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D. J. PARMER

2,851,212

OPENING DEVICE FOR BAGS

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FIG. 1.

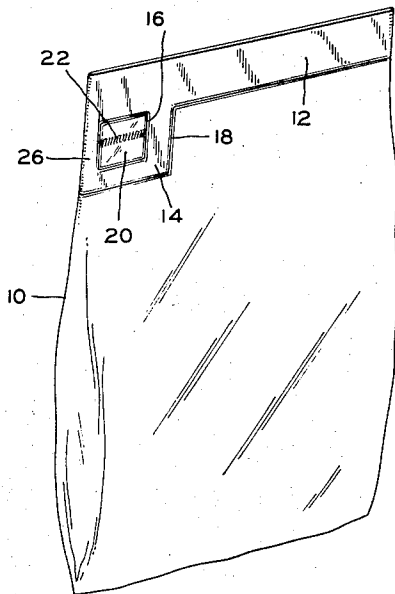


FIG. 2.

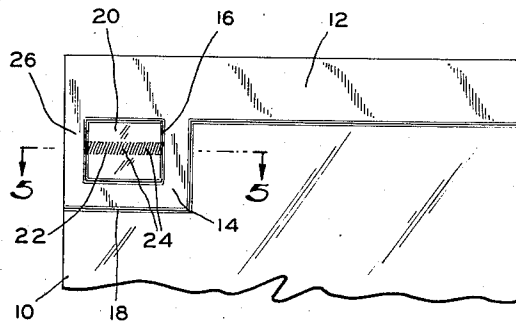


FIG. 4.

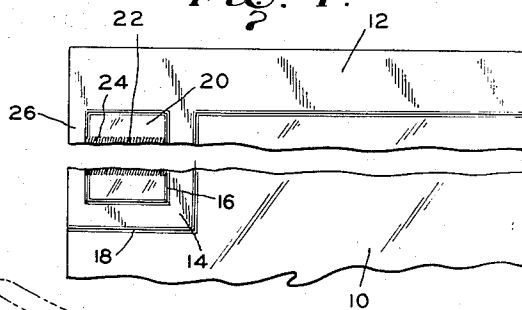


FIG. 3.

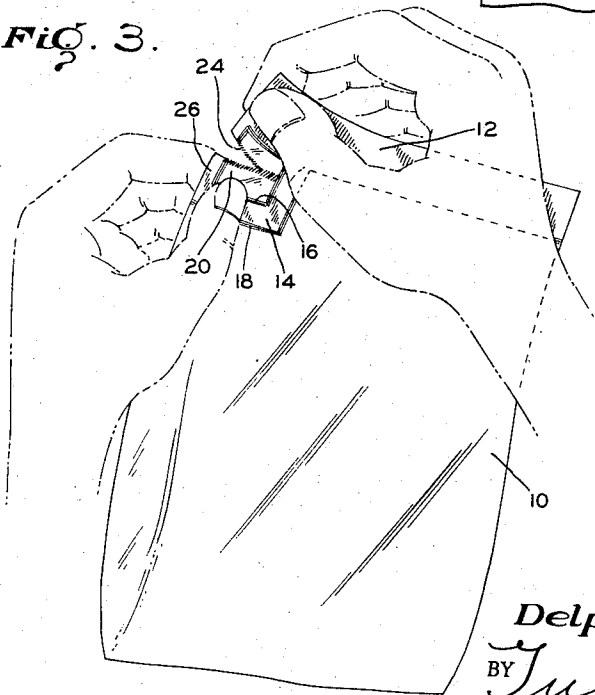
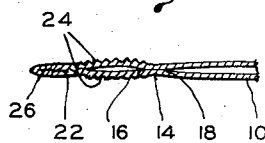


FIG. 5.



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OPENING DEVICE FOR BAGS

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4 Claims. (Cl. 229—66)

This invention relates to sealed plastic or cellulosic bags, and it particularly relates to an opening means for such bags.

Many different items, which are required to be kept unexposed to the air or to dirt and dust, are today sold in bags made of polyethylene, regenerated cellulose, and the like. Such bags generally are open at one end, into which the articles to be packed are inserted. This open end is then sealed by heat, pressure, or both, depending on the nature of the material used.

In order to reach the contents of the sealed bags, it is generally necessary to destroy them by cutting or tearing them open. Since, often it is not convenient to use a knife or scissors in order to open the bag, the general practice now is to provide some means, in the form of a perforated line, a pull tab or a tear strip, to permit opening of the bag without resort to any implements other than the fingers. However, such tearing means are generally not efficient and are certainly not amenable to the sealing arrangement since the perforations or slits tend to expose the contents of the bag, at least to some extent, to the atmosphere.

It is, therefore, one object of the present invention to provide an opening means for sealed bags, of the above-described type, which is effective as a tearing means but which will, nevertheless, prevent any exposure of the contents of the bag to the atmosphere.

Another object of the present invention is to provide a tearing means which blends with the appearance of the bag and does not require the use of any pendent portions which might become entangled during handling of the bag and, thereby, pulled to affect an inadvertent tearing of the bag.

Other objects of the present invention are to provide an improved opening means, of the character described, that is easily and economically produced, which is sturdy in construction, and which is highly efficient in operation.

With the above and related objects in view, this invention consists in the details of construction and combination of parts, as will be more fully understood from the following description, when read in conjunction with the accompanying drawing in which:

Fig. 1 is a perspective view of a bag having an opening means embodying the present invention.

Fig. 2 is a side elevational view of the upper portion of the bag of Fig. 1, showing the invention in greater detail.

Fig. 3 is a perspective view showing the opening means in the process of being torn open.

Fig. 4 is a fragmentary, detailed view, showing the parts of the bag after being torn open.

Fig. 5 is a fragmentary, cross-sectional view taken on line 5—5 of Fig. 2.

Referring now in greater detail to the drawing wherein similar reference characters refer to similar parts, there is shown a bag 10, of plastic, regenerated cellulose, or the like, which is sealed at the marginal area 12.

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At one side of the bag, the sealed area is extended down to include a generally rectangular portion 14 adjacent that one side of the bag. This portion 14 is in the nature of a frame and is defined by the inner and outer sealing lines 16 and 18.

Within the frame 14, in the unsealed area 20, is provided a tear portion 22. This tear portion 22 is a line of weakness consisting of a series of spaced, diagonal striations or indentations 24.

The line of weakness 22 extends almost but not quite to the edge of the area 20. At the edge there is provided a thin sealed portion 26. This sealed portion 26 is provided to add strength to the framed area 20 in the event the line of weakness 22 should inadvertently become torn during handling.

The striations 24 are provided at an angle in order to increase the ease of tearing. The angled striations, by partially overlying one another, tend to carry the tear along to each other much more easily than if the striations were straight. If straight striations were used, there would be a tendency for the tear to stop at the completely unweakened portions between the striations.

Once the tear is started, as by pinching the line of weakness 22 and pulling it apart, the leverage on each side of the line of weakness will carry the tear through the sealing lines and out to both edges of the bag. The top of the bag is then completely severed, as shown in Fig. 4.

Although this invention has been described in considerable detail, such description is intended as being illustrative rather than limiting, since the invention may be variously embodied, and the scope of the invention is to be determined as claimed.

Having thus set forth and disclosed the nature of this invention, what is claimed is:

1. In a package comprising superposed layers of packaging material which it is difficult to start tearing from an edge, said layers forming between them a commodity-containing compartment one margin of which is formed by a sealing flange in which the edge portions of said layers of packaging material are sealed together, a tear-initiating zone comprising an unsealed area of said unsealed portions of layers completely surrounded by a frame of sealed area separating said unsealed area from said compartment, said unsealed area only having a line of weakness extending transversely thereof, whereby said tear-initiating zone easily can be visually located and tearing said package for opening the same can be easily initiated at said line of weakness and continued without difficulty through said frame of sealed area and then through the layers of packaging material to open said package.

2. In the package as described in claim 1, said sealing flange forming one side of said frame of said sealed frame area.

3. In the package as described in claim 1, said line of weakness comprising a series of non-perforating diagonal striations so arranged that the top portion of one striation substantially overlaps the plane of the bottom portion of the adjacent striation.

4. In the package as described in claim 1, said sealed frame area being located adjacent an edge of said package.

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