May 23, 1933. C. B. KLEFEKER ET AL 1,910,924

CARTON PACKING

Filed Dec. 23, 1931

Fig. 1

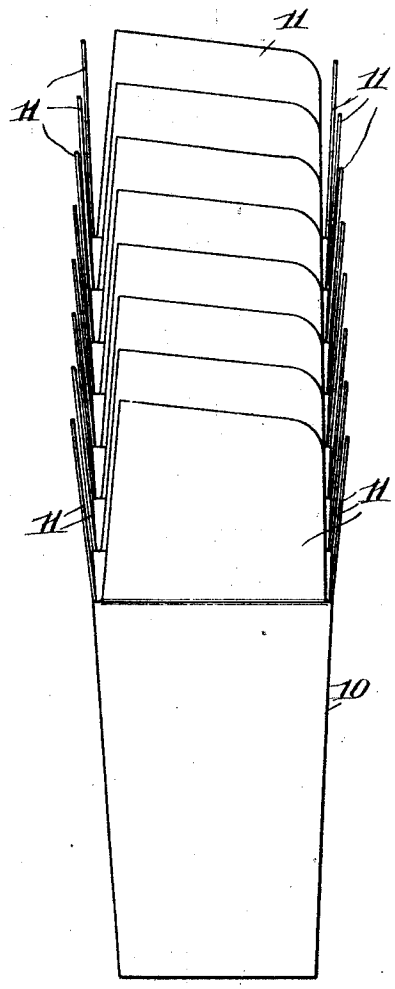
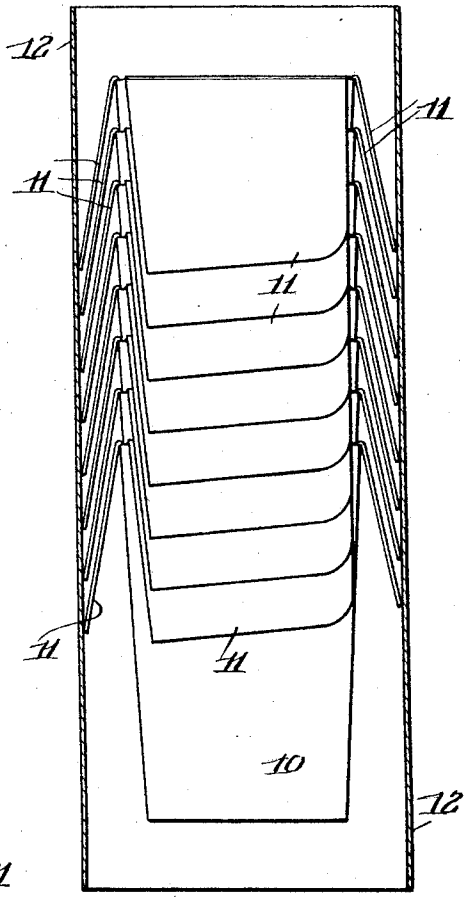


Fig. 2



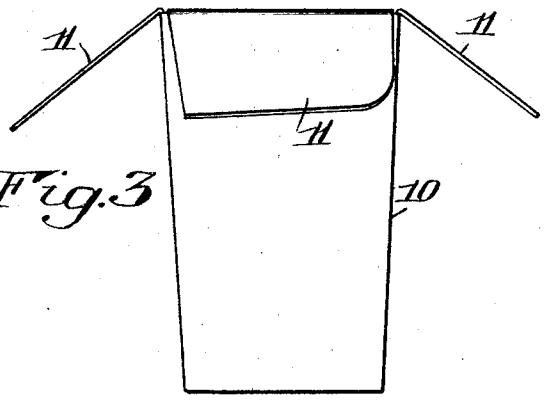


Fig. 3

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Patented May 23, 1933 1,910,924

UNITED STATES PATENT OFFICE

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CARTON PACKING

Application filed December 23, 1931. Serial No. 582,680.

This invention relates to the packing of cartons and especially cartons of the kind commonly used for holding ice cream, though it is not necessarily limited to this particular type of carton.

An object of the invention is to provide a simplified and more satisfactory method of packing cartons, and especially one so designed that the cartons will be ready for use when they are removed from the package. It is also an object of the invention to provide a carton package which is more compact than prior carton packages, so that space will be saved.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawing:

Fig. 1 is a view of a stack of nested cartons with their flaps turned up in the position which they normally tend to assume when the cartons are manufactured;

Fig. 2 is a view of the same stack of cartons with the flaps turned down and with the stack enveloped in the retaining wrapper, which is shown in section, and

Fig. 3 is a view of a carton removed from the package and ready for use.

The same reference numerals throughout the several views indicate the same parts.

Fig. 1 illustrates a stack of nested cartons 10 each having a plurality of closure flaps 11 which normally tend to assume an upstanding position such as plainly shown in Fig. 1. These cartons are made of any suitable folded sheet material, preferably cardboard or the like.

Heretofore, it has been customary to pack such cartons with the flaps in the upstanding position shown in Fig. 1. According to prior practice in filling ice cream cartons, this manner of packing such cartons has not had the serious disadvantages, which are inherent in it when the cartons are used according to the present modern methods. It was formerly customary to place previously frozen ice cream in the cartons as the quantities of ice cream were called for, and under this practice the cartons could be removed one at a time as needed from the nested stack, and if necessary the flaps could be turned outwardly or downwardly when placing the ice cream in the carton.

According to the present approved practice, however, which is rapidly growing in favor, the ice cream mixture is now frequently placed in the cartons in liquid or semi-liquid condition and is then frozen directly in the cartons. The cartons filled with frozen ice cream are then delivered from the manufacturing establishment to the retailer, so that when a customer calls for a certain quantity of ice cream, the retailer merely hands out the previously filled carton, and is thus spared the messy and time consuming operation of filling an empty carton with already frozen ice cream.

The work of filling the cartons, according to the above described practice, has accordingly devolved upon the manufacturing establishment rather than upon the retailer. In order to produce the filled cartons of ice cream in substantial quantity and at sufficiently low prices, the filling must be done rapidly and without waste. An efficient technique for filling the cartons has accordingly evolved, which comprises holding the carton, with its closure flaps open and turned down the sides of the carton, under a spout from which the liquid or semi-liquid ice cream mixture issues. When the carton is sufficiently full, it is moved laterally with respect to the spout and another carton is placed under the spout. Frequently the upper edge of the carton is held tightly against the lower edge of the spout while the carton is being moved laterally away from the spout, so as to scrape off any excess material.

In order to accomplish this, it will be readily appreciated that the flaps of the cartons must not be standing upwardly, but should be turned downwardly in order that the carton may present a relatively firm top edge to be used in the scraping operation above mentioned. Furthermore, when the flaps are in downturned position, it is possible to place the next succeeding carton tightly against the

one which has just been filled as the latter is moved away from the spout, so that there is no waste of material issuing continuously from the spout, in case the supply of material is not turned off after the filling of each individual carton.

When the cartons are packed with the flaps in upstanding position as in Fig. 1, according to the prior method of packing, there is a serious disadvantage in using them according to the above mentioned modern technique, because the flaps of all of these cartons must be turned downwardly immediately prior to filling the cartons, and this is a time consuming operation. Furthermore, it is somewhat awkward to hold the flaps downwardly after they have been turned down and while the cartons are being filled, because the flaps normally have a tendency to spring upward again to their upstanding position.

To remedy this difficulty, the present invention provides an improved package of cartons and an improved method of packing cartons, which greatly simplifies the proceedure and also saves space in transporting the unfilled cartons. According to this present invention, the cartons are stacked in nested relation as before, in many instances this stacking being accomplished by the machine which manufactures the cartons. The flaps 11 on the cartons are turned downwardly to a position such as shown in Fig. 2, instead of being permitted to remain in their normal upstanding position, and the nested stack of cartons with turned down flaps is then enveloped in suitable wrapping means 12, preferably in the form of a tubular member of frangible material such as wrapping paper. This tubular enveloping member 12 not only serves as a wrapper for the stack of cartons, but further performs the important function of holding the flaps in the downturned position illustrated in Fig. 2. The wrapper may be made up in tubular form before the cartons are placed in it, or it may be formed by wrapping the sheet around the stack of cartons.

The ends of the tubular member 12 may be left open, as in Fig. 2, so that when it is desired to use the cartons they may simply be pushed out through an open end of the wrapper, or the ends may be closed in any suitable manner if preferred. If it is not desired to push the cartons out through the end of the wrapper, the frangible nature of the wrapper makes it easy to tear it open in order to remove the cartons in any desired manner.

When the carton flaps are confined in their downturned position in this manner during the time it takes to transport them from the carton factory to the ice cream establishment where they are used, the flaps tend to acquire a permanent set, so that when released from the wrapper 12 they no longer tend to spring up to their initial upstanding position as shown in Fig. 1, but only to an intermediate position such, for example, as that illustrated in Fig. 3. This intermediate position to which they return when released is found to be usually a position sloping downwardly from the top of the carton, as plainly illustrated in Fig. 3, so that it is a comparatively easy matter to turn the flaps completely downwardly if desired. Furthermore, merely bringing two cartons laterally toward each other will automatically depress the contacting flaps of both cartons and permit the cartons to be moved tightly together. If it is desired to hold the flaps turned completely downwardly along the sides of the carton, this can be done relatively easily because the permanent set acquired by the flaps has greatly reduced the force with which they tend to spring back, and thus less force is required to hold them in downturned position.

Furthermore, this improved carton package requires less space for a given number of cartons than the prior package, because each stack of cartons is shorter by the length of the flaps, and is not materially larger in diameter.

When cartons are packed according to the present invention, they are removed from the wrapper by the ice cream manufacturing establishment or wherever else they are to be used, and can then be employed immediately for their intended purpose without the time consuming operation of turning down the flaps by hand and without the necessity of awkwardly holding them down after they are turned down.

While one embodiment of the invention has been disclosed, it is to be understood that the inventive idea may be carried out in a number of ways. This application is therefore not to be limited to the precise details described, but is intended to cover all variations and modifications thereof falling within the spirit of the invention or the scope of the appended claims.

We claim:

1. A package of cartons of folded sheet material comprising a series of nested cartons having closure flaps normally tending to assume an upstanding position, said flaps being turned downwardly, and a wrapper enveloping said cartons and holding said flaps in downturned position.

2. A package of cartons of folded sheet material comprising a series of nested cartons having closure flaps normally tending to assume an upstanding position, said flaps being turned downwardly, and a tubular member of paper enveloping said cartons and holding said flaps in downturned position.

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