My invention relates to a display package. It has to do, more particularly, with a protective package which is especially suitable for packaging foods so that they can be displayed in a sanitary and an appealing manner to prospective purchasers and also serve as a container after purchase, to facilitate storing in a refrigerator or cupboard, until the customer is ready to use the food. In the following description I refer to the package as being for pre-cut meats, such as lunch meats, but it is to be understood that it can be used for protectively and attractively packaging other articles.

This application is a continuation-in-part of my copending application Ser. No. 295,540, filed June 27, 1952, now abandoned.

The package of this invention not only protects the food in a sanitary manner and displays the contents attractively and appealingly but is also of such a nature that it is readily adaptable to production packaging methods. Furthermore, the cost of this package is relatively low. Also, the package is such that it facilitates storing of food in a refrigerator or cupboard. When the food is to be used, the package is such that it can be removed readily therefrom for serving.

According to my invention, the package consists of an upwardly convexly curved or bulged supporting base upon which the pre-cut or sliced meat, for example, is disposed preferably in a neat pile or stack. Over this base-supported stack of meat, a sheet of transparent protective flexible covering material or film is disposed with its edges folded and gathered down around the base. A retaining band member is then positioned on the edge of the base, the retaining band being provided with a groove on its interior surface into which the edge of the base will snap so as to grip the transparent sheet material between the edge of the base and the retaining band and thereby retain the transparent cover over the meat. The retaining band is flared at its lower side to guide the base into the band to a position where its edge will snap into the retaining groove in the band. Both the base and the band are preferably made of yieldable material to facilitate insertion of the base into the band. The flexibility of the base is increased and its insertion into the retaining band is simplified by having it of convex form.

The protective film is preferably formed of a thermoplastic material which will shrink when heated to a pre-selected temperature. Vinyldene chloride plastics are suitable for this purpose and more specifically, one of the "Saran" type, manufactured by the Dow Chemical Company, has been found by me to be particularly suitable. This type of film when heated to a temperature of from 195° to 205° F. will shrink. Therefore, in packaging the meat product, according to my invention, after the package is assembled as indicated above, it is preferably dipped in hot water or sprayed with water at a temperature of 195° to 205° F. to cause the film to shrink. This will cause the convex base to press upwardly on the lower surface of the stack of meat so that the top surface of the stack will be in tight contact with the protective cover film which will be smoothed by the pressure of contact and will, therefore, give the meat a most attractive appearance. This appearance will be enhanced because the pressure exerted by the convex base will cause the upper surface of the meat to assume a similar contour. Furthermore, since the film will be in tight contact with the upper surface of the meat, there can be no condensation develop between the film and such surface due to variations in temperatures.

The preferred embodiment of my invention is illustrated in the accompanying drawings wherein similar characters of reference designate corresponding parts and wherein:

Figure 1 is a view partly in side elevation and partly in section showing a complete package according to my invention with pre-sliced meat therein.

Figure 2 shows a supporting base in the form of a dome-shaped disc upon which the meat is to be disposed.

Figure 3 shows the meat disposed on the disc.

Figure 4 shows the sheet of transparent covering material disposed over the meat and disc.

Figure 5 is a plan view of the retaining band in the form of a ring.

Figure 6 shows the retaining ring being applied over the transparent material and the disc.

Figure 7 shows the retaining ring in final position with the edges of the disc snapped therein.

Figure 8 is an enlarged transverse section through the retaining ring.

Figure 9 is an enlarged transverse section through the ring showing the edge of the disc positioned thereon to retain the covering material in position.

Figure 10 is a perspective view of a convexly curved base of square outline for supporting a stack of meat of square outline.

Figure 11 is a plan view of a retaining band to be used on the base of Figure 10.

With reference to the drawings, in Figure 1, I have illustrated a complete package. I have shown, for example, a stack of pre-cut lunch meat as the article being packaged, the meat being in the form of a cylindrical stock C.

The stack of meat C is supported on an upwardly convexly curved base 10 which is in the form of a dome-shaped disc preferably of a suitable yieldable or elastic transparent plastic material. Covering the stack of meat C is a protective wrapper 11 which is transparent and which is preferably formed of a suitable plastic film, which will suitably protect the meat and still show it attractively. This film, as previously indicated, is of such a type that it will shrink when immersed in or sprayed with water at a temperature of from about 195° to 205° F. Surrounding the edge of the disc 10 and retaining the lower edge of the wrapper 11 in sealing engagement therewith is the retaining ring 12. This ring 12 preferably is also formed of a suitable yieldable plastic and may be colored for contrast. It will be noted from Figures 1 and 8 that the ring 12 is provided with a lower skirt 13 flared outwardly to guide the disc 10 thereinto as will later appear. Spaced upwardly from its lower edge, the ring 12 is pro-
vided with a disc-receiving groove or channel 16, the ring being provided with an inwardly offset inwardly tapering lip 15 above the groove 16.

In packaging the meat, a suitable dome-shaped disc 10 of suitable size is selected as shown in Figure 2. Then the cylindrical stack of pre-cut meat or single piece of meat is rested on the disc as shown in Figure 3. The disc will be slightly greater in diameter than the meat so that it will be project outwards therefrom completely around its periphery, but the diameter of the disc is kept close to that of the meat supported thereon so that the void annular space around the stack of meat will be kept at a minimum. Next the sheet 11 of transparent material is placed over the stack of meat and is folded downwardly around it and along the edge of the disc 10 as shown in Figure 4. The retaining ring 12 is then positioned on the package, as shown in Figure 6, either by moving the ring downwardly over the enclosed stack of meat or by lifting the disc 10. When the ring 12 and disc 10 are positioned properly, the disc 10 is guided upwardly therewithin by the flared lower portion 13 of the ring and the disc will finally snap into the groove 16 where it will be retained and the material 11 will be gripped between the ring and disc as shown in Figures 7 and 9. Any excess of the sheet material 11 extending below the ring 12 may be removed by severing it at a suitable point below the lower edge of the ring. Because of the dome-shape of the disc 10, its flexibility is increased and also its insertion into the ring is facilitated. As shown in Figure 7, the shape of the edge of the disc 10 is important. The lower corner of the edge is a sharp knife edge 17 which will effectively grip the sheet material 11 which, as shown in Figure 9, will extend a substantial distance below the edge 17 so it will be effectively gripped. The upper corner is rounded at 18 of the sheet material 11 will not cut or tear along this line when the material is shrunk in the manner described below.

After the package is assembled as indicated above, it is dipped in water or sprayed with water, vapor or liquid, which will be at a temperature ranging from 193°F to 205°F. This will cause the plastic film 11 to shrink. The portion of the film extending below the edge 17 of the ring will shrink and shivel and cooperate with the edge 17 to form a seal at such edge. The convex upper surface of the disc 10 will push upwardly against the bottom of the stack of meat C and will cause its uppermost portion of the meat to tightly contact with the film. Since the film 11 will tightly and smoothly contact the upper surface of the stack C of meat, the upper surface of the meat will assume the convex contour of the disc 10, as shown in Figure 1. Because of this contact, no condensation can develop between the surface of the meat and the film and, therefore, the meat will be displayed attractively regardless of temperature variations. The protective film 11 will remain under tension so that the tight contact between the film and the upper surface of the meat will be maintained. The meat will be so sealed in the package that any substantial shrinkage thereof will be precluded because the moisture cannot escape therethrough. The groove 16 and the inwardly offset portion 15 of the ring 12 above the groove will eliminate any possibility of the disc 10 moving bodily upwardly within the ring during shrinkage of the film 11.

The base 10 need not be disc-shaped but can be of square outline, as shown in Figure 10, or of square outline and having a stack 10a of square outline. However, the square base 10a will be convex and has an upwardly curving surface which is preferably spherical. This base 10a will receive a retaining band 12a of corresponding outline which is shown in Figure 11. Bases and cooperating retaining bands of any polygonal outline may be provided depending upon the outline of the stack or piece of meat or other article to be packaged.

Thus, the meat will be attractively displayed to prospective customers, the transparent wrapper permitting close sanitary inspection. When purchased, the package can be readily stored until used. When it is to be used, it is merely necessary to snap off the retaining member and remove the wrapper, the meat still being carried by the supporting base for handling. The yieldable nature of the base and retaining member will facilitate assembling and opening of the package.

Various other advantages will be apparent.

Having thus described my invention, what I claim is:

1. In combination, a display package and a flexible commodity displayed thereby comprising a convex base on which said commodity is supported, said base having a marginal area which is a smooth continuous uninterrupted surface that terminates in a continuous gripping peripheral edge, a transparent flexible cover folded downwardly around the commodity and the continuous gripping edge of said base and contacting said gripping edge, and a continuous retaining member surrounding the continuous gripping edge of the base and having a continuous retaining groove formed therein into which the gripping edge of the base is inserted so as to grip the wrapper between the continuous gripping edge of the base and outer continuous wall of said groove, said transparent cover tightly engaging the commodity and pulling it down on the base so that the convexity of the base on which it is supported is transmitted to the flexible commodity to produce a convex upper surface on the commodity beneath the cover so as to provide an attractive appearing upper surface on the commodity displayed beneath the cover, said convex base when in expanded condition being of such area that it extends into said continuous groove and the convexity thereof facilitating flexing downwardly and inwardly to provide for reduction in area to permit snapping into said continuous groove in assembling the package and commodity.

2. The combination of claim 1 in which said base has an edge with a knife-edge lower corner and a rounded upper corner, the knife-edge lower corner contacting the outer continuous wall of said groove to more effectively grip the cover, and the rounded upper corner preventing cutting or tearing of the cover as the edge of the base is snapped into said groove.

3. The combination of claim 2 in which said base and said retaining member are of flexible plastic material, said base being transparent to permit viewing of the commodity from the package.

4. The combination of claim 2 in which the retaining member is flared outwardly below the continuous groove to provide a continuous skirt for supporting the package in upright position for display and to guide the edge of the base upwardly into said groove so as to facilitate contracting the base to a reduced area during assembly of said base and said retaining member, said groove being formed in the retaining member at a level spaced above the lower edge thereof and the retaining member being offset inwardly above the groove.

5. In combination a display package and a commodity displayed thereby comprising a convex base on which said commodity is supported, said base having a marginal area which is a smooth continuous uninterrupted surface that terminates in a continuous gripping peripheral edge, a transparent flexible cover folded downwardly around the commodity and the continuous gripping edge of said base and 10, for supporting the base, and a continuous retaining member surrounding the continuous gripping edge of the base and having a continuous retaining groove formed therein into which the gripping edge of the base is inserted so as to grip the wrapper between the continuous gripping edge of the base and the outer continuous wall of said groove, said transparent cover tightly engaging the commodity and pulling it down onto the base to provide for attractively displaying the upper surface of the commodity displayed beneath the cover, said convex base when in expanded condition being of
such an area that it extends into said groove and the convexity thereof facilitating flexing downwardly and inwardly to provide for reduction in area to permit snapping into said continuous groove in assembling the package and commodity.

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