Jan. 5, 1943. R. GUYER ET AL 2,307,124

METHOD OF PACKAGING AND DISPENSING FLUID SUBSTANCES

Original Filed Nov. 12, 1938 3 Sheets-Sheet 1

Fig. 1

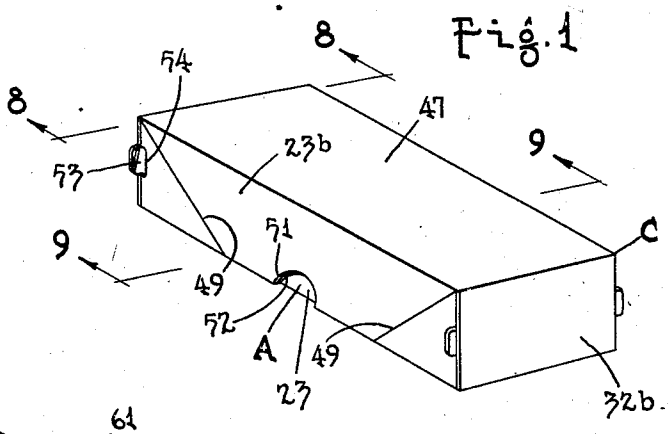


Fig. 10

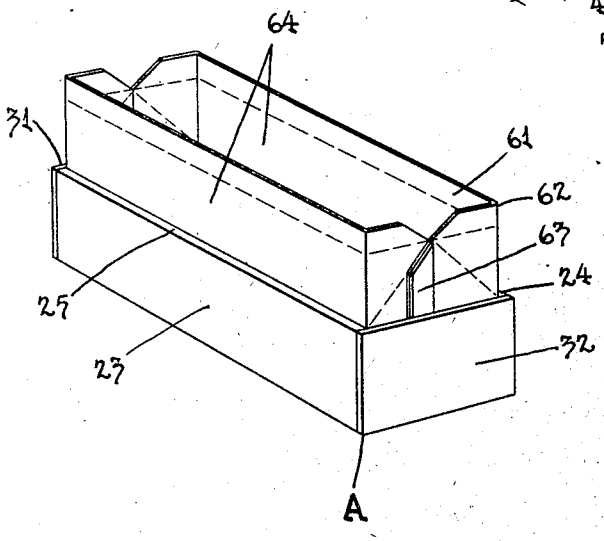


Fig. 11

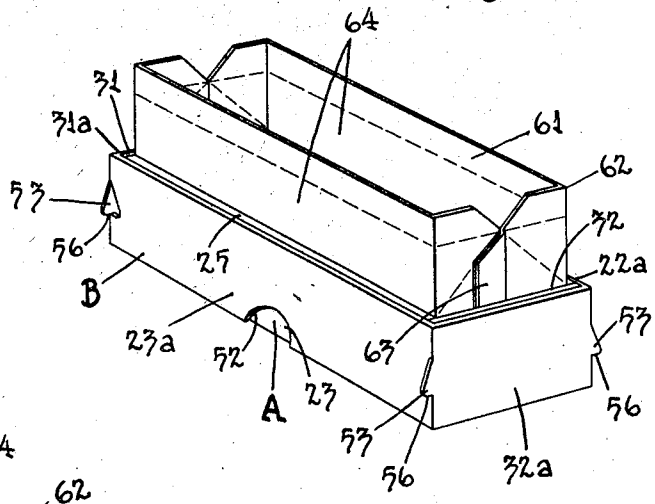
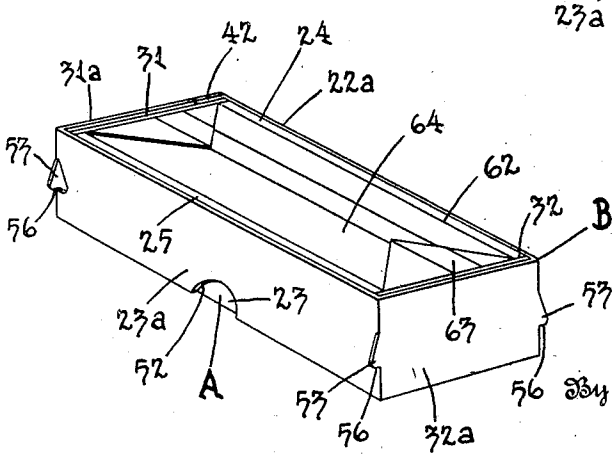


Fig. 12



Inventors
Reynolds Guyer and
Russell J. Hennessey
By Carwell & Lagaard
Attorneys

Jan. 5, 1943. R. GUYER ET AL 2,307,124

METHOD OF PACKAGING AND DISPENSING FLUID SUBSTANCES

Original Filed Nov. 12, 1938 3 Sheets-Sheet 2

Fig. 2

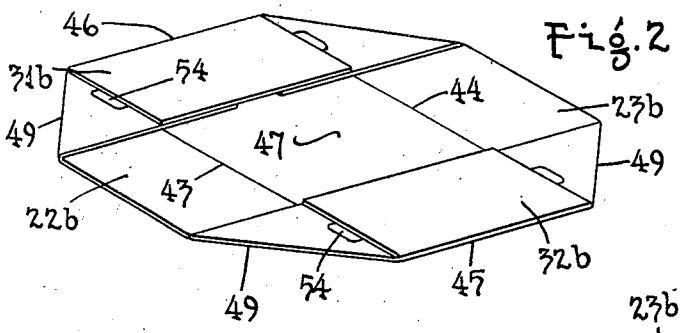


Fig. 3

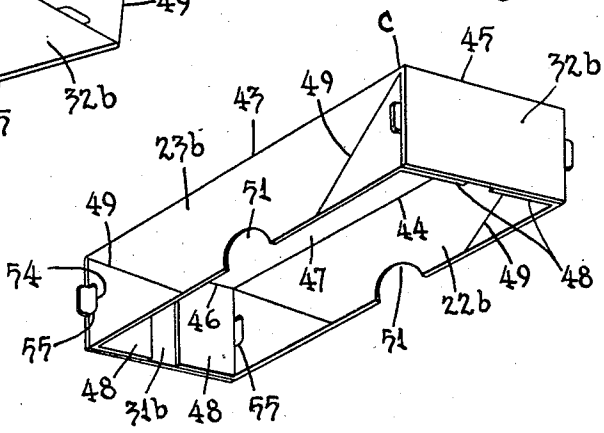


Fig. 4

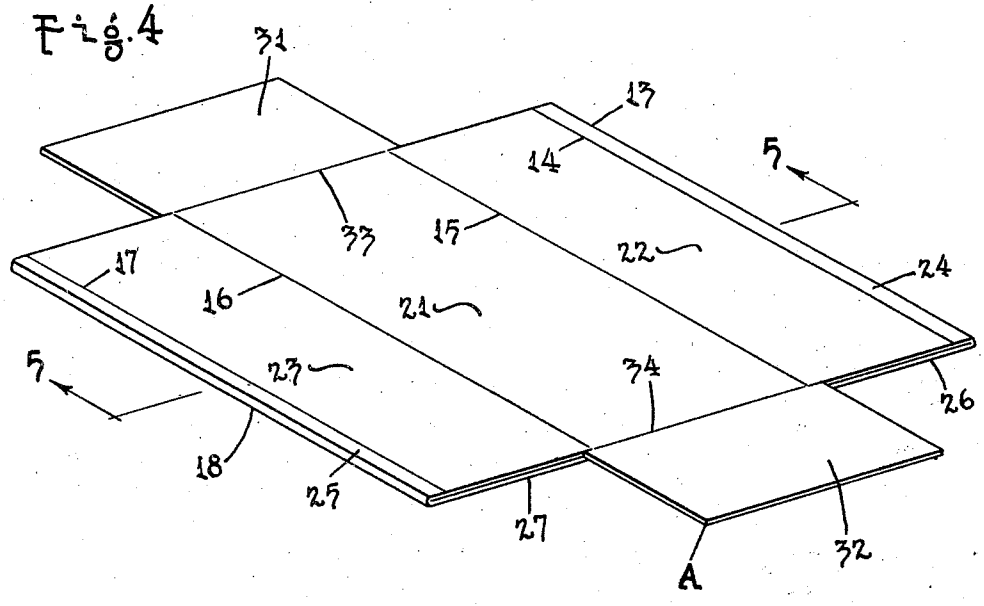
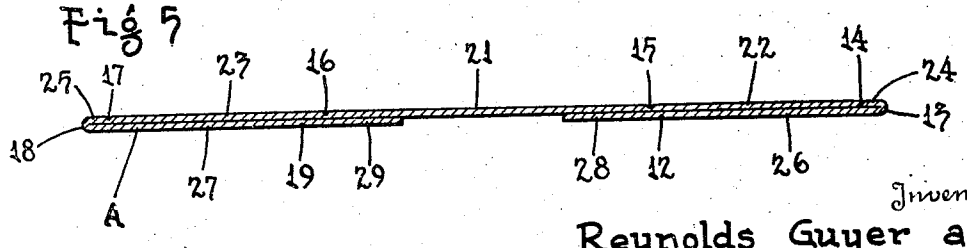


Fig. 5



Inventors
Reynolds Guyer and
Russell J. Hennessey
By Caswell & Lagaard
Attorneys

Jan. 5, 1943. R. GUYER ET AL 2,307,124

METHOD OF PACKAGING AND DISPENSING FLUID SUBSTANCES

Original Filed Nov. 12, 1938 3 Sheets-Sheet 3

Fig. 6

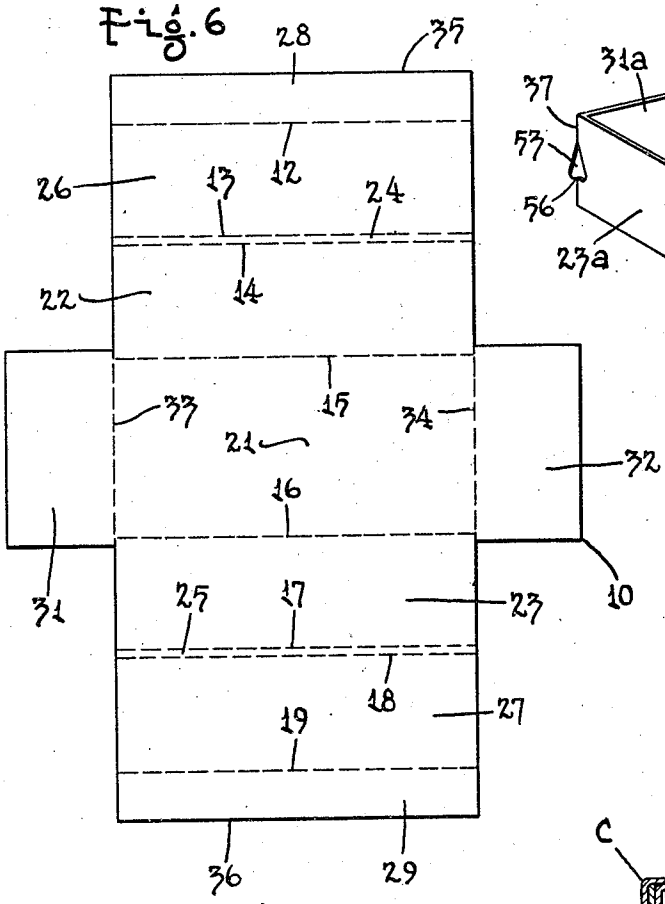


Fig. 7

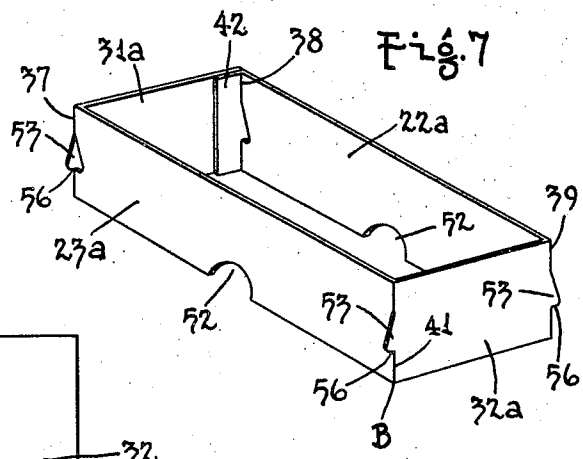


Fig. 9

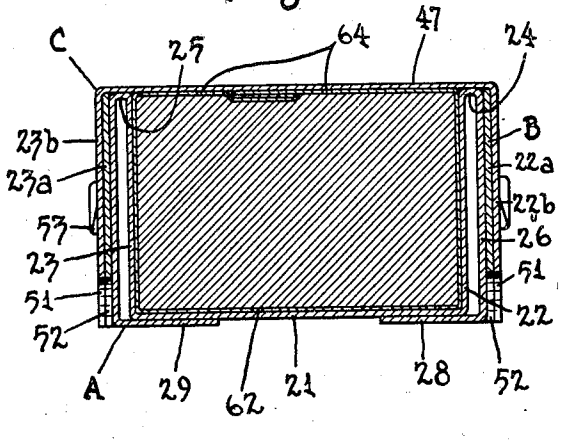
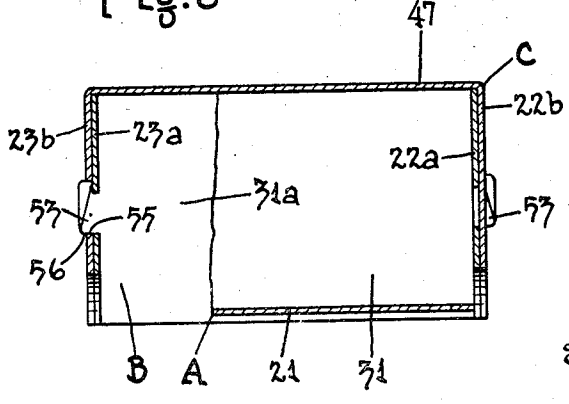


Fig. 8



Inventors
Reynolds Guyer and
Russell J. Hennessey

By Caswell & Lagaard
Attorneys

Patented Jan. 5, 1943 2,307,124

UNITED STATES PATENT OFFICE

2,307,124

METHOD OF PACKAGING AND DISPENSING FLUID SUBSTANCES

Reynolds Guyer and Russell J. Hennessey, St. Paul, Minn., assignors to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota

Original application November 12, 1938, Serial No. 240,021. Divided and this application October 31, 1941, Serial No. 417,300

6 Claims. (Cl. 93—3)

Our invention relates to a method of packaging and dispensing fluid substances adapted to solidify, such as cheese and the like.

An object of the invention resides in providing a method of packaging and dispensing in which the substances to be packaged may be readily poured in the original container from which the same is to be dispensed and in which the substance may be readily dispensed from the same package.

An object of the invention resides in providing a method of packaging and dispensing in which a tray is used having a bottom and lateral walls hingedly connected thereto and in which a hoop is used for holding the tray in erected position, said method consisting in applying a cover to the tray and hoop and in attaching the cover to the hoop when the cover is applied to the tray and hoop to cause simultaneous removal of the cover and hoop to free the walls of the tray.

Other objects of the invention will become apparent from the following description of the invention.

In the drawings:

Fig. 1 is a perspective view of a carton illustrating an embodiment of our invention.

Fig. 2 is a perspective view of the cover of the carton shown in collapsed position.

Fig. 3 is a perspective view of the cover shown in erected position.

Fig. 4 is a perspective view of the tray of the invention shown in collapsed position.

Fig. 5 is a cross sectional view taken on line 5—5 of Fig. 4.

Fig. 6 is a developed view of the blank from which the tray shown in Fig. 4 is constructed.

Fig. 7 is a perspective view of the hoop of the invention.

Fig. 8 is a cross sectional view taken on line 8—8 of Fig. 1.

Fig. 9 is a cross sectional view taken on line 9—9 of Fig. 1.

Fig. 10 is a perspective view showing the tray and wrapper assembled.

Fig. 11 is a perspective view showing the hoop applied to the structure disclosed in Fig. 10.

Fig. 12 is a perspective view of the tray filled and with the wrapper closed and showing the package before the cover has been applied.

In the packaging of cheese and similar substances which are poured in a liquid state in a container to be subsequently removed therefrom after solidification, considerable difficulty has been encountered in procuring access to the substance. The present invention provides a method whereby the substance is readily made available for the purpose of dispensing when the cover of the package is removed.

This application for patent is a division of our copending application Patent No. 2,284,959 granted June 2, 1942.

For the purpose of illustrating our method, we have shown a package which comprises a tray A best illustrated in Figs. 4 and 9, a hoop B shown in detail in Fig. 7 and a cover C illustrated in Fig. 3. These parts cooperate in a manner to form a package which is particularly adapted for use with our method. The said parts will now be individually described in detail.

The tray A is constructed from a blank 10 shown in Fig. 6 which is made from cardboard or some other suitable paper material. This blank is formed with a number of transverse scores 12, 13, 14, 15, 16, 17, 18 and 19. These scores divide the blank into a bottom 21, side walls 22 and 23 hingedly connected thereto, flanges 24 and 25 hingedly connected to the side walls 22 and 23, auxiliary walls 26 and 27 hingedly connected to the flanges 24 and 25, and flaps 28 and 29 connected to the auxiliary walls 26 and 27. The blank is notched at the corners to form end walls 31 and 32 which are hingedly connected to the bottom 21 by means of scores 33 and 34. The various scores of the blank form hinges between the various parts whereby the same may be moved from collapsed to erected position and vice versa. In the fabrication of the blank, the flaps 28 and 29 are coated with adhesive along the marginal portions thereof adjoining the edges 35 and 36 of the blank. The coating falls short of the scores 12 and 19 by a distance equal to the width of the flanges 24 and 25. After being coated, the blank is folded along the scores 13 and 18 and the adhesive of the flaps 28 and 29 caused to adhere to the bottom 21. The blank is now completed and ready for use. From Fig. 5, it will be apparent that the score 12 is off-set from the score 15 a distance substantially equal to the width of the flange 24. Similarly, the score 16 is off-set from the score 19 a distance equal to the width of the flanges 25. By means of this construction, the wall 22 is adapted to become spaced from the auxiliary 26 and similarly, the wall 23 is adapted to become spaced from the auxiliary wall 27 when the walls of the tray are folded into erected position. At the same time the flanges 24 and 25 are caused to extend outwardly from the walls 22 and 23 and at right angles thereto. The arrangement of the parts, when the carton is erected, is best shown in Fig. 9.

The hoop B, as stated, is best shown in Fig. 7 and is constructed from a strip of cardboard or other suitable material of a width equal to the height of the lateral walls of the tray A. This strip is scored at the four corners, as indicated at 37, 38, 39 and 41, to form lateral walls 22a, 23a, 31a and 32a and a flap 42 connected with the wall 22a. The flap 42 is adapted to be secured to the end wall 31a by adhesive or otherwise and ties the end of the hoop B together. The hoop B is adapted to be applied over the walls of the tray A or in other words, said tray is adapted to be received within the said hoop and to telescope with reference thereto. Inasmuch as the walls of the tray A are disconnected at their adjoining edges, the hoop B holds the walls from spreading and maintains the tray in erected form.

The cover C is constructed from a blank of paper cardboard or some similar paper product which is best shown in Figs. 2 and 3. This blank is formed with longitudinal scores 43 and 44 and with transverse scores 45 and 46 which divide the blank into a top 47, end walls 31b and 32b, and side walls 22b and 23b. In addition, the blank is cut along the scores 44 and 43 up to the scores 45 and 46 to form flaps 48 which are folded back and secured to the end walls 31b and 32b by means of adhesive or otherwise. The side walls 22b and 23b of the cover C are formed with diagonal scores 49 which permit of collapsing the carton so that the same may take the form shown in Fig. 2.

The cover C is constructed at the lower portions of the side walls 22b and 23b thereof, with finger notches 51. In like manner, the hoop B is constructed with similar finger notches 52 which, when the parts are assembled, are adapted to register with one another. These finger notches permit of grasping the tray A at the lowermost portion thereof and by manipulating the cover C to remove the tray from the cover.

The hoop B is held attached to the cover C by means of a number of locking tongues 53. These tongues are struck out of the material forming the side walls 22a and 23a and are integral with the end walls 31a and 32a. The scores 37, 38, 39 and 41 do not extend across these tongues so that, when the structure is folded, the tongues remain in the planes of the end walls 31a and 32a and extend outwardly from the side walls 22a and 23a, as shown in Fig. 7. For cooperation with these tongues, a number of slots 54 are cut in the side walls 22b and 23b of the cover C. When the hoop B is inserted into the cover C, tongues 53 engage said slots and holds the hoop attached to the cover.

The manner of using the invention is as follows: The cheese or other substance to be packaged in the package is usually wrapped in paper, tin foil or some other suitable wrapping material. For this purpose, a sheet of such material is placed upon the tray A when said tray is collapsed, which sheet is indicated by the reference numeral 61. By means of suitable machinery, now available for the purpose, the sheet is folded to form a container 62 open at the top, the excess portions of the sheet being doubled back upon themselves at the ends of the package and overlapping one another as indicated at 63 in Fig. 10 of the drawings. The lateral walls of the tray A are also folded up to fit the walls of the container so formed. This may be done at the same time the container is formed or it may be done subsequently. The structure is then inserted into the hoop B and caused to telescope with respect thereto until the upper edges of the lateral walls of the tray register with the upper edges of the lateral walls of the hoop as shown in Fig. 11. The container is now filled by pouring the melted cheese or other substance to be packaged into the same until the required amount of cheese has been poured. The extended portion 64 of the wrapper or container 62 is then folded over upon the melted cheese as shown in Fig. 12. The cover C is next applied to the entire assembled structure and during such application, the tongues 53 are forced into the slots 54 and the lower edges 55 of said slots which form shoulders engage corresponding shoulders 56 on the said tongues and hold the hoop secured to the cover C. Whenever it becomes desirable to remove the contents of the package, for the purpose of dispensing the contents, the finger and thumb may be placed in the finger notches 51 and 52 and the lowermost portion of the tray A readily grasped. This tray may now be removed from the cover. Due to the fact that the hoop B is locked with reference to the cover C, the hoop remains in the cover and the tray and contents are separately withdrawn from the hoop and cover. Upon removal of the cover and hoop, the lateral walls of the tray A are free and may be swung outwardly into collapsed position, as shown in Fig. 4. When so disposed, the solidified cheese is exposed and the wrapper or container 62 enveloping the same may be easily removed and access had to the cheese. Where a part only of the cheese is used, the walls of the tray may be folded into erected position and the cover with the hoop attached again applied to the tray to close the same. If desired, two or all of the lateral walls of the tray may be broken away at the scores forming the hinges between the same and the bottom of the tray to facilitate application of the cover thereto. We have found that, where the end walls only are broken away, the side walls may be readily held in erected position, while the cover is being applied to the tray. In such case, the ends of the side walls hold the tray from longitudinal movement relative to the cover.

While we have described the locking tongues for holding the hoop attached to the cover, it can readily be understood that the method will embrace the use of glue for attaching the hoop to the cover while the parts are being assembled which would cause the same to stick together and procure removal of the hoop when the cover is removed from the tray.

Our invention is highly advantageous in that an extremely simple and practical method is provided for packaging and dispensing cheese and similar fluid substances adapted to solidify. By our improved method, the original container in which the cheese is poured may be readily manipulated to expose the cheese when desired for use, whereby the same may be easily and quickly dispensed. By means of our invention, the hoop used with the container is simultaneously removed with the cover so that the lateral walls of the tray are free to swing outwardly and expose the contents of the tray.

Changes in the specific steps of our invention as herein disclosed, may be made within the scope of what is claimed without departing from the spirit of our invention.

Having described our invention, what we claim as new and desire to protect by Letters Patent is:

1. The method of packaging and dispensing

fluid substances adapted to solidify, said method consisting in placing on a tray having a bottom and lateral walls hingedly connected therewith a sheet, in folding the sheet to form a container, in erecting the lateral walls of the tray to fit about said container, in applying a hoop to the lateral walls to hold the same erected, in pouring the substance to be packaged into the container to substantially the height of the lateral walls of the tray, in folding over the sheet to enclose the substance packaged and in applying a cover to the hoop.

2. The method of packaging and dispensing fluid substances adapted to solidify, said method consisting in placing on a tray having a bottom and lateral walls hingedly connected therewith a sheet, in folding the sheet to form a container, in erecting the lateral walls of the tray to fit about said container, in applying a hoop to the lateral walls to hold the same erected, in pouring the substance to be packaged into the container to the height of the lateral walls of the tray, in folding over the sheet to enclose the substance packaged, in applying a cover to the hoop, and in attaching the hoop to the cover upon assembly of the parts to cause subsequent removal of the cover to withdraw the hoop from the tray and free the walls thereof.

3. The method of packaging and dispensing fluid substances adapted to solidify, said method consisting in erecting a tray having a bottom and lateral walls hingedly connected therewith together with a sheet forming a container, in applying a hoop to the lateral walls to hold the same erected, in pouring the substance to be packaged into the container to substantially the height of the lateral walls of the tray, in folding over the sheet to enclose the substance packaged and in applying a cover to the hoop.

4. The method of packaging and dispensing fluid substances adapted to solidify, said method consisting in erecting a tray having a bottom and lateral walls hingedly connected therewith together with a sheet forming a container, in applying a hoop to the lateral walls to hold the same erected, in pouring the substance to be packaged into the container to substantially the height of the lateral walls of the tray, in folding over the sheet to enclose the substance packaged, in applying a cover to the hoop, and in attaching the hoop to the cover to cause subsequent removal of the cover to withdraw the hoop from the tray and free the walls thereof.

5. The method of packaging and dispensing which consists in erecting a tray having a bottom and lateral walls hingedly connected therewith, in applying a hoop to the lateral walls to hold the same in erected position and placing within the tray the substance to be packaged, in applying a cover to the hoop and in attaching the hoop to the cover to cause subsequent removal of the cover to withdraw the hoop from the tray and free the walls thereof.

6. The method of packaging which consists in erecting a tray having movable lateral walls, applying a retaining member to said lateral walls to hold the same in erected position, in filling the tray and in applying a cover to the tray and in attaching the cover to the retaining member to cause subsequent removal of the retaining member from the tray upon removal of the cover to free the walls of the tray.

REYNOLDS GUYER.
RUSSELL J. HENNESSEY.