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H. L. METZGER

2,610,781

BOX

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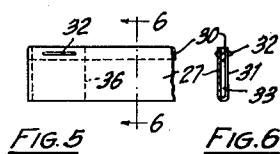
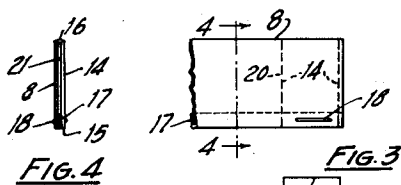
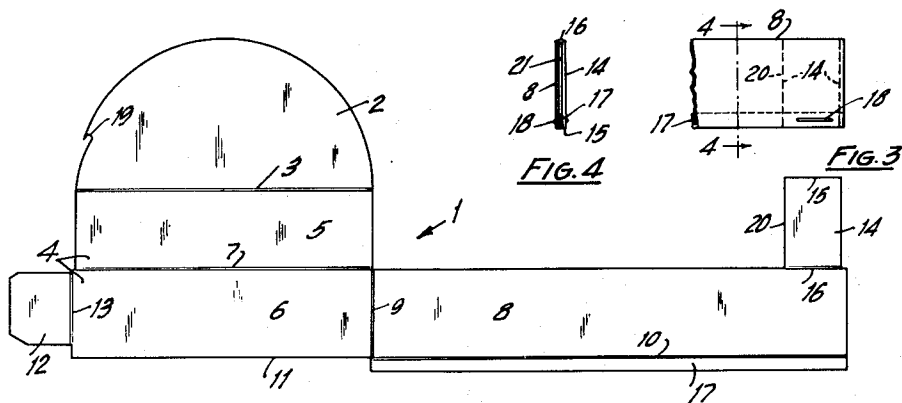


FIG. 6

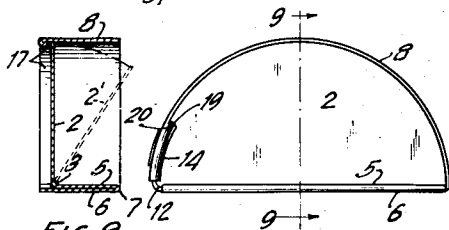
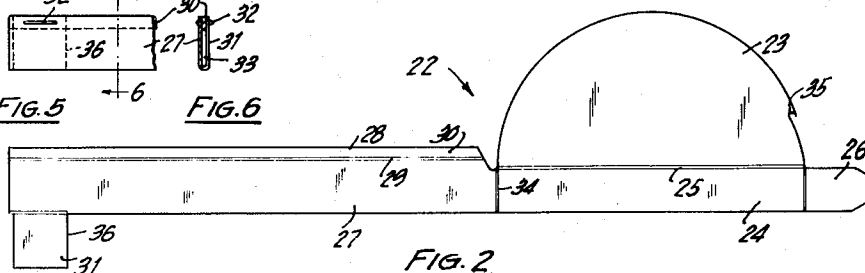


FIG. 7

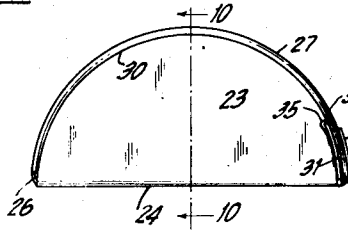
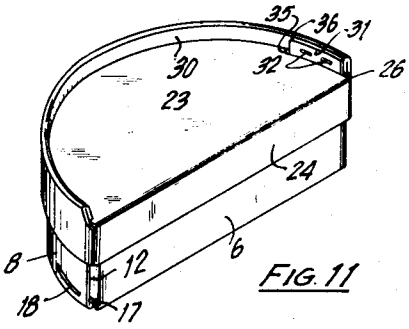
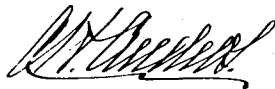


FIG. 10



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BOX

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4 Claims. (Cl. 229-16)

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My invention relates to boxes and particularly to improvements in boxes of the general type commonly used as containers for Camembert and other cheeses. Such boxes, at the present time, are generally formed of thin wood and are comparatively expensive.

The principal object of my invention is to provide a semi-cylindrical box and a cover therefor each of which is formed from a single, integral blank of paperboard or the like. Another object is to provide blanks of paperboard or the like of such design that they may be folded to form a semi-cylindrical box and a cover therefor. Since paperboard of the type suitable for making boxes of this character may have only one side thereof provided with a smooth finished surface, another object of my invention is to provide a blank formed of such paperboard and of such design that, when it is folded to form the box, the finished side of the blank will be on the outer side of the box. Another object is to form a blank of such character that, when it is folded to form the box, certain portions of the blank will be interlocked or interfitted in a manner which will hold the various portions of the blank in box-formed relation.

I accomplish these objects by means of the blanks described below and illustrated in the accompanying drawing in which—

Fig. 1 is a plan view of a blank adapted to form the container element of the box;

Fig. 2 is a blank adapted to form the cover element of the box;

Fig. 3 is a plan view of that portion of the blank shown immediately below it in Fig. 1 after portions thereof have been overfolded and stapled together;

Fig. 4 is a section of Fig. 3 in the plane 4-4;

Fig. 5 is a plan view, similar to Fig. 3, of that portion of the blank shown immediately below it in Fig. 2 after certain portions thereof have been overfolded and secured together by means of a staple;

Fig. 6 is a section of Fig. 5 in the plane 6-6;

Fig. 7 is a top plan view of the container portion of the box with the cover removed;

Fig. 8 is a top plan view of the cover;

Fig. 9 is a section of Fig. 7 in the plane 9-9;

Fig. 10 is a section of Fig. 8 in the plane 10-10; and

Fig. 11 is a perspective view of the completed box.

Referring to the drawings, and particularly to Figs. 1, 3, 4, 7, 9 and 11, 1 represents generally the blank from which the container portion of

the box is formed; and it will be considered that the finished side of the paperboard of which the blank is formed is on the top. This blank comprises a semi-circular portion 2 which is adapted to form the bottom of the box. Attached to the semi-circular portion 2 along the diameter or straight side 3 thereof is a rectangular portion, represented generally at 4, and comprising two parts 5 and 6 which are divided by a score 7. An elongated strip portion 8 is attached at one end thereof to the portion 6 and the blank is scored, as shown at 9, along the line of attachment. The elongated strip 8, adjacent the lower marginal edge thereof, is provided with a longitudinally-extending score 10 which is substantially in alignment with the marginal edge 11 of the portion 6. Attached to that side or end of the portion 6 which is opposite the strip 8, and along the score 13, is a tongue 12 which is somewhat narrower than the width of the portion 6. Adjacent the free end of the strip 8 and extending laterally outwardly from the top edge thereof is a tab 14, the upper edge 15 of which is spaced from the score 16 a distance approximately equal to the distance between the scores 10 and 16.

In forming the container portion of the box, the narrow marginal portion 17 of the strip 8 below the score 10 is folded over against the back of the strip 8, as shown in Figs. 3 and 4. The tab 14 is then downfolded over the back of the strip 8, as shown in Figs. 3 and 4, and secured in downfolded position, with its end overlying the first folded portion 17, by means of a staple 18. The portions 5 and 6 are folded together along the score 7 with the bottom-forming portion 2 in about the position shown at 2' in Fig. 9, or at a more acute angle to the portion 5; the strip 8 and the tongue 12 remaining coplanar with the portion 6. The strip 8 is then first bent sharply along the score 9, and, thereafter, bent into a smooth semi-cylinder, as shown in Fig. 7, and the tongue 12 is tucked into the pocket 21 (see Fig. 4) as shown in Fig. 7. The semi-circular edge of the portion 2 is provided with a re-entrant notch 19 (see Figs. 1 and 7) which is positioned to engage the edge 20 of the downfolded tab 14 when the bottom-forming portion is pushed downwardly from the position 2' into the position 2, and thus not only lock the strip 8 in position around the semi-circular bottom 2 but also prevent the tongue 12 from being withdrawn from pocket 21. In other words, all portions of the blank 1 are then locked in container-forming relation.

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The blank illustrated in Fig. 2 and represented generally by the numeral 22, forms the cover element of the box, and is quite similar to the blank 1. It comprises a semi-circular portion 23 adapted to form the top of the cover and a rectangular portion 24 attached to the diameter or straight portion of the cover along the score 25. Attached to one end of the rectangular portion 24 is a tongue 26 similar to the tongue 12 of the blank 1. Attached to the other end of the rectangular portion 24 is an elongated strip 27 of somewhat greater width than the rectangular portion 24, and which is similar to strip 8 on the blank 1. Adjacent the upper marginal edge 28 of the strip 27 and parallel thereto is a score 29 adapting the marginal portion 30 of the strip 27 to be downfolded along the score until it lies against the back of the strip 27. When the portion 30 is downfolded, the edge 28 is in approximate alignment with the score 25. Adjacent the free end of the strip 27 and extending laterally downwardly therefrom, is a tab 31, similar to the tab 14 on the container-forming blank, and which is adapted to be folded upwardly and backwardly, as shown in Figs. 5 and 6, and to be secured in folded position by means of the staple 32 thus forming, with the strip 27, a loop or pocket 33 adapted to receive the tongue 26 when the blank is folded to form the cover.

In forming the cover, after the marginal portion 31 of the strip 27 has been downfolded and secured in downfolded position by means of the staple 32, the rectangular portion 24 is downfolded along the score 25 to a position which is initially at an acute angle to the semi-circular portion 23 of the blank, as indicated by the angle between the portion 24 and the dotted lines 23' in Fig. 10. The strip 27 is then sharply flexed at the score 34 and thereafter smoothly flexed or bent into semi-cylindrical form, as shown in Fig. 8, and the tongue 26 is tucked into pocket 33. The top 23 is provided with a re-entrant notch 35 similar to the notch 19 in the blank 1, which is adapted to engage the edge 36 of the tab 31, as shown in Fig. 8, when the top 23 is pushed from the position 23' into the position 23 (see Fig. 10) and thus hold the strip 27 in position about the top 23 and prevent the tongue 26 from pulling out of pocket 33. In other words, all parts of the blank 22 are firmly locked in cover-forming relation. The downfolded portion 30 forms a ledge overlying the curved marginal edge of the top 23, as shown in Figs. 10 and 11, and prevents it from rising.

It is understood, of course, that the radius or diameter of the top-forming portion 23 of the cover is somewhat greater than the radius or diameter of the semi-circular portion forming the bottom of the container so that the cover is adapted to fit over the container.

While I have described my box as semi-cylindrical, it will be apparent that its shape depends only upon the shape of the bottom of the container and the corresponding shape of the top of the cover. Obviously, the portions 2 and 23 of the blanks could just as well be made triangular, square, pentagonal, hexagonal, or generally polygonal with the side forming portions attached along any side thereof.

What I claim is:

1. A semi-cylindrical box comprising a container element formed from an integral blank of

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paper board and comprising a semi-circular bottom, a straight side wall attached to the straight edge of said bottom, and a curved side wall attached at one end thereof to one end of said straight wall and extending therefrom around the curved edge of said bottom to a zone adjacent the other end of said straight wall; said bottom and said curved wall being provided with interengaged portions holding said bottom and said wall in container-forming, assembled relation; and said straight wall and said curved wall being provided with interfitting portions comprising a tongue at the end of said straight wall and an inwardly overfolded extension forming a pocket at the end of said curved wall holding said walls in container-forming, assembled relation, said inter-engaged portions constituting the overfolded extension and a notched area in the semi-circular edge of the bottom extending from the straight-edge thereof and terminating along the semi-circular bottom a distance equal to the width of the overfolded extension and engaging an edge of the latter.

2. The structure set forth in claim 1 in which the curved side wall is provided with a portion underlying and supporting the curved marginal edge portion of the bottom.

3. A box comprising a cover element formed from an integral blank of paper board and comprising a semi-circular top, a straight side wall attached to the straight edge of said top, and a curved side wall attached at one end thereof to one end of said straight wall and extending therefrom around the curved edge of said top to a zone adjacent the other end of said straight wall; said top and said curved wall being provided with interengaged portions holding said top and said wall in cover-forming, assembled relation; and said straight wall and said curved wall being provided with interfitting portions comprising a tongue at the end of said straight wall and an inwardly overfolded extension forming a pocket at the end of said curved wall holding said walls in cover-forming, assembled relation, said inter-engaged portions constituting the overfolded extension and a notched area in the semi-circular edge of the top extending from the straight-edge thereof and terminating along the semi-circular top a distance equal to the width of the overfolded extension and engaging an edge of the latter.

4. The structure set forth in claim 3 in which the curved side wall is provided with a portion overlying the curved marginal edge portion of the top and preventing said top from being displaced upwardly.

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