April 4, 1961 H. V. BOLDING 2,978,165

PACKAGING FOLDER

Filed July 23, 1959 2 Sheets-Sheet 1

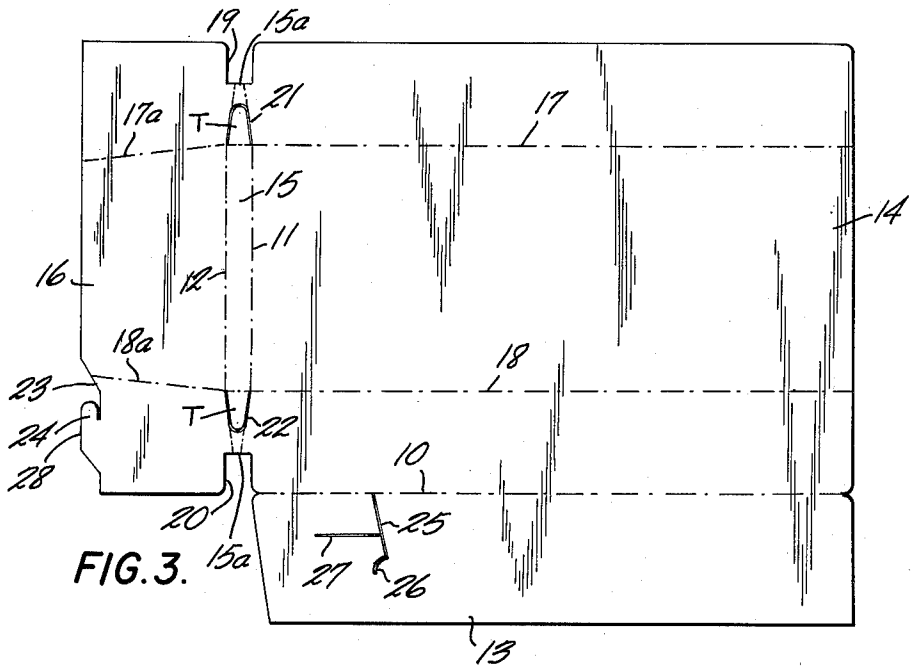


FIG. 3.

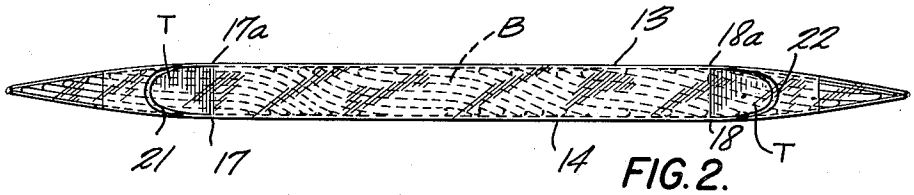


FIG. 2.

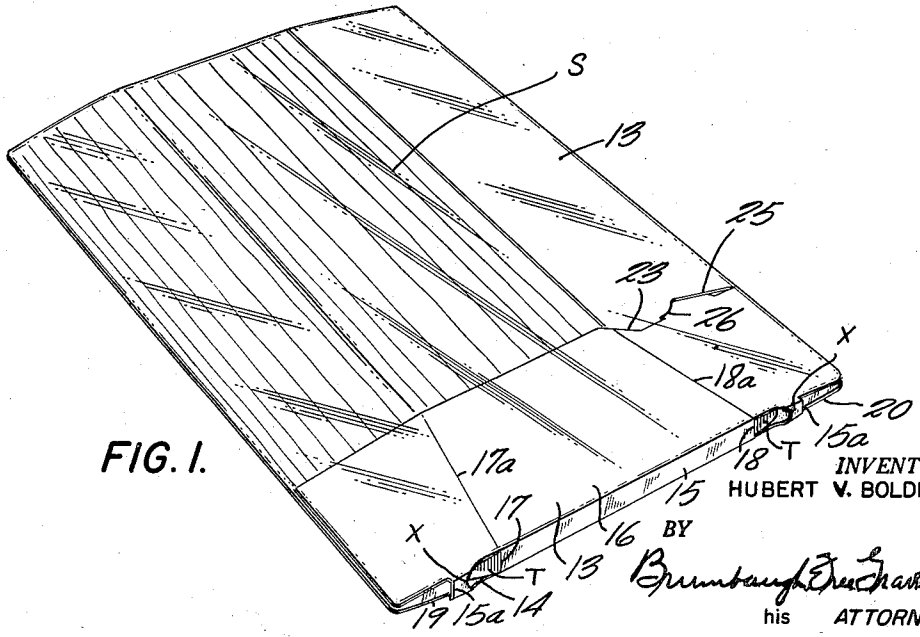


FIG. 1.

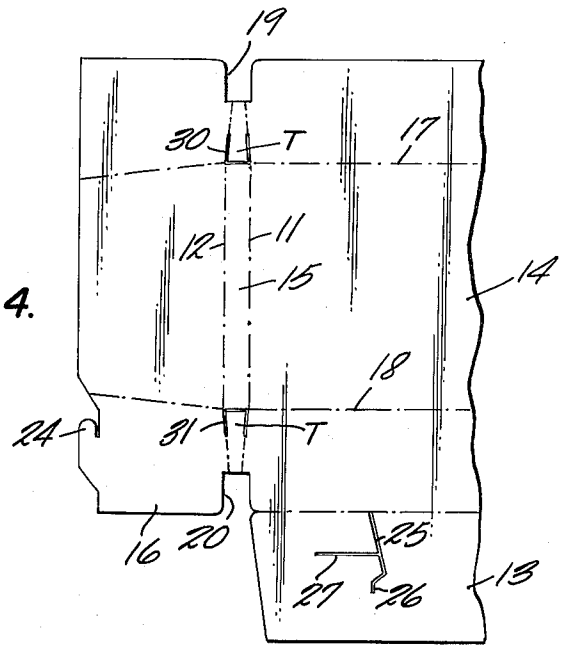
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Filed July 23, 1959 2 Sheets-Sheet 2

FIG. 4.



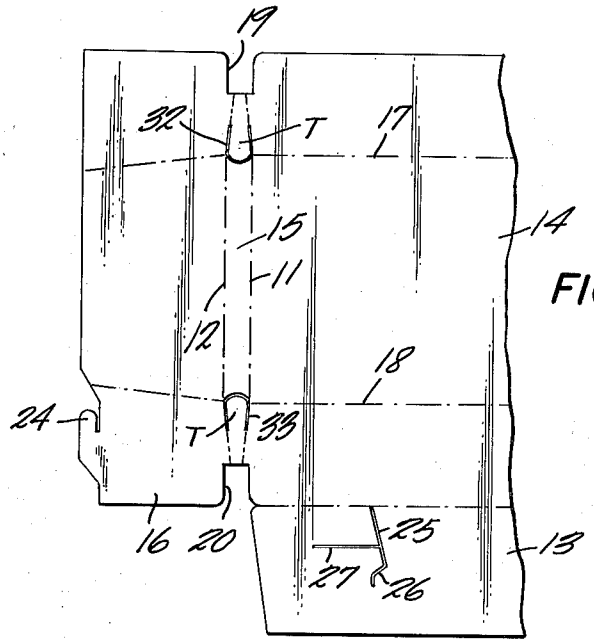


FIG. 5.

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PACKAGING FOLDER

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8 Claims. (Cl. 229—87)

This invention relates to improvements in packages for sliced meats, such as bacon, and other thin products which are conveniently arranged in overlapping relation.

In packaging sliced bacon, it has been the practice in recent years to employ a folder made from a blank cut and scored to form a flat rectangular base panel upon which the product is arranged in overlapping relationship and having interlocking flaps which overlie adjacent margins of the product. In one package of this type, one of the flaps is connected to an edge of the base panel by a narrow end wall which is cut away by open slots at both ends from the flap so that the flap is free to taper toward the flat base panel at both ends to conform to the contour of the product packaged. The sliced bacon thus packaged in the folder is then wrapped tightly in a transparent sheet material so that the portion of the product not covered by the interlocking marginal flaps is exposed to view.

The conventional folder described above has several drawbacks. First of all, the end of the package adjacent the end wall has no pre-established shape and little, if any, rigidity due to the fact that the tapered portions of the end flaps are separated from the end wall by the open slots therebetween. This is a disadvantage which is particularly apparent during the wrapping operation because attractive packaging requires tight wrapping, and tight wrapping with sheet material, in turn, requires a relatively rigid form about which the sheet material is wrapped. Moreover, the freely disposed tapered portions of the end flap afford a considerable freedom of movement to the end flap which makes it difficult to maintain it in proper position during the wrapping operation. This freedom of movement adds to the difficulties in handling the folder especially during and prior to the wrapping operation. In addition, the freely disposed upstanding edges of the end wall adjacent the open slots between the end wall and the end flap expose the sheet wrapping to danger of tearing during the wrapping operation or during the handling of the package after the wrapping operation.

The package of the present invention embodies a novel folder in which one end thereof has a pre-established shape for greater strength and rigidity. Among other advantages, ths greater strength and rigidity permits the sheet material to be wrapped tightly about the folder to improve the appearance of the package. In addition, the package stands up better during handling.

A feature of the novel folder of the present invention is the predetermined taper or convergence which is imparted automatically to both the end cover flap and the base panel of the folder when the folder is set up.

Another feature of the present invention is the provision of reinforcing tabs which form part of the end wall spaced inwardly from the extreme ends of the end wall. These reinforcing tabs impart greater strength to the package, particularly in the region between the converging portions of the base panel and the end cover flap.

For a complete understanding of the present invention, reference can be made to the detailed description which follows and the accompanying drawings, in which:

Figure 1 is a perspective view of a package embodying the novel folder of the present invention;

Figure 2 is an end elevational view of the folder;

Figure 3 is a view of a cut and scored blank from which the folder is made;

Figure 4 is a fragmentary view of an alternative form of blank; and

Figure 5 is a fragmentary view of still another form of blank.

The package illustrated in Figure 1 of the drawings embodies a folder made from a blank cut and scored in the manner shown in Figure 3. The blank is scored along a line **10** adjacent one margin and along lines **11** and **12** adjacent another margin to subdivide the blank into a side cover flap **13**, a main base panel **14**, an end wall **15**, and an end cover flap **16**. The blank is also scored along lines **17** and **18** which extend lengthwise across the main panel **14** and the end wall **15** in parallel lines and continue across the end flap **16** along lines **17***a* and **18***a*, respectively, which taper slightly toward each other.

The score lines **11** and **12** which define the end wall **15** are spaced apart from the inner edge of the recess **19** formed in one edge of the blank to the inner edge of the recess **20** formed on the opposite edge of the blank. More specifically, the score lines **11** and **12** are parallel to each other between the score lines **17** and **18**, but converge toward each other between the respective score line **17** or **18** and the respective recess **19** or **20**.

Reinforcing tabs T are formed in the side wall **15** by U-shaped slits **21** and **22** formed in the blank. The slit **21** is located between the score line **17** and the inner edge of the recess **19**; similarly, the slit **22** is located between the score line **18** and the inner edge of the recess **20**. The legs of the U-shaped slits are coincident with the converging portions of the score lines **11** and **12**. In the embodiment illustrated in Figures 1 to 3, the slits begin at the score lines **17** and **18** and extend outwardly terminating short of the end edges **15***a* of the end wall The connections joining the legs of the slits are located between the respective score line **17** or **18** and the inner edge of the respective recess **19** or **20**.

The free edge of the end flap **16** is cut away at **23** to form an upstanding finger-like locking tab **24**. The side flap **13** is slit along a diagonal line **25** which extends from the score line **10** toward the free edge of the flap **13** in a direction away from the locking tab **24**, and the extreme end **26** thereof reverses in direction. The flap **13** is also cut along a line **27** which intersects at one end thereof with the diagonal line **25**.

In packaging sliced bacon in the novel package of the present invention, the slices are placed in overlapping relationship on the base panel **14**, the slices extending longitudinally from approximately the fold line **11** to the opposite edge of the base panel **14**. The side flap **13** is then folded back along the score line **10** over the end slice or slices to the position shown in Figure 1. Also, the end wall **15** is folded along the score line **11** to upstanding position, that is, a position substantially perpendicular to the main panel **14**, thereby automatically bending the base panel along the lines **17** and **18**, and the end flap **16** is folded along the score line **12** over the ends of the slices, thereby automatically bending the end flap **16** along the lines **17***a* and **18***a*. The flaps **13** and **16** are locked together by inserting the locking tab **14** into the slit **25**. This can be conveniently accomplished by twisting the end flap **16** to place the side edge **28** of the locking tab on the diagonal slit **25** and then inserting the tab **24** into the end portion **26** of the slit **25**.

When the folder is thus erected, the ends of the end wall **15** will tend to angle outwardly away from the plane in which the middle portion of the end wall **15** lies. Thus, the edges **15***a* defining the extreme ends of the end wall **15** are offset outwardly from the plane of the portion of the end wall between the score lines **17** and **18** defined by the parallel portions of the score lines **11** and **12**. The extent to which the edges **15***a* are offset from the plane of the middle portion of the end wall **15** will depend on the included angle between the tapering ends of the score lines **11** and **12**. As the included angle defined by the extreme ends of the score lines **11** and **12** increases, the greater will be the projection of the ends of the end wall from the plane in which the middle portion lies. In the packaging of bacon slices, it has been found satisfactory to taper the ends of the score lines **11** and **12** so that they define between them an included angle in the range of from about 10° to 20°.

Although both ends of the end wall **15** project outwardly from the plane in which the middle portion of the end wall lies, the tabs T formed by the U-shaped slits **21** and **22** tend to lie in the same plane as the end wall **15** or, that is to say, in a position intermediate the tapering portions of the base panel **14** and the end flap **16**. The tabs T thus reinforce the end of the folder and strengthen the end wall **15** against collapse. The reinforcement provided by the end tabs T can be further insured by tucking them inwardly toward the interior of the folder, although this is unnecessary in the embodiment shown in Figures 1 to 3.

When the marginal flaps **13** and **16** have been interlocked in the manner described above, a transparent sheet material S is wrapped tightly about the bacon and the folder. The thickness of the package thus produced, at least at one end, is determined by the height of the end wall **15**. The end wall is of relatively uniform height between the score lines **17** and **18**, and the extent of taper at both ends of the end wall is determined by the included angle between the extreme ends of the score lines **11** and **12**. The included angle between the ends of the score lines **11** and **12**, in turn, determines the extent to which the ends of the end wall angle out from the plane in which the middle portion of the end wall lies, as well as the distance which the extreme edges **15***a* of the end wall are offset outwardly of the plane of the end wall **15**, thus permitting the reinforcing tabs T to occupy positions intermediate the base panel **14** and the end cover flap **16**.

Alternate embodiments of the folder are shown in Figures 4 and 5. In the embodiment shown in Figure 4, the tabs T are defined by U-shaped slits **30** and **31** in which the portions of the slits connecting the legs thereof lie on the score lines **17** and **18** and the legs thereof extend part way along the tapered portions of the score lines **11** and **12** toward the recesses **19** and **20**. The embodiment shown in Figure 5 is generally similar to that shown in Figure 4, except that the portions of the U-shaped slits **32** and **33** which join the leg portions are curved and lie inwardly of the score lines **17** and **18**. In both the embodiments shown in Figures 4 and 5, the tabs T will tend to lie in the planes of the ends of the end wall **15**, instead of in the plane of the middle portion of the end wall **15**. Accordingly, they are preferably tucked inwardly so as to lie intermediate the base panel **14** and the end cover flap **16** in order to afford the desired reinforcement therebetween.

The locking tab T can, of course, be eliminated, but it contributes appreciably to the strength and rigidity of the packaging folder. If the tab T is eliminated, the end wall **15** will be continuous from one edge **15***a* to the other, although even in this case if the end wall is slit along each of the score lines **17** and **18** any tendency of the end wall to buckle will be eliminated.

The invention has been shown in preferred forms and by way of example only, and many variations and modifications may be made therein without departing from the invention. For example, the score lines **17** and **18** can be eliminated, the locking tab **24** can be of different construction, and the packaging folder can be provided with a similar end wall and end flap construction at the opposite end, to mention but a few of the more obvious modifications. Incidentally, even if the score lines **17** and **18** are eliminated, both the base panel and the cover flap will automatically taper toward each other at both ends when viewed from the direction of the end wall, causing both ends of the folder to "feather" at both the top and bottom. The invention, therefore, is not to be limited to any specified form or embodiment, except insofar as such limitations are expressly set forth in the claims.

I claim:

1. A packaging folder made from a cut and scored blank comprising means defining recesses in opposite edges of the blank, an end wall defined between a pair of score lines which extend across the blank from one recess to the other, said score lines being spaced apart throughout their entire lengths but converging toward each other at both ends, said converging portions of the score lines defining between them end portions of the end wall which extend outwardly from the plane of the middle portion of the end wall, the inner edges of the recesses forming the extreme end edge of the end wall, which end edges are outwardly offset from the plane of the middle portion of the end wall, a base panel defined by the portion of the blank adjacent one edge of the end wall, a cover flap defined by the portion of the blank adjacent the opposite edge of the end wall, whereby when the end wall is adjusted to upright position relative to the base panel and the cover flap is adjusted to overlie the base panel, both the base panel and the cover flap will automatically taper toward each other at both ends when viewed from the direction of the end wall, and reinforcing tabs defined by U-shaped slits, said reinforcing tabs each forming parts of the end wall which are interposed between the base panel and the end cover flap.

2. A packaging folder comprising a substantially rectangular base panel, a side cover flap connected to the base panel along one side so as to be foldable to overlie the base panel, an upstanding end wall connected along its lower edge to an edge of the base panel adjacent the said cover flap, an end cover flap connected to the upper edge of the end wall, said end wall being defined by upper and lower edges which are substantially parallel throughout a middle portion thereof and converging at both ends, the lower edge extending upwardly at both ends and the upper edge extending downwardly at both ends, thereby causing the base panel to extend upwardly at both ends when viewed from the direction of the end wall and causing the end cover flap to extend downwardly at both ends when viewed from the direction of the end wall, the middle portion of the end wall lying in a plane defined by the parallel edges and the end portions of the end wall extending outwardly from the said plane so that the extreme end portions are offset outwardly from said plane, and reinforcing tabs defined by slits, said reinforcing tabs forming part of said end walls.

3. A packaging folder as set forth in claim 2 in which the reinforcing tabs are defined by U-shaped slits, said U-shaped slits each having a pair of leg portions and a portion of each slit joining the leg portions, the leg portions of each slit extending along lengths of the converging upper and lower edges of the end wall spaced apart from the extreme end thereof.

4. A packaging folder made from a cut and scored blank comprising an end wall defined between a pair of score lines which extend across the blank from one edge to an opposite edge, said score lines being spaced apart throughout their entire lengths, the score lines being parallel at the middle and converging toward each other at both ends, a base panel defined by the portion of the

blank adjacent one edge of the end wall, an end cover flap defined by the portion of the blank adjacent the opposite edge of the end wall, whereby when the end wall is adjusted to upright position relative to the base panel and the end cover flap is adjusted to overlie the base panel, both the base panel and the end cover flap will automatically taper toward each other when viewed from the direction of the end wall, a side cover flap connected to an edge of the base panel adjacent the end wall, interlocking means carried by the end cover flap and the side cover flap to detachably lock them together, and reinforcing tabs carried by the end wall for insertion between the base panel and the end cover flap.

5. A packaging folder as set forth in claim 4 in which the reinforcing tabs are each defined by U-shaped slits and form parts of the end wall spaced apart from the extreme ends thereof.

6. A packaging folder made from a cut and scored blank comprising an end wall defined between a pair of spaced-apart score lines which extend across the blank and converge toward each other at their ends, a base panel defined by the portion of the blank adjacent one edge of the end wall, a cover flap defined by the portion of the blank adjacent the opposite edge of the end wall, whereby when the end wall is adjusted to upright position relative to the base panel and the cover flap is adjusted to overlie the base panel, both the base panel and the cover flap will automatically taper toward each other at both ends when viewed from the direction of the end wall, and a reinforcing tab defined by a U-shaped slit in the converging portion of the end wall at each end thereof, said reinforcing tab being insertable between the base panel and the cover flap.

7. A packaging folder as set forth in claim 6 in which each U-shaped slit includes a pair of leg portions which extend along lengths of the converging portions of the score lines and a connecting portion between the leg portions.

8. A packaging folder made from a cut and scored blank comprising cutaway portions in opposite edges of the blank, an end wall defined by a pair of scored lines which extend across the blank from one cutaway portion to the other and by the inner edges of the cutaway portions, said scored lines being spaced apart throughout their entire lengths, extending in parallel relationship at the middle but converging toward each other at both ends, the scored lines being spaced apart at their points of intersection with the inner edges of the cutaway portions of the blank, the parallel portions of the scored lines defining a vertical plane in which the middle portion of the end wall lies and the converging portions of the scored lines causing the end wall to angle outwardly from said vertical plane at both ends, a base panel defined by the portion of the blank adjacent one edge of the end wall, and a cover flap defined by the portion of the blank adjacent the opposite edge of the end wall, whereby when the end wall is adjusted to upright position relative to the base panel and the cover flap is adjusted to overlie the base panel, both the base panel and the cover flap will automatically taper toward each other along predetermined scored lines at both ends when viewed from the direction of the end wall, the portions of the cover flap and the base panel adjacent the converging portions of the scored lines being maintained at a predetermined included angle to impart a predetermined shape to the end of the package, and the portions of the cover flap and the base panel adjacent the cutaway portions of the blank being free to assume positions defining between them an included angle different from said predetermined angle.

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