

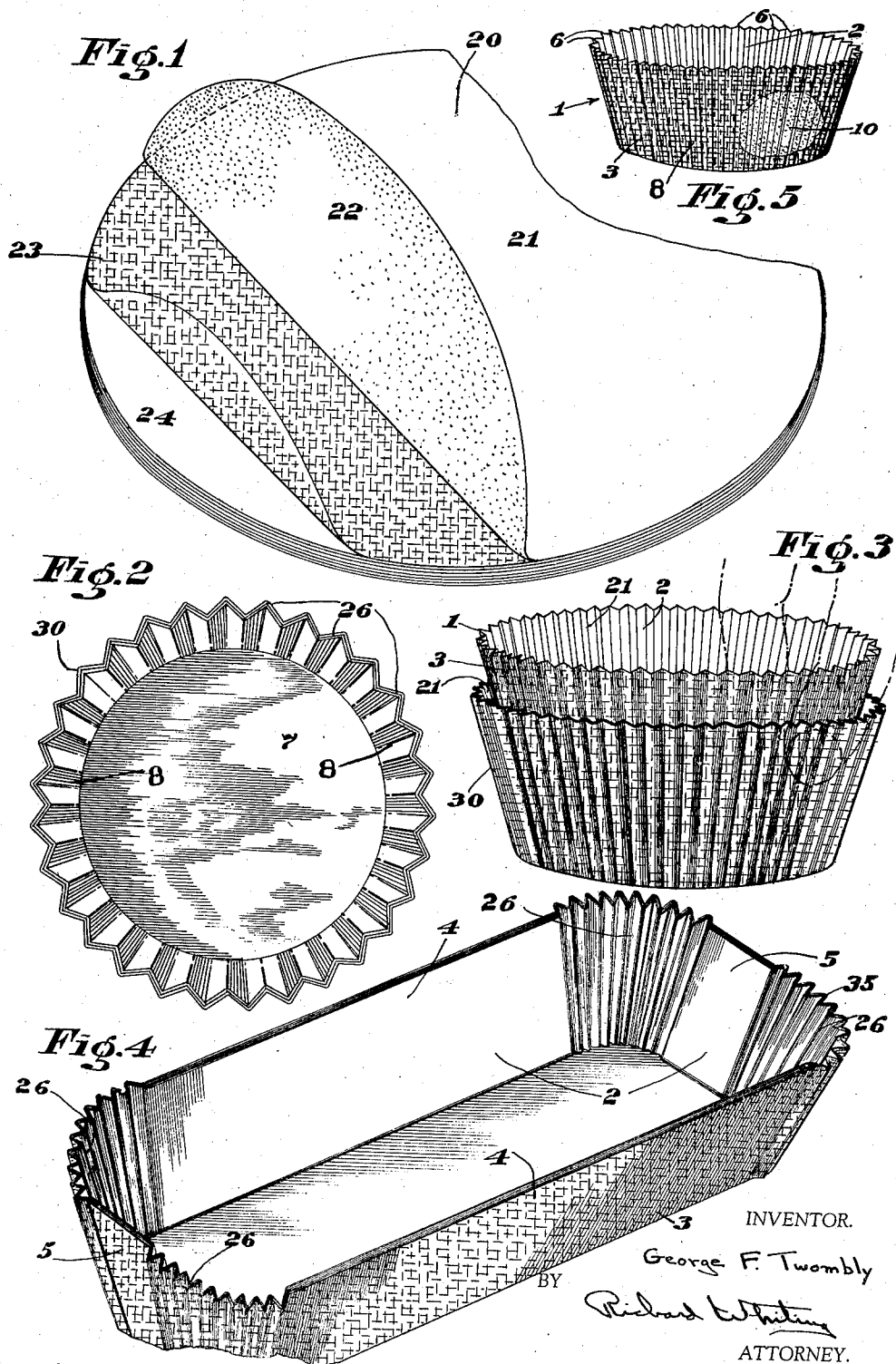
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G. F. TWOMBLY

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PAPER RECEPTACLE

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INVENTOR.

George F. Twombly

BY

Richard L. Whitney

ATTORNEY.

UNITED STATES PATENT OFFICE

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PAPER RECEPTACLE

George F. Twombly, Medford, Mass.

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This invention relates to paper receptacles adapted for use particularly as baking utensils, and to a novel method of making the same, and more specifically it pertains to an article of that character which is made with an outer lamination of colored glassine paper lined with an inner lamination of colorless wax paper, combined and secured together in a novel manner to produce a paper receptacle which possesses greater strength, is more moisture-proof and is more easily handled by the baker, than prior receptacles of a similar nature and which, by reason of its outer decorative colored lamination, imparts an attractive appearance to the food.

Articles of this character in common use heretofore which have been made from single sheets of wax paper, have presented a rather drab appearance, due partly to the necessity for using a colorless sheet to avoid contamination of the food by coloring matter, and such receptacles, furthermore, have had their limitations in that their flimsy construction has usually prevented their being used alone as baking receptacles and has required them to be used as linings inserted within the ordinary metal baking pans.

In an effort to produce a paper container which is attractive in appearance and which is also of a sufficiently strong construction to permit its use independently as a baking utensil, it has been proposed to construct containers from two sheets of paper glued together, the outer sheet being corrugated and also colored. United States patent to Scott, No. 1,811,566 shows such a construction. Manufacturing problems are presented when attempting to use corrugated paper glued to a liner to construct such containers, due to the fact that such structure does not lend itself to being die-pressed into any desired receptacle form.

It is an object of my invention to obviate the limitations inherent in prior articles of this nature and to provide a container which can readily be die-pressed into receptacle form and which is sturdy in construction, permitting its use independently as a baking utensil and which also lends itself to attractive color effects. It is my further purpose to provide a simplified method of manufacturing an article which possesses those desirable characteristics.

I have found that a utensil of this character can be effectively constructed from two sheets of paper, one nested within the other and die-pressed to the desired receptacle form, the inner sheet comprising uncolored wax paper suitable for contact with the food and the outer sheet

comprising colored glassine paper which is secured to the inner wax paper lining by flutings simultaneously crimped in both sheets during the shaping operations.

In the preferred embodiment of my invention I also interpose between the outer decorative colored glassine sheath and the inner wax paper lining a thin film of wax which, upon the application of heat and pressure is caused to flow and, after drying, forms a firm bond between the inner and outer laminations of the container. By the provision of such a wax film I not only provide a bond between the paper layers, but I also materially increase the strength of the receptacle and enhance its desired moisture-proof characteristics.

In its method aspect my invention provides for the forming of a large number of containers simultaneously in nested form whereby any desired shape and size of container can be made in a simple and effective manner, and, as will appear from a more detailed description of my invention, the nested assembly of a plurality of containers produced by my novel method of construction also possesses a number of desirable and, I believe, unique characteristics.

These and further objects and advantages of my invention will appear from a more detailed description thereof, taken in connection with the accompanying drawing, in which—

Fig. 1 is a perspective view of a set of glassine and wax sheets superimposed on each other and cut to the desired shape in readiness for die-pressing to form a nest of receptacles;

Fig. 2 is a plan view of a nest of a plurality of receptacles pressed from the sheets illustrated in Fig. 1;

Fig. 3 is a perspective view of the nest of containers of Fig. 2 with the innermost receptacle being removed;

Fig. 4 is a perspective view of a nest of receptacles of rectangular form; and

Fig. 5 is a perspective view of a single receptacle.

Referring to the drawing, I have illustrated in Fig. 5, the finished receptacle which is the subject of the present invention. As therein indicated, the receptacle designated generally at 1 is constructed of an inner lamination 2 of colorless wax paper sheathed in an outer lamination 3 of glassine paper which is preferably colored to enhance the appearance of the receptacle. The side walls of the receptacle are formed with a plurality of flutings or accordion pleats 6 which are crimped in both laminations of the receptacle

simultaneously during the manufacture and these flutings not only give the receptacle the desired shape, but they also serve to secure together the inner and outer laminations. This double layer fluted construction also provides a receptacle which is stronger than those heretofore in common use, thereby providing a utensil which can itself be used independently as a receptacle, as its side wall 8 does not require external support by a baking pan or the like during the cooking.

It will be observed that by providing a two-layer construction I am able to provide an outer layer 3 which is colored to impart an attractive appearance to the comestibles and an inner layer 2 of colorless wax paper which is sanitary and effectively prevents any contamination of the food by coloring matter.

The receptacle embodying my preferred construction includes not only the inner lamination 2 of wax paper and the outer lamination 3 of colored glassine paper, but also a third intermediate lamination 10 (Fig. 5) comprising a thin film of wax which is disposed between the wax lining 2 and the glassine decorative sheath 3. As a result of the application of heat and pressure to the wax layer 10 during the process of manufacture as hereinafter described, the wax is caused to flow between the laminations 2 and 3 of the receptacle and, upon drying, becomes set to form a firm bond between the laminations. The rigidity of the receptacle is increased by the provision of the film of wax 10 and such a film also enhances the moisture-proof properties of the receptacle.

In accordance with my preferred method of making such receptacles, I first cut a plurality of sheets of glassine and wax paper to that shape, which, after die-pressing into receptacle form, will produce a receptacle of the desired shape and dimension. The glassine paper which I employ is of the usual character well known by that name to the trade and is preferably colored to enhance the appearance of the finished receptacle. The wax paper is preferably not only impregnated with wax, but, for the purpose of providing the intermediate wax film 10, it is also provided with a relatively greater amount of wax on one surface than on the opposite surface. A sufficient amount of wax should be provided on the excessively waxed surface to insure that that surface of the waxed paper will become fairly moist upon the application of heat.

A number of wax paper and glassine paper sheets of the above characteristics, after being cut to the desired shape as described above, are then superimposed alternately upon each other to form the pile of sheets indicated generally at 20 in Fig. 1. The upper sheet 21 of the pile is a wax paper sheet, the undersurface 22 of which is provided with an excess of plastic wax. Disposed immediately beneath the sheet 21 is a colored glassine sheet 23, beneath which is disposed another wax sheet 24, and so on.

The pile of superimposed wax and glassine sheets so arranged is then die-pressed by means of apparatus of a type well known in the art and provided with a male and a female die shaped in the form desired for the receptacle. This apparatus in one operation produces the nest of receptacles illustrated at 30 in Fig. 2 with the flat bottom portions 7 and the fluted side walls 8. During this pressing operation I provide for the application of heat to the layers of sheets being pressed in any effective manner such as by heat-

ing both the inner and outer dies, and I have found that the heat so applied will penetrate completely through a rather large number of superimposed glassine and wax paper sheets in an amount sufficient to melt the wax film 22 on each of the wax paper sheets 21 in the pile. The simultaneous application of heat and pressure causes the plastic wax 22 to flow and, after the nest 30 of receptacles so formed has been removed from the press and permitted to cool, the wax film will set and form a firm bond between each wax paper sheet 21 and its companion glassine sheet 23.

The nest of receptacles 30, illustrated in Fig. 2, is sent to the baker in the form shown, without separating the individual receptacles, and bakers have found that such a nest of receptacles forms a handy means of supply from which the individual receptacles can very easily and rapidly be distributed on the large baking pans or trays preparatory to filling the receptacles with individual batches of dough. By engaging the inner layer 2 of the nest with the forefinger while restraining the remainder of the nest with the thumb, as illustrated in Fig. 3, the inner layer 2 of wax paper is elevated and, as a result of the adhesive properties of the intermediate wax film 10, the companion layer 3 of colored glassine paper is simultaneously withdrawn to produce the complete receptacle. I have found that the removal together of the companion layers forming an individual receptacle is facilitated by the presence on the inside surface 21 of each receptacle of a very slight amount of wax which has seeped through the wax paper from the excessively waxed surface 22 during the heating operation, which slight amount of wax functions as a lubricant to aid in the removal of the glassine layers with their companion wax paper layers from the closely compacted nest. By repeating this simple operation the individual receptacles are withdrawn from the nest and the baker need not manipulate the various layers of the nest to insure that both laminations of any individual receptacle are withdrawn together from the nest.

In Fig. 4 I have illustrated a modified form of receptacle to indicate the manner in which the flutings are employed where other than circular or oval receptacles are being made. The nest of rectangular receptacles, indicated generally at 35, is constructed from a pile of alternate sheets of wax and glassine paper just as described above in connection with the circular receptacles to provide the inner wax layers 2 and the outer glassine layers 3. The side walls 4 may be plain surfaced, as indicated; joining the end walls 5 by fluted corners 26 as shown. The flutings 26 may of course be more extensive than indicated in the drawing and if desired the side walls 4 and end walls 5 may also be provided with relatively shallow flutings joining the deep flutings 26 at the four corners.

I claim:

1. As an article of manufacture a compacted group of mutually adherent layers of paper-like material shaped in receptacle form, with side walls tapered throughout its height, all of said layers being compactly crimped together with coincident interlocking flutings and having alternate colored and uncolored layers bonded together by films of wax interposed between the colored and uncolored layers and in which a greater quantity of wax is disposed between each colored layer and the next adjacent enclosed uncolored layer than between the said colored layer and the next

adjacent outer uncolored layer, whereby, when an uncolored layer is withdrawn from the group a surrounding colored layer is simultaneously withdrawn to produce a two-ply receptacle having an uncolored layer enclosed by a colored layer.

2. As an article of manufacture a compacted group of a large number of paper-like laminations formed by superimposing alternate waxed and unwaxed sheets to form a pile and simultaneously pressing all of the sheets in the pile into receptacle form with each unwaxed layer enclosing a contiguous waxed layer and in which there is a greater adhesion between each unwaxed layer and the next adjacent waxed layer enclosed therein than between each unwaxed layer and the next adjacent outer waxed layer, whereby when a waxed layer is withdrawn from the group a surrounding unwaxed layer is simultaneously withdrawn to form a two-ply receptacle having a waxed layer enclosed by an adhered unwaxed layer.

3. As an article of manufacture a compacted group of a large number of paper-like laminations formed by superimposing alternate sheets of waxed and unwaxed paper-like material to form a pile, each of said waxed sheets carrying a greater amount of wax on one surface than on

the other and being so disposed in the pile that the surfaces carrying the greater amount of wax all face in the same direction throughout the pile, pressing simultaneously all of the sheets in the pile into receptacle form in which said waxed sheets have their surfaces carrying the greater amount of wax formed convex, heating the pile of sheets to soften the wax, and thereafter allowing the wax to cool.

4. As an article of manufacture a compacted group of mutually adherent layers of paper-like material shaped in receptacle form, all of said layers being compactly crimped together with interlocking flutings and having alternate layers bonded to layers contiguous thereto by films of wax interposed between the alternate and contiguous layers and in which a greater quantity of wax is disposed between each alternate layer and the contiguous layer enclosed thereby than between the said alternate layer and the next outer contiguous layer, whereby, when a said contiguous layer is withdrawn from the group, a surrounding said alternate layer is simultaneously withdrawn to produce a two-ply receptacle having one of said contiguous layers enclosed by one of said alternate layers.

GEORGE F. TWOMBLY.