Jan. 22, 1957 O. U. B. J. BRUNAA 2,778,561

MAILING BOXES

Filed Dec. 21, 1953 2 Sheets-Sheet 1

Fig. 1

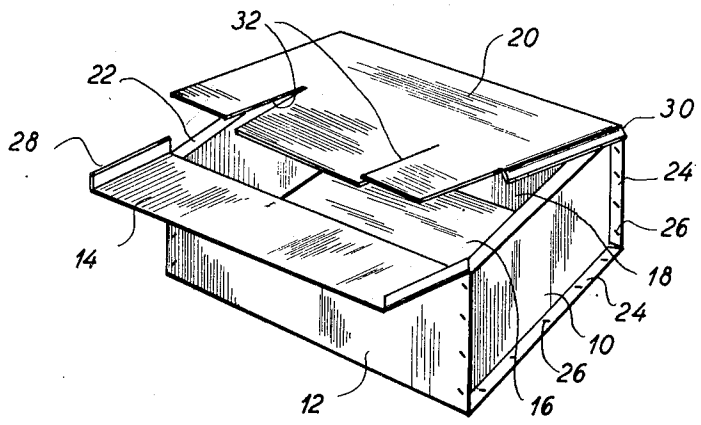
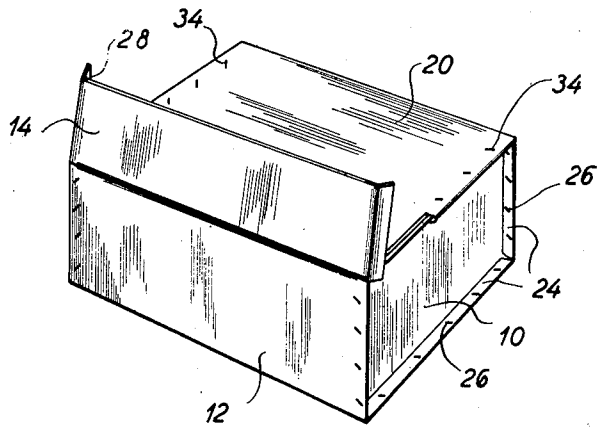


Fig. 2



INVENTOR.
Ole Ulrich Bruno Jensen Brunaa

BY
Peter G. Bourg
Atty.

Jan. 22, 1957 O. U. B. J. BRUNAA 2,778,561

MAILING BOXES

Filed Dec. 21, 1953 2 Sheets-Sheet 2

Fig. 3

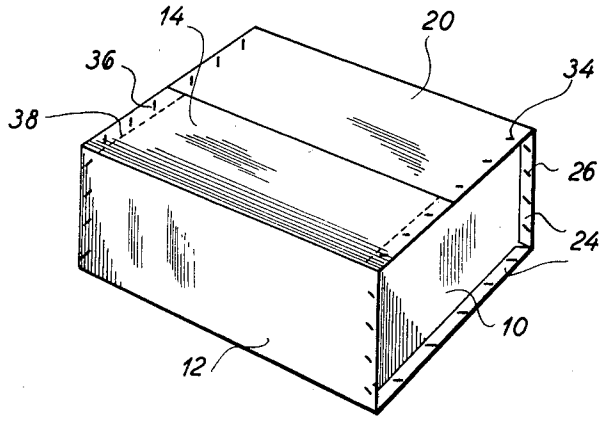
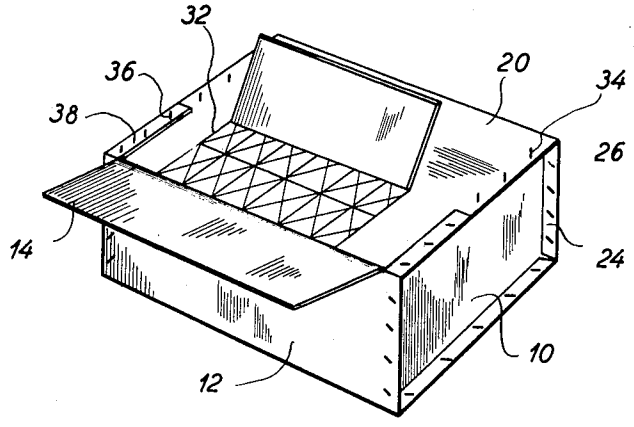


Fig. 4



INVENTOR.
Oluf Ulrich Bruno Jensen Brunaa
BY
Peter G. Borsig
Atty.

United States Patent Office 2,778,561 Patented Jan. 22, 1957

2,778,561

MAILING BOXES

Oluf Ulrich Bruno Jensen Brunaa, Jyderup, Denmark

Application December 21, 1953, Serial No. 399,326

1 Claim. (Cl. 229—51)

One of the objects of the invention is to provide a mailing box or carton which is simple in design, cheap in manufacture and presents a smooth surface so as to facilitate stacking of the boxes for mailing purpose. Another object of the invention is to provide for a pleasing appearance of the contents of the mailing box by designing the box so as to avoid damage of the contents thereof.

Still another object of the invention is to procure a mailing box or carton which is able to resist rough handling and to obtain this by designing and assembling the box as will appear from the following specification. In addition, the invention has for a further object to provide for a mailing box which may be readily opened at the destination without distorting the contents of the box.

The features of this invention which are believed to be novel, are set forth with particularity in the appended claim. The invention itself, however, may be best understood by reference to the following detailed specification and the accompanying drawing in which:

Figure 1 is a perspective view of a mailing box or carton according to the invention, ready to receive the contents to be mailed;

Figure 2 is a similar view of the box when being closed;

Figure 3 shows the box ready to be mailed; and

Figure 4 shows the box when opened at the destination place.

The mailing box or carton according to the invention, is made of cardboard or like fibrous material and consists mainly of inset end walls provided with outwardly protruding flanges, and edge flaps on the bottom, front wall, rear wall and a lid connected to the rear wall of the box, said flaps extending along the edges adjacent to the end walls and lying against the inner surface of the end wall flanges and being secured to the latter when the box is closed, and a closing flap being connected to the upper edge of the front wall of the box or carton.

Such boxes or cartons are for example used for shipping butter and when stacked in a plurality of layers in the bulk, the lower boxes are exposed to a considerable load. Moreover, when the stacks have grown to the height of a man, workpeople are inclined to walk without any care on boxes or cartons previously stacked and such boxes will thus be subjected to serious local stresses. For this reason the connection between the different parts of such boxes has to be made as strong as possible.

In addition to the need for strength in mailing boxes of the kind referred to, it is necessary that upon arriving at their destination the boxes should be capable of being opened without damaging or disordering the contents thereof, since the boxes may be used for exhibition of the contents without their being unpacked. Whether the contents are a material in the form of paste such as butter, or a plurality of smaller packages it is necessary in order to obtain a pleasing appearance of the contents, that the surface of the latter be smooth and undamaged.

In order to be capable of fulfilling the above requirements, the mailing box according to the invention is formed so that the closing flap extends over the foremost part of the lid, the free front edge of which lies close to the upper edge of the front wall, and the edge flaps of the lid are omitted on said foremost part, said edge flaps along the end edges of the closing flap being adapted to be bent around and secured to the flanges of the end walls while the foremost part of the lid is slit normal to the plane of the front wall at two spaced points the distance between which is smaller than the distance between the end walls of the box.

Thus, the flat inner surface of the lid covers the entire surface of the contents during transportation so that impressions thereon by the edge of the closing flap are avoided, whereas in known boxes of the kind in question the closing flap is located beneath the foremost part of the lid to support the same. If the edge of the closing flap is glued to the upper side of the lid by means of a sealing tape as generally used, said tape can be readily cut with a knife or other suitable tool without the tool engaging the contents of the box but merely engaging the outer surface of the lid and the inner surface of the closing flap. The edge flaps of the closing flap may then be cut in a similar way and, upon opening of the closing flap, the foremost part of the lid between the two spaced points can then be swung open to expose to view the contents of the carton.

The closing flap may be provided with indications or weakening lines normal to the free edge thereof and spaced a distance which is smaller than or equal to the distance between the end walls of the box but greater than the distance between the pre-cut points of the lid. Whether the cutting tool is held parallel to the upper surface of the box or normal thereto, the penetration of the tool will be limited by those portions of the foremost part of the lid which are lying between the slit portions of the lid and the end walls of the box. Said portions are rigidly connected to the flanges at the upper edges of the end walls and are thus able to resist the pressure of the tool whereby the contents of the box is not affected.

In the embodiment shown in the drawings, the mailing box comprises two end walls **10**, a front wall **12** having a closing flap **14** along its upper edge, a bottom **16**, a rear wall **18** and a lid **20**. The end walls **10** are provided with outwardly bent flanges **22** which are enclosed by edge flaps **24** integral with those edges of the bottom, front and rear wall of the box which are adjacent to the end walls **10**. The edge flaps **24**, the flanges **22** and those parts of the bottom **16**, the front wall **12** and rear wall **18** which are adjacent to the end walls, are secured to one another by a suitable number of staples **26**. The mentioned parts may be secured by other means but the use of staples is preferred as an adhesive for example, requires some time to set.

Along the end edges of the closing flap **14** edge flaps **28** are provided, and along the end edges of the lid **20** edge flaps **30** are provided only at the end edges of the lid adjacent to the rear wall **18**, whereby a part without edge flaps is left the length of which is approximately equal to that of the edge flaps **28** of the closing flap.

Extending normal to the free front edge of the lid two slits **32** are provided in the lid, said slits thus extending parallel to the side edges of the lid. Preferably, the slits extend in the lid for a distance corresponding to the length of the portions of the side edges of the lid on which no edge flaps **28** are present but if desired, the length of the slits may be shorter to ensure that the slits are entirely covered by the closing flap **14** in the closed condition of the box.

To make use of the box, the lid **20** is folded fully back from the position shown in Figure 1 so that the goods can be placed within the interior of the box. The lid is then folded down until the front edge thereof is close to the upper edge of the front wall **12**. The edge flaps **30** of the

lid are bent around the flanges **22** of the end walls and are secured by means of staples **34**, see Figure 2. Then the closing flap **14** is folded down upon the foremost part of the lid to cover the slits **32**, and the edge flaps **28** of the closing flap are bent around the flanges **22** of the end walls and secured by means of staples **36**, so that the box has now arrived at the condition shown in Figure 3 in which it is ready to be mailed, if desired upon gluing a sealing tape over the joint between the lid and the free edge of the closing flap.

When the box has to be opened at its destination, either to be emptied at once or to be utilised for exhibition purposes, the sealing tape, if any and the closing flap are cut. To facilitate the cutting operation the closing flap **14** may be provided with indicating or weakening lines **38** extending parallel to and adjacent to its end edges and the edge flaps **28**. Said lines also assist in obtaining a clean cut so that the closing flap when in open condition, as shown in Figure 4, shows straight and neat edges. Upon opening of the portion of the lid between the slits **32** the contents of the box are accessible.

The inner surface of the portion of the lid to be swung back, may be utilised for advertising, information about quality or other purpose, and, to make the box more characteristic or conspicuous, curved lines may be used for the slits **32** or the weakening lines **38** or both.

As will be seen from Figure 4, the weakening lines **38** are placed closer to the end walls than are the slits **32** in the embodiment of the mailing box shown. Thus, the die or tool being used for cutting the lines **38**, will engage the portions of the lid which are adjacent to the end walls, and as such portions are secured by means of the staples **36** to the flanges of the end walls during and upon the cutting operation the contents of the box will not be subjected to any pressure, or any substantial pressure, from the tool.

What I claim is:

A mailing box of cardboard, or fibrous material, comprising two inset end walls, integral flanges along the edges of said end walls and protruding outwardly from the box, a bottom wall, a front wall, and a rear wall, edge flaps being connected to said bottom wall, front wall and rear wall along the edges thereof adjacent the flanges of said end wall, said edge flaps being bent around said end wall flanges in engagement with the inner surfaces of said flanges, and fastening means securing said edge flaps to said end wall flanges, a lid, the rear edge of the latter being hingedly connected to the upper edge of said rear wall, the front edge of said lid being adapted to extend adjacent the upper edge of said front wall upon closing said lid, side edge flaps being provided along the rearmost portions of the side edges of said lid and being foldable around the upper flanges of the inset end walls, whereby to engage the inner surface thereof for stabilization, a closing flap hingedly connected at one end of said walls to the upper edge of said front wall of the box, edge flaps provided along the full extent of the side edges of said closing flap, the edge flaps on the closing flap being foldable around the foremost portion of the upper flanges of said inset end walls, the rearmost portions of the side edges of the lid extending from the rear wall of the box and forwardly, substantially terminating at the rear ends of the side flaps of the closing flap, when said box is in a closed position.

References Cited in the file of this patent

UNITED STATES PATENTS

1,621,225	Walter	Mar. 15, 1927
1,712,249	Byrne	May 7, 1929
2,007,520	Daller	July 9, 1935
2,056,032	Berman	Sept. 29, 1936
2,148,480	Larsh	Feb. 28, 1939
2,552,340	Moore	May 8, 1951
2,690,288	Allen et al.	Sept. 28, 1954

FOREIGN PATENTS

25,377	Australia	Nov. 22, 1935