Jan. 2, 1940. G. G. PLATT ET AL 2,185,353

METHOD AND APPARATUS FOR PACKAGING

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Fig. 3.

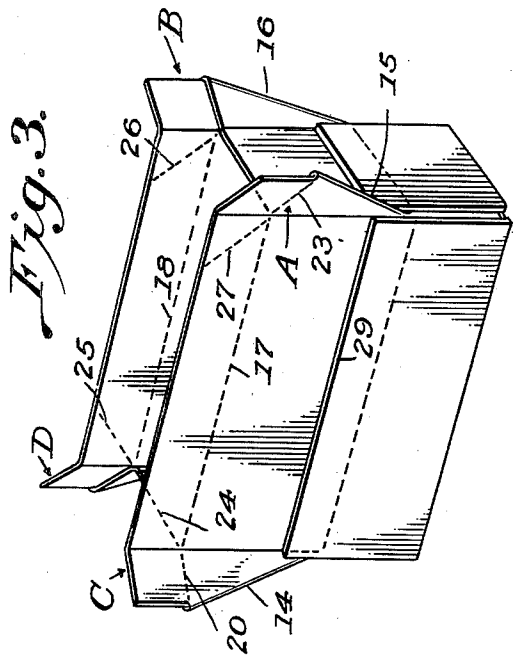


Fig. 4.

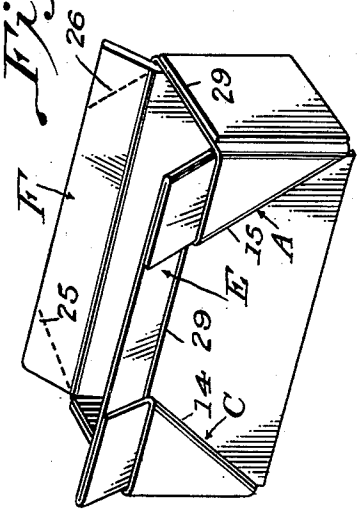


Fig. 1.

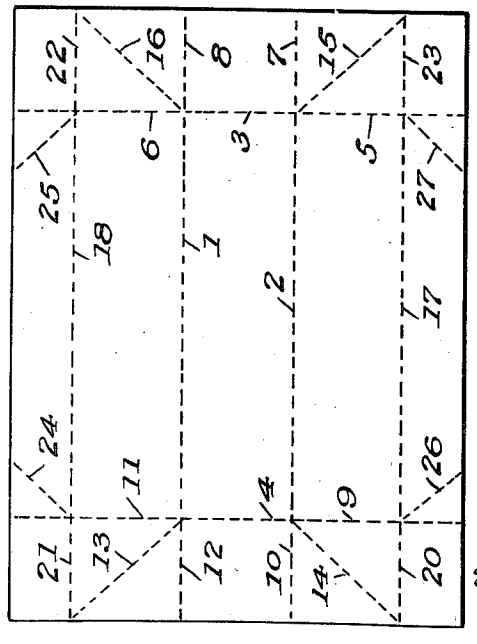
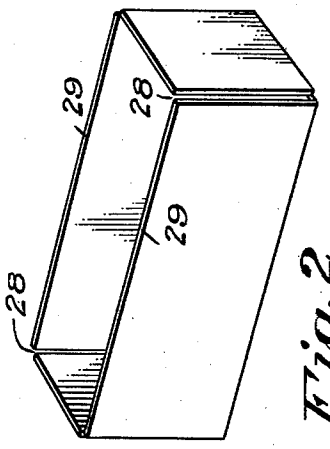


Fig. 2.



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Fig. 8.

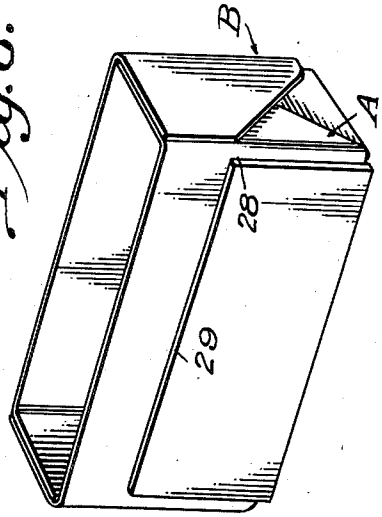


Fig. 9.

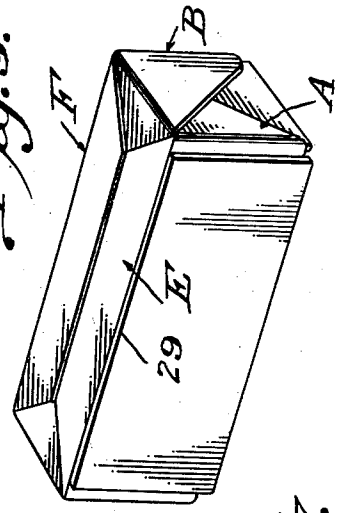


Fig. 5.

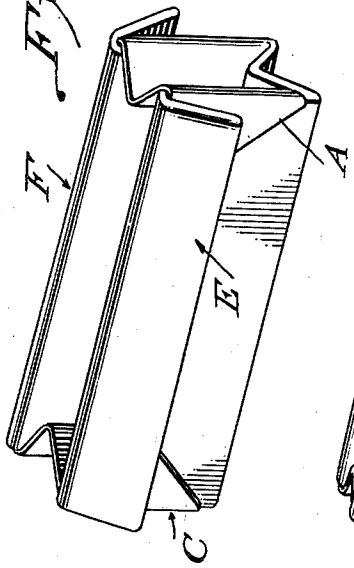


Fig. 6.

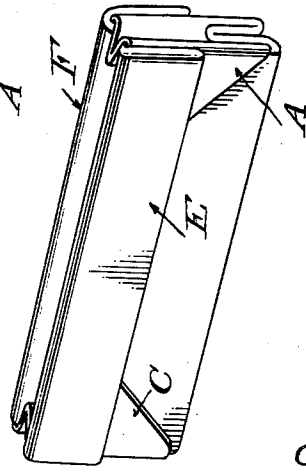
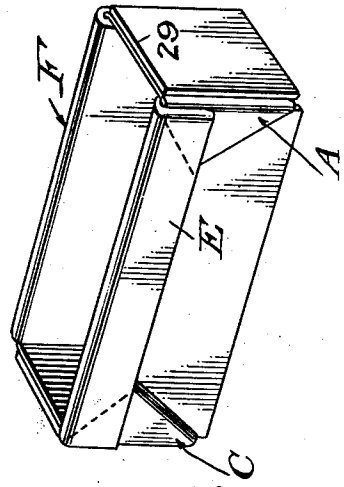


Fig. 7.



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UNITED STATES PATENT OFFICE

2,185,353

METHOD AND APPARATUS FOR PACKAGING

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Santa Ana, Calif.

Application November 1, 1937, Serial No. 172,242

2 Claims. (Cl. 99—179)

This invention is an improvement in a method of molding plastic or liquid substances including food products and for example, cheese, butter, butter substitutes such as oleomargarine, and other substances of similar physical characteristics into a wrapped block of suitable size and shape, as for example, the standard one-quarter pound block.

In the past an attempt has been made to achieve this result by the use of several operations involving the molding of the mass, transferring the molded substance to a sheet of paper and subsequently wrapping. This is at best a messy and time-consuming procedure and it is not adapted for use in small scale operations. The further objection is that room temperature is not suitable in most cases.

An object of this invention is to provide a device of a simple and economical construction that can be conveniently used to mold and assist in completely wrapping the substance without the necessity of removing the mass from the mold prior to wrapping.

Another object of the invention is to provide a suitable preformed wrapper adapted for insertion within the mold. A further object is provision of a suitable wrapper formed with the aid of the mold.

Our invention, therefore, comprises a method and apparatus for molding and wrapping a plastic mass with a minimum of handling as hereinafter described. Other objects will become apparent as the description of the invention proceeds with particular reference to the drawings wherein:

Figure 1 shows a sheet from which our wrapper is formed, the ultimate folds being indicated by dotted lines.

Figure 2 shows one embodiment of the mold.

Figure 3 shows the wrapper being inserted within the mold.

Figure 4 shows subsequent folding of the wrapper after being placed in position.

Figures 5 and 6 show a preformed wrapper partially collapsed and fully collapsed respectively.

Figure 7 shows the mold and wrapper ready for filling.

Figure 8 shows the overlapping wings swung around the end of the mold.

Figure 9 shows the finished package still in the mold.

The mold may be fashioned from metal or other rigid materials such as, for example, resin plastics or paper.

Resin plastics are particularly adaptable for use in constructing the mold of our invention. The use of this material permits a wide color range, is inexpensive and lends itself to imprinting of instructions, advertisement, etc. on the mold. It has the added advantage of being easily cleaned and not being affected by water.

When constructed of sheet material the mold may be cut and bent into the shape shown in Figure 2. The side and end walls do not extend the full length or width of the base portion leaving slots 28 at each corner permitting a portion of the wrapper to project therethrough as hereinafter described. The wrapping sheet may be of conventional paper, regenerated cellulose, glassine paper, etc. preferably suitably coated with an oil resistant coating. It also may be of more durable material thus permitting its re-use.

In a preferred embodiment, the following procedure is used: the sheet is initially folded along the lines 1, 2, 3 and 4 extended, the area enclosed by lines 1, 2, 3 and 4 being slightly less than the area in the base portion of the mold. The four sides of the sheet are then turned upward upon these folds bringing together folds 9 and 10, 11 and 12, 5 and 6, and 7 and 8 respectively, resulting in projecting wings A, B, C and D. At this point, the wrapper is placed within the mold as shown in Figure 3 with the wings A, B, C and D projecting through the slots 28 of the mold.

The next step is to fold the wings A, B, C and D outward and against the side walls of the mold causing new folds along the diagonal lines 13, 14, 15 and 16 as shown in Figure 4. The portions extending above the side wall of the mold then are folded outwardly and downwardly along the top line 29 of the mold and lines 17 and 18 of the wrapper thus forming flaps E and F which are held as in Figure 7 while the substance to be molded is placed within the wrapper, using a knife, paddle or similar device when the substance is plastic; the rigid mold supports the wrapping sheet during the filling operation.

After the desired amount of substance has been placed within the wrapper and supporting mold, the extending flaps E and F are folded upwardly and the overlapping wing portions, A, B, C and D, are swung around over the ends of the mold as shown in Figure 8. The portions of wings A, B, C and D which extend over the top line of the mold are now folded inwardly over the top line of the mold and along the lines 20, 21, 22 and 23. The side flaps E and F, extending a distance equal to more than one-half the width of the mold, are turned inwardly along the lines 17 and

18 and pressed firmly against the top of the molded mass forming new and final folds along lines 24, 25, 26 and 27, thus completing the wrapping of the substance as shown in Figure 9.

After the substance has been brought to a consistency permitting handling, as for example by cooling when necessary, the completely wrapped block can be removed easily from the mold without distortion of its shape. It is particularly pointed out that the mold has not been touched by the substance and can be used repeatedly.

We have illustrated our invention with the use of an initially flat sheet of wrapper material but obviously a preformed wrapper as shown in Figures 5 and 6 may be used in which case the operation will begin as shown in Figure 3. The preformed wrapper may be made with the aid of our mold or alternatively by the use of a suitable die wherein the folds are made by wrapping the sheet outside of a mold or die and using the sequence of steps outlined above.

For various economic reasons, colored butter substitutes are not generally available. Customarily these foods are marketed to the consumer in a substantially uncolored condition and accompanied by a capsule of suitable coloring matter. Within her home, it is necessary for the housewife to color the food by stirring and kneading the mass in a bowl to form the homogeneously colored mass. Discriminating housewives heretofore have objected to table use of butter substitutes because of its inconvenience in handling and serving properly. This invention has been particularly advantageous in preparation of shaped blocks of colored butter substitutes and thereby materially increased desirability of their use on the table.

We claim:

1. In the method of molding and wrapping a block of plastic foodstuffs, the steps comprising supporting within a discontinuous mold structure a prefolded wrapper fashioned from a single flexible sheet to define five surfaces of a parallelepiped, extending wing portions of said folded sheet exterior of and above the discontinuous mold structure, retaining the wrapper in position by folding all the projecting wing portions of the wrapper against two exterior sides of the mold structure, placing the said plastic material within the supported wrapper, folding corresponding pairs of projecting end wing portions over each other and the exterior ends of the mold structure, and by means of a folding operation effecting a non-adhesive engagement between the free edges of the wrapper to enclose completely the plastic foodstuff.

2. In the method of molding and wrapping a block of oleomargarine, the steps comprising supporting within a discontinuous mold structure a prefolded wrapper fashioned from a single flexible sheet to define five surfaces of a parallelepiped, extending wing portions of said folded sheet exterior of and above the discontinuous mold structure, retaining the wrapper in position by folding all the projecting wing portions of the wrapper against two exterior sides of the mold structure, placing the said oleomargarine within the supported wrapper, folding corresponding pairs of projecting end wing portions over each other and the exterior ends of the mold structure, and by means of a folding operation effecting a non-adhesive engagement between the free edges of the wrapper to enclose completely the oleomargarine.

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