

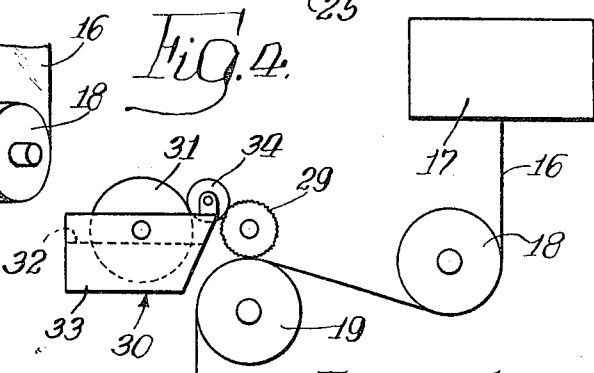
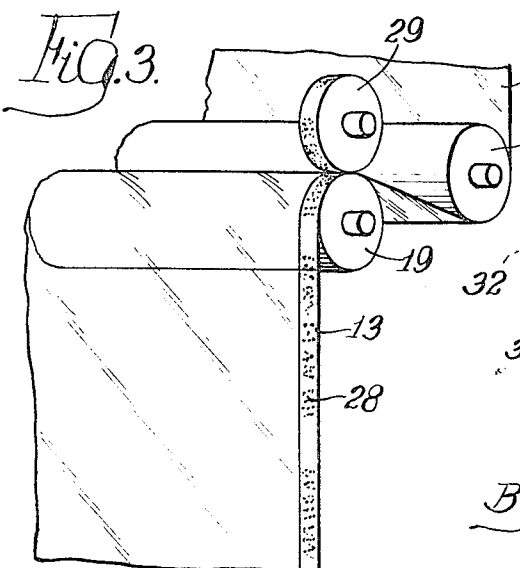
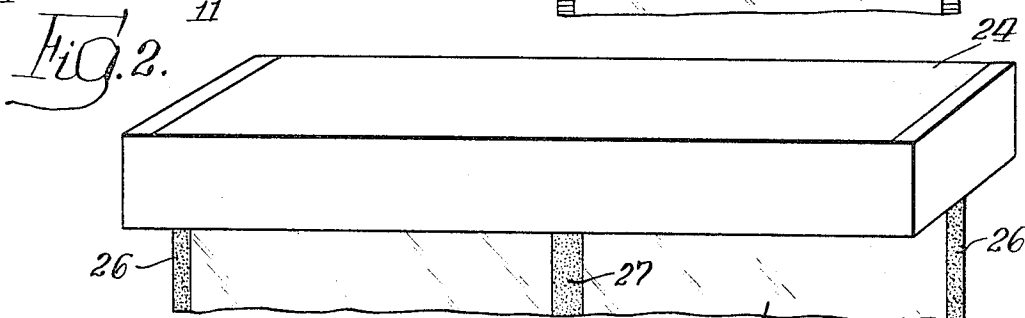
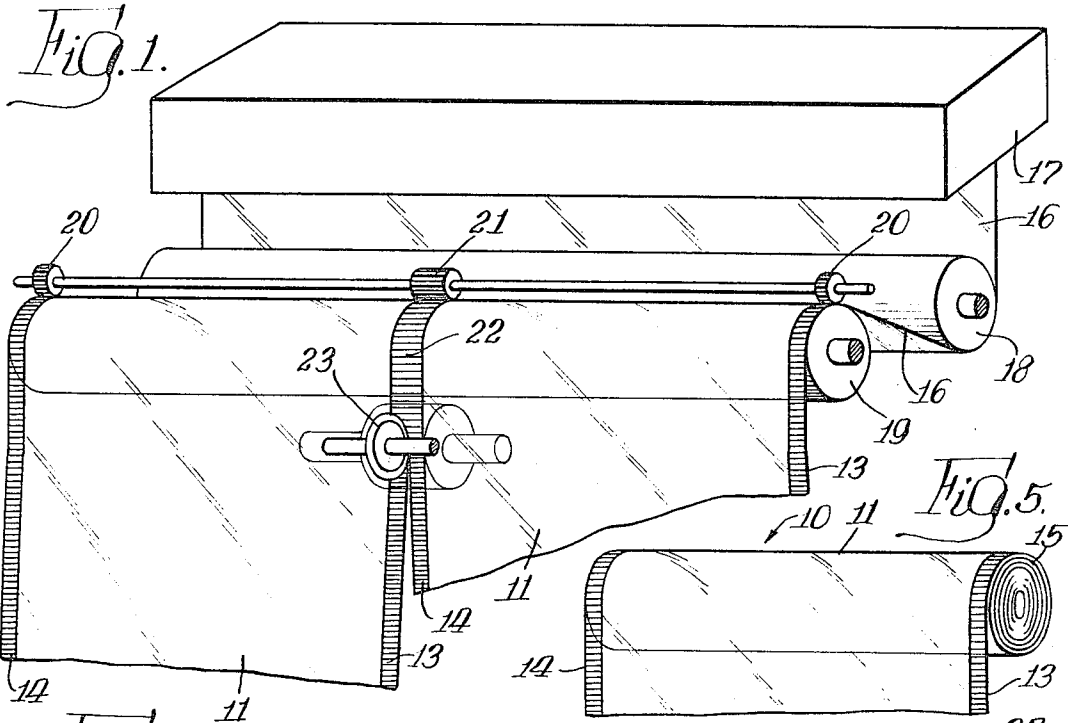
April 30, 1968

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3,380,580

ROLLED SHEET MATERIAL

Filed June 24, 1966



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3,380,580

ROLLED SHEET MATERIAL

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a corporation of Illinois
Filed June 24, 1966, Ser. No. 560,256
9 Claims. (Cl. 296—58)

ABSTRACT OF THE DISCLOSURE

A rolled sheet material having a side edge irregular in the direction of the thickness of the sheet, the mid-portion of the sheet extending between the side edges thereof being regular and the sheet material having a substantially constant thickness throughout.

This invention relates to rolled sheet material and in particular to such material having relatively high tendency to cling to itself.

One improved form of sheet material adapted for use such as a food wrap comprises a thin sheet of polyethylene provided in a rolled configuration in a suitable dispensing container, or carton. Such sheet material has a substantial tendency to cling to itself making it quite difficult for the user to separate the distal end portion of the rolled sheet to permit the withdrawal of the desired length thereof from the roll. Further, the extreme thinness of the material and the substantial transparency thereof make it quite difficult to locate the side edges of the sheet. Still further, such sheet material has a tendency to entrap air between the roll layers in the middle portion thereof, that is the portion between the side edges of the sheet.

The present invention comprehends an improved rolled sheet material which eliminates the above discussed disadvantages of such sheet material in a novel and simple manner. Thus, a principal object of the present invention is to provide a new and improved rolled sheet material.

Another object of the invention is to provide such a rolled sheet material having means at one or both of the side edges of the rolled sheet for facilitating the separation from the rolled configuration of a distal portion of the sheet defining the outermost layer of the roll by providing a visual indication to the user of the location of the sheet edge.

A further object of the invention is to provide such a rolled sheet material having means for facilitating the finger-tip separation from the rolled configuration of the distal portion of the sheet defining the outermost layer thereof comprising means defining an irregular side edge of the sheet providing a series of edge portions spaced from the subjacent layer.

Still another object of the invention is the provision of such a rolled sheet material wherein the side edge is provided with an indicium for providing both a visual indication of the edge and additional information to the user.

A still further object of the invention is the provision of such a rolled sheet material wherein the side edge is embossed.

A yet further feature of the invention is the provision of such a rolled sheet material wherein the sheet edge is colored.

Still another object of the invention is the provision of such a rolled sheet material wherein the sheet is extruded and the edge is formed of extrusion material having a visual appearance different from that of the material forming the sheet between the side edges thereof.

Other features and advantages of the invention will be apparent from the following description taken in connection with the accompanying drawing wherein:

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FIGURE 1 is a fragmentary perspective view of apparatus forming a pair of sheets embodying the invention;

FIGURE 2 is a fragmentary perspective of an apparatus providing an extruded sheet for forming a pair of sheets embodying the invention, the extruded sheet being provided with portions thereof having a visual appearance different from that of the material between the portions, whereby said portions may define the visually readily determinable side edges of the rolled sheet of the invention;

FIGURE 3 is a fragmentary perspective view of an apparatus providing an embossing of the side edge of the sheet comprising an indicium which both visually indicates the location of the side edge of the sheet and provides additional information to the viewer;

FIGURE 4 is a side elevation of the apparatus of FIGURE 3 further illustrating the associated extrusion means and inking means; and

FIGURE 5 is a perspective view of a rolled sheet embodying the invention.

In the exemplary embodiment of the invention as disclosed in the drawing, a rolled sheet generally designated **10** is shown to comprise a sheet **11** formed of a thin material having a relatively high tendency to cling to itself. Thus, for example, the sheet may be formed of polyethylene. The sheet material may be transparent and, thus, in the conventional rolled sheet configuration, separation of the distal portion **12** of the sheet from the rolled configuration is quite difficult because of the difficulty of locating the sheet side edges and after locating the side edges in separating them from the subjacent layer of the rolled sheet. The present invention overcomes this vexatious problem by providing means defining the side edges **13** and **14** as irregular sheet edges and means for visually indicating the location of the irregular edges for facilitating the separation of the sheet portion **12** from the subjacent layer **15**.

More specifically, as shown in FIGURE 1, a pair of sheets **11** may be formed from an extruded sheet **16** delivered from a suitable conventional extrusion apparatus **17** to a setting roller **18** where the extruded sheet material is set. The set sheet **16** is then delivered to a second, or back-up, roller **19**. Embossing means in the form of a pair of thin embossing wheels **20** and a wide embossing wheel **21** are provided for cooperation with roller **19** to emboss the sheet **16** at the opposite sides thereof and along the centerline thereof as shown in FIGURE 1. The middle embossing wheel **21** is twice as wide as the side wheels **20** and forms along the centerline of the sheet **16** a double width embossment **22**. The sheet **16** is subsequently slit along its centerline by a suitable slitting wheel **23** which bisects the embossment **22** and which thereby forms the two sheets **11** each having similar embossed side edges **13** and **14**.

By suitably embossing the side edges **13** and **14**, the embossed side edges themselves may provide a sufficient visual indication of the side edges of the sheet **11** to permit the user to locate these edges for facilitated withdrawal of the distal portion **12** of the sheet. However, to further facilitate such location of the side edges, it has been found desirable to provide an additional indication means at these edges. Thus, for example, as shown in FIGURE 2, a modified extrusion apparatus **24** is illustrated wherein the sheet **25** extruded therefrom is provided with side edges **26** and centerline portion **27** formed of an extrusion material having a visual appearance different from that of the material forming the sheet **25** between the portions **26** and **27**. Portion **27** defines a band having substantially twice the width of the portions **26** and, thus, may be subsequently divided into two

halves by the slitting wheel 23 to form the final rolled sheet material wherein the side edges 13 and 14 have additional visual indicating means formed therein.

Another embodiment of the invention is illustrated in FIGURE 3 wherein visual indication of the side edges is effected by imprinting thereon a suitable indicating means 28. The imprinting may comprise a printed form of the embossing effected by the embossing wheel 29. Illustratively, the embossment 28 may comprise the trademark of the manufacturer of the rolled sheet material 10. As shown in FIGURE 4, the visual indication may be enhanced by inking the wheel 29 as by means of a conventional ink supply mechanism 30 including a supply roll 31 for picking up ink 32 from a suitable receptacle 33 and transferring it through a transfer roll 34 to the wheel 29.

While I have described only several different arrangements of the means providing the irregular edges of the rolled sheet and the means for providing a visual indication of the edges, as will be obvious to those skilled in the art, the structural concepts of such means may be embodied in a substantial number of different forms thereof. Further, as will be obvious to those skilled in the art, the provision of the disclosed means for facilitating separation of the edge of the sheet from other portions of the sheet facially engaged thereby as well as the provision of the means for facilitating the location of the sheet edge may also find substantial advantage after the distal portion 12 is separated from the rolled sheet configuration. Thus, for example, where the separated distal portion 12 is used to wrap a foodstuff the discussed means provide facilitated upwrapping thereof when desired generally in the same manner as in facilitating the withdrawal of the distal portion 12 from the rolled sheet configuration.

By providing the edge irregularity or the visual indicating means in the form of indicium, a synergistic effect is provided wherein these means further provide additional information to the user. Still further, where desired, the edge irregularity or visual indication may be in the form of a highly aesthetic design providing an attractive edging to the sheet synergistically. The extruded sheet portions 26 and 27 discussed above may be colored portions as desired. Further, by providing the radial spacing between portions of the rolled sheet edges and the adjacent layers thereof, entrapment of air in the mid-portion of the rolled sheet configuration is effectively eliminated thereby providing a further improved compact rolled sheet configuration.

While I have shown and described certain embodiments of my invention, it is to be understood that it is capable of many modifications. Changes, therefore, in the construction and arrangement may be made without departing from the spirit and scope of the invention as defined in the appended claims.

I claim:

1. In a rolled sheet of thin plastic material of substantially constant thickness having relatively high tendency to cling to itself by substantially only a static charge, means for facilitating finger tip separation from the rolled

sheet of a distal portion defining the outermost layer thereof, comprising means defining a side edge of said sheet irregular in the direction of thickness of the sheet and extending substantially the length of said sheet for providing in the distal portion comprising the outermost layer of the rolled sheet a plurality of edge portions spaced radially from the underlying layer of the rolled sheet, the mid-portion of the sheet extending between the side edges thereof being regular whereby the distal end of said mid-portion clings to said underlying layer.

2. The sheet means of claim 1 wherein said side edge is provided with means for visual indication thereof.

3. The sheet means of claim 1 wherein said side edge is embossed.

4. The sheet means of claim 1 wherein said sheet is substantially transparent and said side edge is provided with means for visual indication thereof.

5. The sheet means of claim 1 wherein said side edge is provided with an indicium for providing visual indication of the edge and other information.

6. The sheet means of claim 1 wherein said sheet edge is colored.

7. The sheet means of claim 1 wherein said sheet edge is formed of a material having a different appearance from the material forming the portion of the sheet between the side edges thereof.

8. The sheet means of claim 1 wherein said irregular side edge means is provided at each of the opposite side edges of the sheet.

9. In a rolled sheet of thin material having relatively high tendency to cling to itself, means for facilitating finger tip separation from the rolled sheet of a distal portion defining the outermost layer thereof, comprising means defining an irregular side edge of said sheet extending substantially the length of said sheet for providing in the distal portion comprising the outermost layer of the rolled sheet a plurality of edge portions spaced radially from the underlying layer of the rolled sheet, said sheet comprising an extrusion and said edge being formed of extrusion material having a visual appearance different from that of the material forming the sheet between the side edges thereof.

References Cited

UNITED STATES PATENTS

2,274,712	3/1942	Kroner	206—57
2,673,643	3/1954	Blank et al.	206—59
3,016,137	1/1962	Pollock	206—58
1,158,537	11/1915	Muzzy	194—10
1,693,477	11/1928	Collins	221—27
1,944,229	1/1934	Fritsche	221—27
2,190,879	2/1940	Mayfeld	221—277
2,321,642	6/1943	Anthony	221—301 XR
3,050,214	8/1962	Kopf.	
3,103,298	10/1963	Polster	221—312 XR
3,163,275	12/1964	Andrews et al.	221—301 XR
3,248,005	4/1966	Joschko	221—312

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