double wall construction is by bending one of the walls back upon itself to form the second wall.

Instead of arranging the tongues 17 horizontally, a single tongue may be employed as shown in Figs. 5 and 6, arranged in a perpendicular position. In these figures, the same reference characters have been used to designate the walls of the carton, the double wall construction and the lid, as in Fig. 3. The flap which is formed at the extremity of the lid is indicated by the reference character 26, being substantially wider than the flap employed in Figs. 1–4 inclusive and the tongue is referred to by the reference character 27.

The tongue 27 is struck from the flap 26 in the same manner as the tongues 17 and is united with the flap at its lower extremity.

The tongue 27 is adapted to enter a slot 28 in the wall 23 and is guided into place by the inner wall 22 in the same manner as in the form of the invention shown in Fig. 3. It may be noted that after the tongue 27 is in place any upward pulling against the flap 26 will tend to hook the tongue tighter into the opening 28. As in the preceding forms of the invention, the frictional engagement of the tongue between the walls 22 and 23 will also aid in tightly securing it in locking engagement with the carton. It may also be noted that the double wall construction in this form of the invention is formed by bending over a flap from the front wall.

Although a carton with a hinged lid has been shown and described, it will be understood that my invention may be equally adaptable to a carton having a removable lid. In such a case, the securing devices will be arranged either in a pair of opposed devices, or in two pairs, one device for each side of the carton.

Some changes may be made in the construction and arrangement of the parts of my invention without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

1. In a carton, a carton proper, having at one side a double wall, a lid having a flap to overlap said double wall, and a tongue formed on the flap disposed in a position diverging at a substantial angle from the direction of closing of said flap, an opening being provided in the outer wall of the double wall to receive the tongue, the tongue being received between the two walls of the double wall after insertion through the opening the inner wall adjacent said opening providing a continuous, smooth, flat surface positioned

closely adjacent the outer wall and resiliently urged toward said outer wall, whereby said inner wall serves to guide the tongue to operative position and to frictionally engage said tongue to resist removal thereof.

2. In a carton, a carton proper, having at one side a double wall, formed by doubling back upon itself one of the walls, a lid having a flap to overlap said double wall, and a tongue formed on the flap disposed in a position diverging at a substantial angle from the direction of closing of said flap, an opening being provided in the outer wall of the double wall to receive the tongue, the tongue being received between the two walls of the double wall after insertion through the opening the inner wall adjacent said opening providing a continuous, smooth, flat surface positioned closely adjacent the outer wall and resiliently urged toward said outer wall, whereby said inner wall serves to guide the tongue to operative position and to frictionally engage said tongue to resist removal thereof.

3. In a carton, a carton proper, having at one side a double wall, a lid having a flap to overlap said double wall, and a pair of oppositely extending tongues, formed on the flap, adapted to be extended through the opening and thence to be received between the two walls of the double wall beyond the opening on either side thereof the inner wall adjacent said opening providing a continuous, smooth, flat surface positioned closely adjacent the outer wall and resiliently urged toward said outer wall, whereby said inner wall serves to guide the tongues to operative position and to frictionally engage said tongues to resist removal thereof.

4. In a carton, a carton proper, having at one side a double wall, a lid having a flap to overlap said double wall, and a pair of oppositely extending tongues, struck from the material of the flap, adapted to be extended through the opening and thence to be received between the two walls of the double wall beyond the opening on either side thereof the inner wall adjacent said opening providing a continuous, smooth, flat surface positioned closely adjacent the outer wall and resiliently urged toward said outer wall, whereby said inner wall serves to guide the tongues to operative position and to frictionally engage said tongues to resist removal thereof.

Signed this 17 day of November, 1928, in the county of Woodbury and State of Iowa.

ARLOW W. MINER.