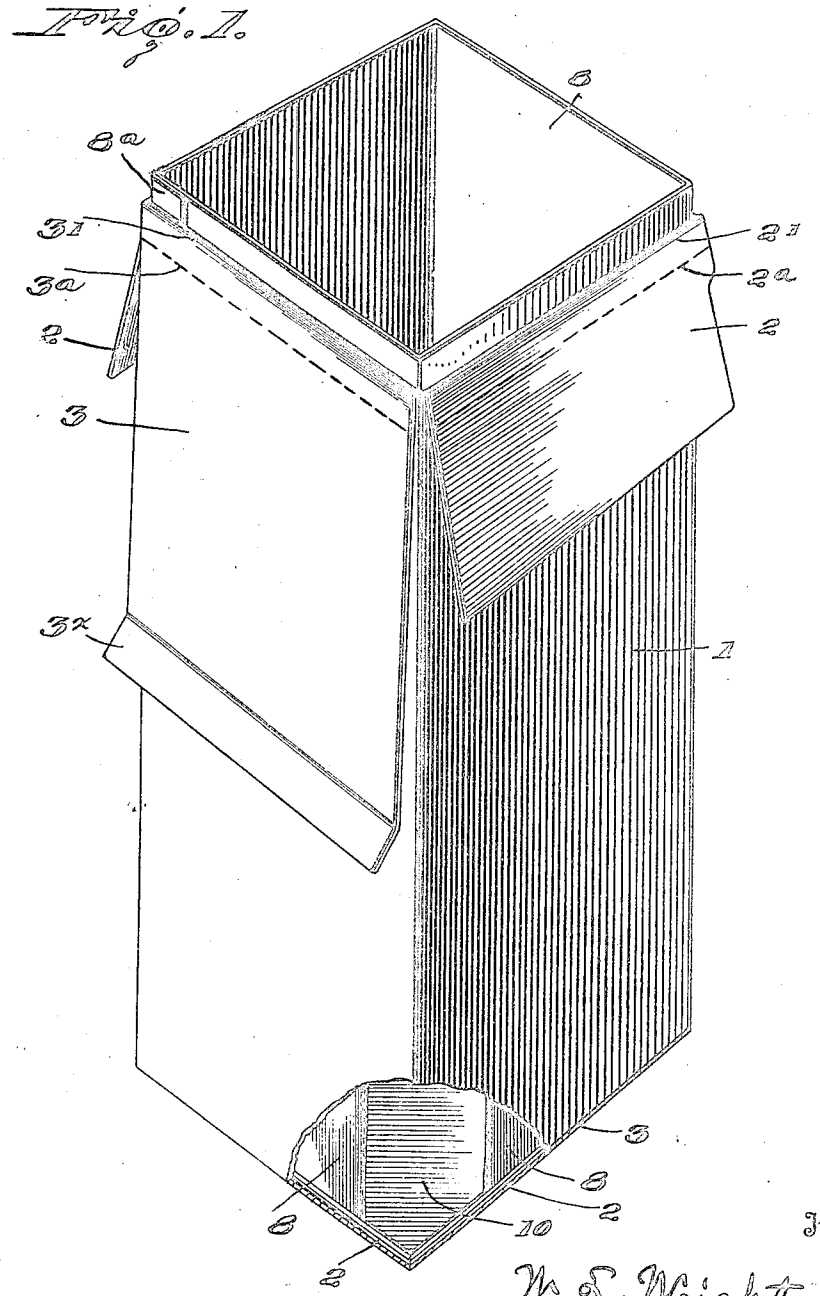
Feb. 6, 1923.

1,444,050

W. L. WRIGHT.
PACKAGING BRICK ICE CREAM.
FILED APR. 22, 1921.

2 SHEETS-SHEET 1

Fig. 1.



Inventor
W. L. Wright

Witness:
Robert F. Beck

By Robert F. Beck, Attorney

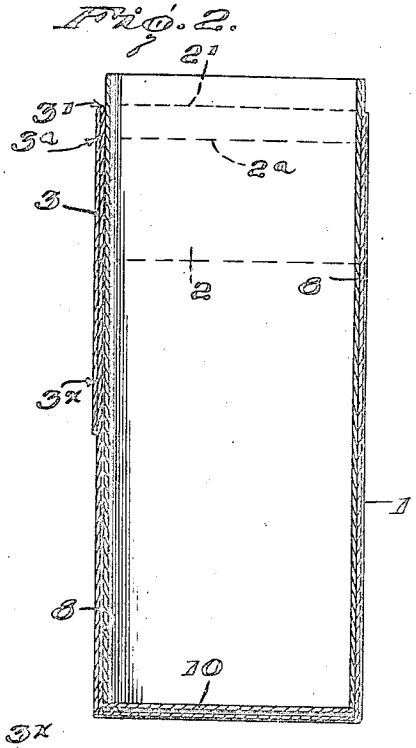
Feb. 6, 1923.

1,444,050

W. L. WRIGHT.
PACKAGING BRICK ICE CREAM.
FILED APR. 22, 1921.

2 SHEETS-SHEET 2

Fig. 2.



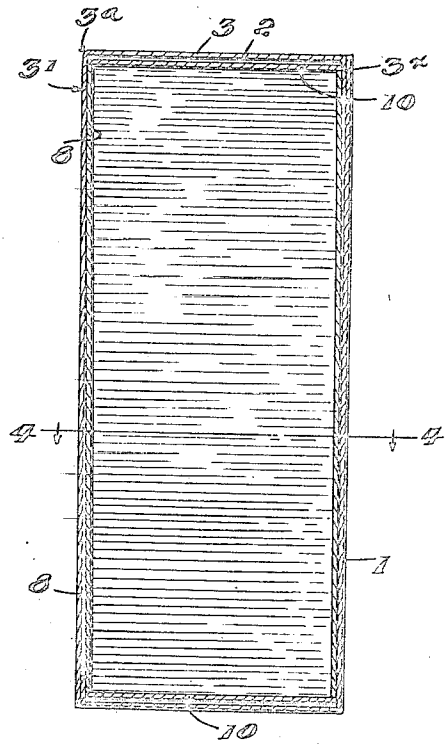


Fig. 3.

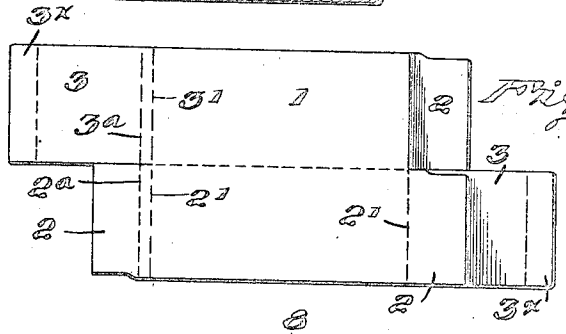


Fig. 6.

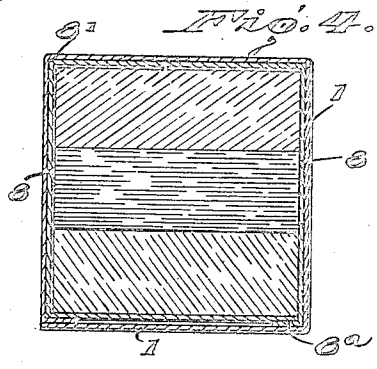


Fig. 4.

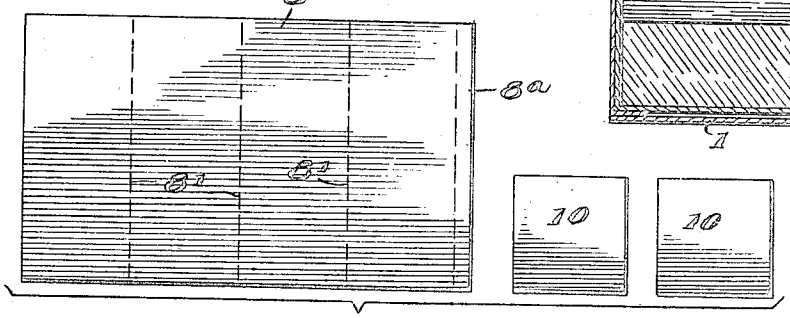


Fig. 5.

Inventor

By W. L. Wright

Witness:
Robert F. Beck

Robert F. Beck

Attorney

Patented Feb. 6, 1923.

1,444,050

UNITED STATES PATENT OFFICE.

WILBUR L. WRIGHT, OF FULTON, NEW YORK, ASSIGNOR TO SEALRIGHT CO. INC., OF FULTON, NEW YORK, A CORPORATION OF NEW YORK.

PACKAGING BRICK ICE CREAM.

Application filed April 22, 1921. Serial No. 463,576.

To all whom it may concern:

Be it known that I, WILBUR L. WRIGHT, a citizen of the United States of America, and resident of Fulton, county of Oswego and State of New York, have invented certain new and useful Improvements in and Relating to Packaging Brick Ice Cream, of which the following is a specification.

This invention relates to certain improvements in ice cream packages; and the objects and nature of the invention will be readily understood by those skilled in the art in the light of the following explanation of the accompanying drawings illustrating what I now believe to be the preferred mechanical expression or embodiment of my invention from among other forms, constructions and arrangements within the spirit and scope thereof.

It is an object of my invention to provide rectangular paper containers for ice cream, that can be knocked down or folded flat into small compass for convenient and economical packing, shipment, and storage; that can be readily assembled and set up for use; that can be quickly and easily filled by the use of the ice cream cylindrical container filling machines now on the market by substituting filling nozzles rectangular in cross section for the cylindrical filling nozzles now employed in such machines; and that will serve to protect and insulate the contained hardened ice cream and will reduce to the minimum possibility of outside air leaking into the package.

With these and other objects in view my invention consists in certain novel features in construction and in formations and arrangements as more fully and particularly set forth and specified hereinafter.

Referring to the accompanying drawings:

Fig. 1 is a perspective view of the container, the parts thereof assembled and brought to form and condition for application to the filling nozzle of the ice cream container filling machine, a lower corner of the container being broken away;

Fig. 2 is a vertical section through the container shown by Fig. 1;

Fig. 3 is a vertical section of the closed package of ice cream embodying the container of my invention;

Fig. 4 is a section on the line 4—4, Fig. 3;

Fig. 5 shows in plan the inner end closure disks and the inner container blank folded flat for packing;

Fig. 6 is a plan of the outer box folded flat for packing.

In the drawings I show any suitable or ordinary folding paper box of commerce, rectangular in cross section, and capable of being collapsed into flat form for convenient and economical storage and packing (Fig. 5). These folding boxes are usually composed of a single flat paper blank having its ends secured together to form the tubular body of the box, the blank having parallel score lines defining the side faces of the body so that the body can fold or collapse (Fig. 5) with two side walls superimposed on and parallel with the other two side walls, and so that the body can be expanded or distended to operative shape forming the oblong body rectangular in cross section. In the particular example illustrated, each end of the collapsible body 1 is formed with a pair of short opposite inner flaps 2 and with an outer long closing flap 3, as will be well understood by those skilled in the art. When the body is distended to form, an end is closed by folding the two inner flaps 2 so as to lie across the end opening and then folding the closing flap 3 so as to loosely overlie the flaps 2. The long outer flap 3 is then secured by tucking its projecting end 3^{x} into the box end between the side edges of flaps 2 and the inner surface of the box body. The opposite end of the box is then closed in like manner.

The blank is usually scored on lines transversely of the various flaps to provide folding lines.

Folding or collapsible paper boxes of various constructions are more or less standard on the market at a comparatively low cost, and are well adapted to receive display and advertising matter, and as each box can be collapsed to flat form such boxes can be packed in large quantities in small space and are economical for storage and shipment.

However, no matter how desirable such paper boxes may be from economical and advertising standpoints, they are not per se adapted to constitute successful original containers for ice cream, i. e., to receive the

semi-frozen ice cream as it flows from the freezer, preparatory to hardening and storing in the hardening room, and final delivery to the ultimate consumer in the hardened state in the original containers.

In the first place, these folding paper boxes are not even approximately air and liquid tight and the semi-frozen cream as it flows from the freezer would ooze through the end closures of the boxes before the cream became thoroughly hardened in the hardening room and the package would thereby become ineffective and unsalable for various reasons, particularly on exposure to the atmosphere.

In the second place, such open-end folding boxes cannot be properly filled by the use of ice cream container filling machines, particularly to form blocks of layer ice cream. I have solved this problem by providing a paper container for ice cream, rectangular in cross section, and embodying a foldable paper box (for instance such as hereinbefore described) that can be filled by ice cream container filling machines, and that will successfully hold the cream through the process of hardening and protect, insulate and preserve the hardened ice cream through the subsequent steps of storing, transportation and final delivery to the ultimate consumer. The conditions require that the oblong rectangular container be filled through one end and that the container provide approximately fluid and air tight walls, walls of sufficient stiffness and stability to stand up under the filling operation and to cooperate with the filling nozzle during that operation to exert suction pull, if need be, on the cream in the nozzle to accelerate the filling operation; and also that the open end of the box be closed approximately air and fluid tight after the filling operation.

I meet these conditions by combining a peculiar inner ice-cream-receiving receptacle or container, with the folding collapsible rectangular open-end paper box which constitutes an outer enclosure for the inner container. This inner container is composed of a tubular body more or less snugly fitting the longitudinal inner surfaces of the folding paper box and in length exceeding the interior length of the paper box, and end closures for the opposite open ends of said inner tubular body.

The inner tubular body is, in the example illustrated, composed of an imperforate rectangular blank or sheet 8 of comparatively stiff paper material, so called paper board, preferably treated with paraffine or otherwise rendered moisture proof. This sheet is formed with score lines, or is otherwise formed to fold on the parallel transverse lines 8′ to form an oblong body rectangular in cross section. The ends of the blank overlap at 8ª, and these ends can be secured together before the body is inserted in the paper box or can be left disconnected so that the overlapping ends are held together by the enclosing paper box. However, whether or not the overlapping ends are directly secured together, the fact remains, that the inner body blank can be packed and shipped in flattened condition with the flattened paper boxes, and can be thus stored by the ice cream manufacturer, with resulting advantages in economy in the matter of freight, packing and storage rates. These remarks are also true of the end closures for the inner bodies, as for this purpose I preferably employ flat rectangular water-proofed paper caps or disks 10 composed usually of the same kind or grade of paper material as the blanks 8, although if so desired, the end closure for the inner body can be flanged to slip either within or at the exterior of the inner body ends.

The boxes and blanks are stored by the ice cream manufacturer in flat form, and are set up and assembled approximately as needed for filling.

In assembling, the paper box is folded to operative form and the lower end thereof is closed by the flaps 2, 3, as hereinbefore described, before or after the bottom closure disk 10 is located in the lower end of the box fitting closely down on the box closure flaps 2, 3. The end disks 10 closely conform to the interior cross sectional dimensions of the box, in fact the disks 10 are usually slightly oversize with respect to said internal box dimensions. In assembling, it is hence necessary to exert pressure in forcing the stiff lower disk 10 into the lower end of the box to position squarely across the box end and against and parallel with the flap closure. The edges of the stiff disk 10 thus preferably press tightly against the inner surfaces of the box and approximately seal the lower end of the box. This stiff bottom disk 10 when thus positioned in the lower end of the box serves to hold the box in set up form and against collapse.

The body 8 is then brought to set up form and inserted longitudinally into the box through the upper open end of the box. This body is expanded to snugly fit within the paper box and is pressed down on the bottom disk 10 so that the lower end edge of the body snugly abuts the edge portions of the top face of the disk. The inner body 8 in length exceeds the internal length of the paper box and hence projects a short distance above the upper open end of the paper box. The comparatively stiff material of the inner body 8 holds the paper box to form and against collapse. The container is now ready for filling, and can be filled by an ice cream container filling machine equipped

with a rectangular nozzle instead of the cylindrical nozzle now employed in such machine.

These machines are now employed for filling cylindrical paper cans. Such a machine now embodies a depending cylindrical nozzle open at the lower end and internally divided to provide longitudinal passages receiving flowable ice cream from different elevated supplies. Usually the different supplies contain ice cream of different flavors so that columns of differently flavored cream will be simultaneously delivered from the lower end of the nozzle into the container being filled. In the machine as now used, the cylindrical paper can is placed on the lower end of the nozzle and moved up on the exterior thereof with the can more or less snugly fitting on the nozzle. The can is filled from the bottom up as it is withdrawn from the nozzle, more or less suction pull, if desired, being thereby exerted on the cream in the nozzle to accelerate its flow into the can. The filled can is then moved horizontally across the lower end of the nozzle to separate the cream in the can from the nozzle. Usually an exterior head snugly fits the nozzle and reciprocates vertically thereon and receives and forms a tight fit with the top edge of the can and moves with the can during its vertical movements on the nozzle.

The rectangular paper container of my present invention is designed and adapted to cooperate with the nozzle and head (when changed to receive the container of rectangular form) as does the cylindrical can in the machine just described.

The projecting upper end of the inner body of the container is arranged to fit and form a more or less tight joint with the head that slides on the exterior of the nozzle and the interior of said body is arranged to more or less snugly fit the exterior of the nozzle. The inner body and the bottom disk render the container sufficiently air tight to create suction pull on the cream in the nozzle, if that be desired, when the container is rapidly drawn down on the nozzle. In fact, the inner body, renders the container of the desired stiffness and stability to cooperate with the filling machine during the filling operation. The flaps 2, 3, at the upper end of the container are swung down on their normal fold lines 2′, 3′, so as to be free of the projecting upper end of the body and expose the same to fit in the exterior head on the nozzle, during the filling operation.

When the container has been filled with the semi-frozen cream, and withdrawn from the machine, the top closure for the inner body, whether the flat paper disk 10 or a flanged paper disk, is placed over the open top of said body to rest on the top edge thereof and close the same, the same as the lower end of said body is closed. The top closure is then retained in place by closing the upper end of the paper box through the medium of its top flaps 2, 3, the same as the lower end of said box is closed by the corresponding lower end flaps. There is this difference, however, owing to the projected upper end of the inner body, namely, the top flaps 2, 3, extend vertically from the top edge of the outer box, and then extend inwardly and horizontally across the top face of the top disk 10, consequently the upper end flaps of the outer paper box, are formed with the additional fold or bending lines 2^a, 3^a, where said flaps bend to pass in on top of the top closure 10.

When the package of ice cream is thus sealed, the engagement between the edges of the body 8 and the end closures 10 and between the overlapping portions 8^a of the body, are sufficiently tight to prevent objectionable leakage of cream at such joints before the cream is subjected to the freezing process in the hardening room.

When the packages are placed in the hardening room, the vapor from the semi-frozen cream will be frozen in and around said joints between meeting paper edges and faces and within the paper boxes and will thereby tightly seal such packages so that the paper containers will effectively protect the cream and permit delivery thereof at homes of consumers in the original package, gaining with the rectangular container, approximately the advantages and utility attained by the use of cylindrical paper cans of proper construction, with the added advantage gained by containers that can be packed flat and in cheap outside boxes that can be cheaply supplied with advertising and display matter.

It is evident that various changes, modifications and variations might be resorted to without departing from the spirit and scope of my invention and hence I do not wish to limit myself to the exact disclosures hereof.

What I claim is:

1. A brick ice cream package comprising a rectangular paper material box expanded from folded flat form and constructed and arranged to cooperate with the head and nozzle of an ice cream container filling machine for filling with semi frozen ice cream and subsequent hardening and ultimate delivery as an original package of hardened brick ice cream, said paper material box embodying stiff sheet paper material inner and outer longitudinal walls providing a stiff exteriorly and interiorly unobstructed open upper end for application to and cooperation with said head and nozzle for filling, said inner walls longitudinally facing and contacting the inner surfaces of said outer walls throughout the lengths thereof and forming the ice cream engaging longitudinal surfaces of the box, the longitudinal and

end inner walls cooperating to hold semi-frozen ice cream against leakage preparatory to hardening.

2. A rectangular paper container for ice cream constructed and arranged to be filled with ice cream by and to cooperate with the nozzle of an ice cream container filling machine, comprising an outer collapsible paper box capable of folding flat for packing and storage and having end openings and closures, a separate collapsible stiff paper inner body for receiving the ice cream from and formed to receive said nozzle and capable of folding flat for packing, the upper end of the outer box formed to fold back to exteriorly expose the open upper end of the inner body to receive said nozzle, and paper inner walls to cooperate with the inner body in forming a tight closure for semi-frozen ice cream.

3. A rectangular paper container capable of folding flat for packing and constructed and arranged to be filled through one end by an ice cream container filling machine and to provide a stiff unobstructed open mouth to receive said nozzle, said container consisting of a collapsible outside paper box having end closure flaps, and a separate flapless inside paper container for the ice cream of sufficient stiffness and stability to slide on the filling nozzle of the machine and cooperate therewith during the filling operation, inside end closures being provided for said inside container.

4. A rectangular paper container for ice cream, consisting of a collapsible outside paper box body having flaps for closing the box ends, and an inside ice cream receiving container embodying a stiff paper blank folded to form an inner body at its upper end projecting beyond the box body to form a stiff mouth to receive and cooperate with filling machine parts, and paper disks for closing the ends of the inner body within the outer box and to cooperate with the inner body in forming a tight container for retaining semi-frozen cream.

5. A rectangular paper box container for ice cream constructed and arranged to be filled through one end by the filling nozzle of an ice cream container filling machine, and comprising an outside folding paper box having outside end closing flaps, and an inside stiff approximately-tight flapless folding paper enclosure for the ice cream rendering said container stable and capable of cooperating with said nozzle during filling operation and capable of sealing and protecting the contained ice cream, said inside enclosure being formed to retain semi-frozen cream against leakage.

6. An ice cream container consisting of an outside folded blank paper box having outside end closure means, and an inside approximately tight ice cream closure consisting of a folded stiff flat paper blank and inside end closures therefor to cooperate therewith in retaining semi-frozen cream preparatory to hardening, said inside enclosure snugly fitting the outside box and rendering the container stable and tight.

7. A rectangular paper container for ice cream consisting of an outer box having an end filling opening and closures, and a stiff inner paper tubular body closely fitting the interior of the box and having end paper closures within the box, said outer box formed at its upper end to fold down to exteriorly expose the stiff open upper end of said stiff inner body to cooperate with filling machine parts, the upper end of said outer box formed to fold up and over said upper end of the stiff inner body and its top closure to cover the same.

WILBUR L. WRIGHT.