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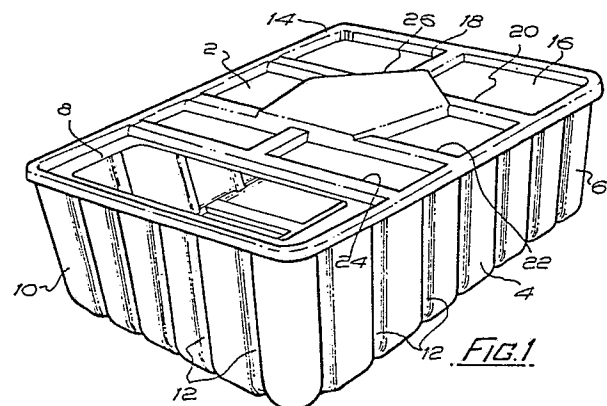
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54 Dispensing containers.

57 To meet the need of the retail trade for a source of bags for wrapping goods, without taking up too much space at the checkout desk, it is proposed to provide a set or plurality of containers, each containing, or for containing, a supply of bags, at least one of the containers having superficial dimensions less than those of the other or at least one of the others, the underside of the smaller container and the upper face of said at least one other, larger, container being provided respectively with matching depressions (16) and projections (18, 20, 22, 24, 26) whereby the smaller container may be placed in stacking relationship upon said at least the other, larger, container.



Description

Dispensing Containers

The invention relates to dispensing containers for bags for retail purposes.

In the retail trade and particularly in departmental stores and supermarkets, there is a need for a convenient source of bags for the wrapping of goods purchased in the store or supermarket, and this source needs to be at or near the checkout desk. Moreover, it is also a requirement that bags of different sizes shall be available, but this requirement has hitherto been at odds with the demand that the source of supply shall not encroach too much upon the available space at the checkout desk.

In order to overcome the abovementioned problem, I propose, according to my invention to provide a plurality of containers, each controlling, or for containing, a supply of bags, at least one of the containers having superficial dimensions less than the other or at least one of the others, the underside of the smaller container and the upper face of the larger container being provided respectively with matching depressions and projections whereby the smaller container may be placed in stacking relationship upon the larger.

Preferably the said projections and depressions are positioned so that when stacked, the larger container projects beyond an edge of the smaller, and the projecting portion of the larger container has an opening in the top for the extraction of bags therefrom.

Preferably the projections and depressions are in the form of a pattern, and the pattern is such that any smaller container will stack upon any larger container. Preferably the pattern comprises a central rib lengthwise of the container, a plurality of transverse ribs and, at least in the larger sizes of container, lateral ribs parallel to the first mentioned central rib, the ribs being provided in the lids of the containers, whilst the undersides of the containers have corresponding grooves.

Embodiments of the invention will now be described by way of example, and with reference to the accompanying drawings of which:-

Figure 1 is a perspective view of a dispensing container for bags seen from above;

Figure 2 is a side elevation of the container of Figure 1;

Figure 3 is an end elevation of the container of Figure 1;

Figure 4 is an underneath plan of the container of Figure 1;

Figure 5 is a section on line X..X of Figure 2;

Figure 6 is a plan view of the top of a container of larger size than that of Figures 1 to 5; and

Figure 7 is a plan view of the top of a container of a size larger than that shown in Figure 6.

As shown particularly in Figure 1 the container is a substantially rectangular box-like structure comprising a lid 2, integral with or bonded to a tray base 4. The corners of the lid 2 and the base 4 are rounded,

and the sides 6 of the tray base are inclined slightly inwardly and downwardly.

The lid and tray base of the container are made of thin plastics material, preferably by thermoforming from a thin sheet of plastics material. The lid 2 is formed with an opening 8 to give access to the interior of the container, and sides 6 and ends 10 of the tray base 4 are provided with flutes 12, vertical in elevation, to increase the strength of the container.

The lid 2 is formed with a peripheral rim 14 of rectangular section shown most clearly in Figure 5. This rim, together with other elements to be described below, projects upwardly from a general level 16. Other portions of the lid elevated, like rim 14, from the general level 16 are a central rib 18 mid-way between the sides, and transverse ribs 20, 22 and 24. A further upward projection, 26, in the form of a rectangular pentagon is located symmetrically with respect to the size of the container and with one edge coincident with rib 22. The projection 26 extends somewhat further from the general level 16 than the rim 14 and the ribs 18 to 24.

As seen in the underneath plan and in the elevations, the underside of the base tray 4 has a series of grooves depressed, when viewed upside down, from the general level 30. Groove 32 is located parallel to and mid-way between the lateral edges of the base, and is of such width and depth as to be able to accommodate the rib 18 of the top of an identically similar container. As shown in Figures 2 and 4, the base also has transverse grooves 34, 36, 38. These are of depth and width similar to the respective transverse ribs 20, 22 and 24 of the lid and are arranged vertically below such ribs. Vertically below the raised pentagon 26 of the lid 2, is a symmetrical 5-sided depression 38 of such size and depth as to be able to accommodate the pentagon 26 of the lid of an identical container, and below the opening 8 is a transverse shoulder 58.

A comparison of the lid and of the underside of the container will demonstrate that for every portion of the lid which is raised above the general level 16, there is, vertically below, in the underside a depression from the general level 30 of such dimensions as to accommodate the projecting portions of the lid of an identical container. Thus, two identical containers as shown in Figure 1 will nest, one upon the other, with the pentagon 26 of the lower box located in the depression 38 in the base of the upper one and likewise with the ribs 18 to 24 located in the grooves 32 to 38 of the base of the lower one.

Two or more containers exactly as shown in Figure 1 may thus be stacked one upon the other, the rim 14 of each lower container surrounding the base of the container immediately above, which is smaller by virtue of the inclined sides 4, and the ribs 18 to 24 and hexagon 26 of the lower container fitting into the corresponding depressions in the underside of the container immediately above. The fit of the base within the rim 14 and of ribs 18 to 24 and the

hexagon 26 within the corresponding depressions of the container immediately above may be slack or tight as required, with the overriding basic requirement that the containers shall not slide relative to one another but stack securely one upon the other.

It is anticipated that the retailer will have a number of containers of similar size in store, stacked as described one upon the other, and one of these containers will be withdrawn from store and placed under the in-use container on the checkout desk when the latter is nearly exhausted so that it may be brought into use immediately the last bag has been used out of the original container.

For the sake of economy of storage it is anticipated that each box will contain only one size of bag, the bags substantially filling the containers when laid flat on the base thereof.

The invention, however, envisages that the retailer will require bags of larger size to be available at the checkout desk, and Figure 6 shows the lid of a container which is of greater length and width than that shown in Figure 1, through of similar depth. As with the embodiment shown in Figures 1, 2, 5, the container of which the lid is shown in Figure 6 has inwardly and downwardly inclined sides as described in connection with the Figure 1 embodiment, and these are fluted again as described in connection with Figure 1, though there may be rather more flutes. The lid has an opening 8 at one end as in the Fig. 1 embodiment and the pentagonal projection 26 is of the same size as in the Figure 1 embodiment and is likewise centrally placed between the lateral edges of the container. Like the ribs 20, 22 and 24 the pentagon is as distant from the end of the container remote from the opening 8 as in the Figure 1 embodiment, but because the container is wider, the ribs 20, 22 and 24 are longer than in the Figure 1 embodiment.

In the lid of Figure 6 there are additional ribs, and there is thus a transverse rib 50 spaced from rib 24 by somewhat less than the distance which in Figure 1 separates rib 24 from the rim 14 to the other side of the opening 8, and the central rib 18 extends between the transverse ribs 24 and 50. There are also ribs 52 parallel to the central rib 18 and as distant therefrom as, in Figure 1 embodiment the central rib 18 is spaced from the rib 14 at the lateral edges.

Because of the taper of the sides, the base of the container of which the lid is shown in Figure 6 will fit within the rim 14 of a container of identical form, loosely abutting against the inner face of the rim. In order for the base to be thus lowered into the lid of a corresponding container the base has grooves and depressions corresponding to the ribs 18 to 24 and a pentagonal depression corresponding to 26 just as in the Figure 1 embodiment but also has a transverse groove corresponding in dimensions and position to the transverse rib 50 and parallel grooves corresponding to the ribs 52.

Not only will a container having such a base fit in the Figure 6 lid; so also will the base of a container of the Figure 1 embodiment because the latter has grooves to accommodate the ribs 18 to 24 and a recess to accommodate the pentagon 26, whilst the

side edges of the base of the smaller container will fit between the lengthwise ribs 52 and the shoulder 58 will abut the rib 50.

It will be observed that with a smaller container nested upon a larger one, the containers will be symmetrically arranged with respect to their width but in respect of their length one end, the ends remote from the openings 8, will be in substantial alignment whilst at the other end, the portion 54 of the lower container, which contains the opening 8, projects beyond the lower container so that the opening is accessible to reach the bags therein.

Figure 7 shows the lid of a container of size greater still and it will be seen to have an additional longitudinal rib 56 and that the rib 50 is displaced from the rib 24 even further than in the Figure 6 embodiment. The base of the container of which the lid is shown in Figure 7 has grooved and depressions corresponding to the various ribs shown on the lid, and again the tapered sides mean that the base will fit within the rib 14 of a corresponding container lid. When supporting the base of a container of the size shown in Figure 6, the lateral edges of the base will abut the ribs 56 of the lid and the ends will abut the rib 50 and the rib 14. The lid of Figure 7 will also nest with the base of a container of the Figure 1 embodiment, the lateral edges abutting the ribs 52. Rib 50, or course, will play no part in preventing movement of such a small container lengthwise of the larger, but this function is satisfactorily provided by the ribs 20, 22 and 24 together with the hexagon 26.

Containers of even larger size may be made to accommodate containers of the same size or of the smaller size as shown in Figures 7, 6 and 1. Such containers will have the lids having ribs 18 to 24 substantially as described above, but with the rib 50 displaced even further from rib 24, and with a pair of additional ribs lengthwise of the container and parallel to and between the ribs 56 and the rim 14 at the lateral edges.

Claims

1. A set or plurality of containers, each containing, or for containing, a supply of bags, at least one of the containers having superficial dimensions less than those of the other or at least one of the others, the underside of the smaller container and the upper face of said at least one other, larger, container being provided respectively with matching depressions and projections whereby the smaller container may be placed in stacking relationship upon said at least one other, larger, container.

2. A set of containers according to Claim 1 wherein said projections and depressions are positioned so that when the smaller container is stacked on a larger container, the larger container projects an edge of the smaller, and the projecting portion of the larger container has an opening in the top for the extraction of

bags therefrom.

3. A set of containers according to Claim 1 or Claim 2 wherein the projections and the depressions are in the form of a pattern, and the pattern in such that any smaller container of the set will stack upon any larger container of the set.

4. A set of containers according to Claim 3

wherein the pattern comprises a central rib lengthwise of the container and a plurality of transverse ribs.

5. A set of containers according to Claim 4 wherein the ribs are provided in the upper faces of the respective containers and the undersides of the containers have corresponding grooves.

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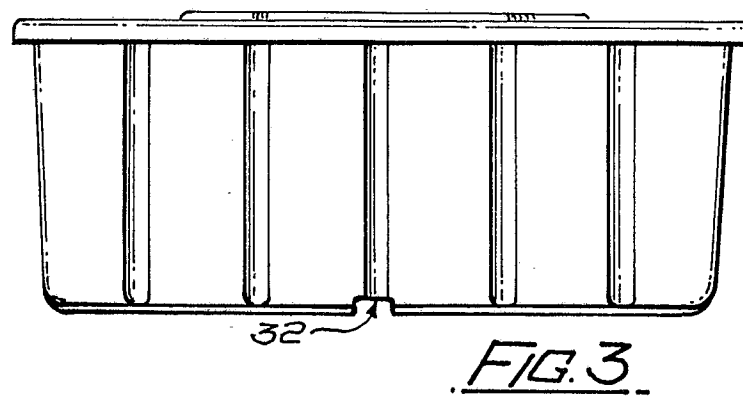
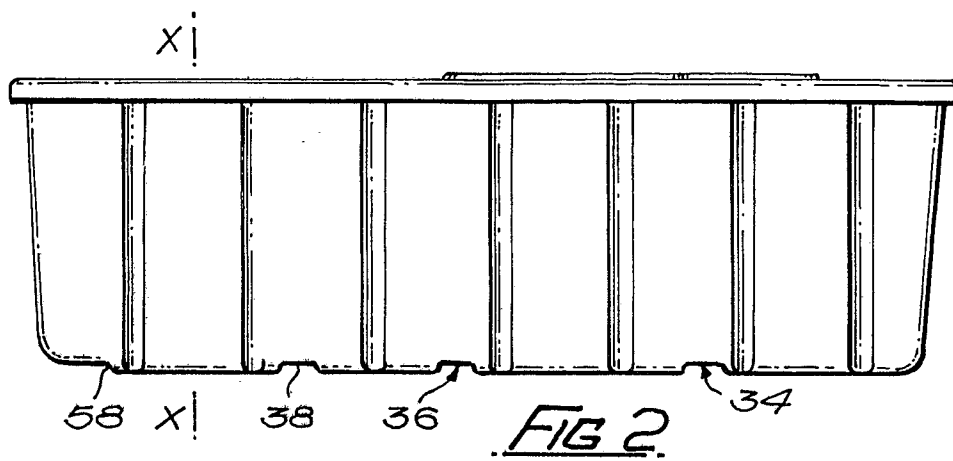
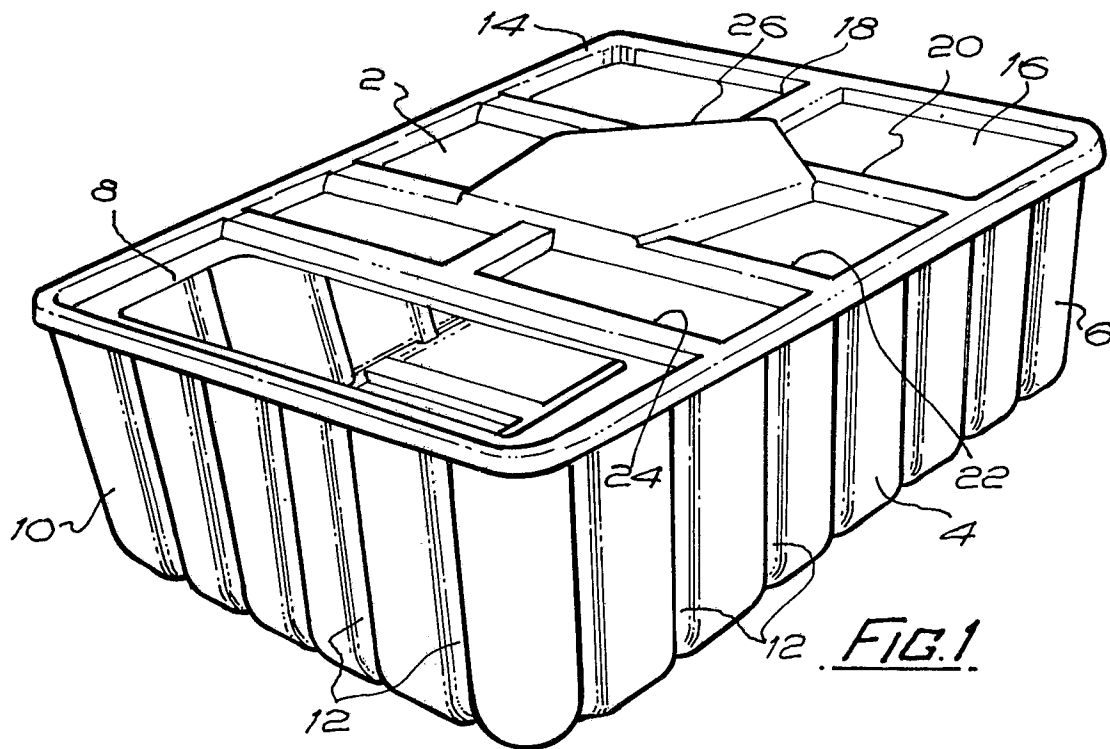
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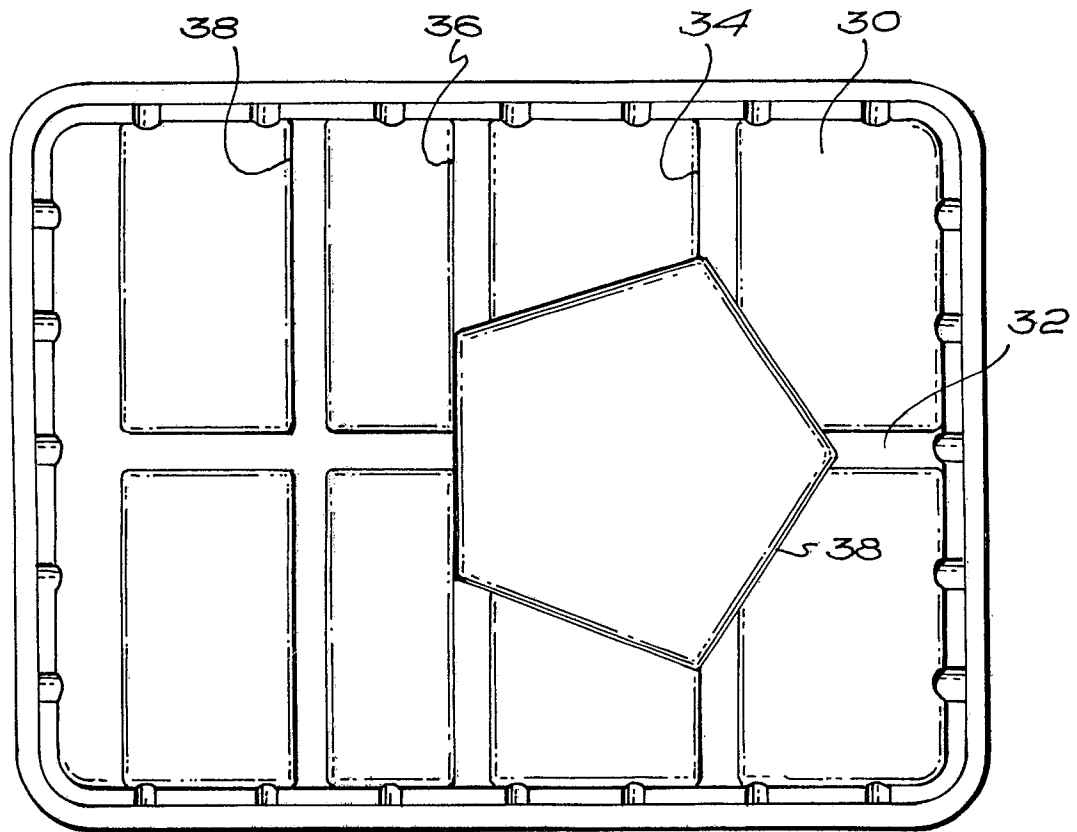
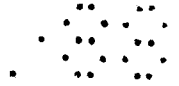


FIG. 4.

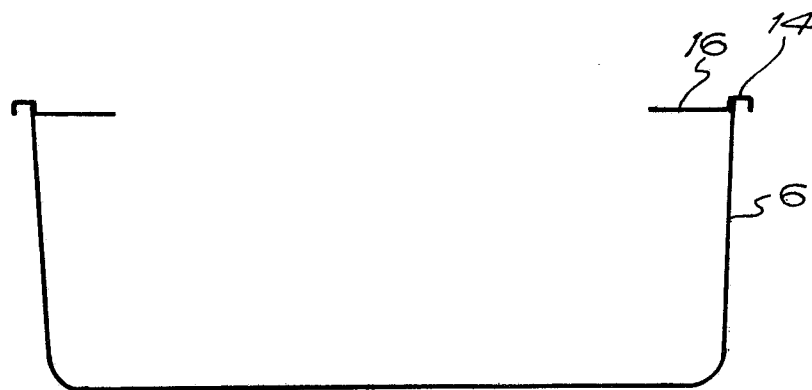


FIG. 5.

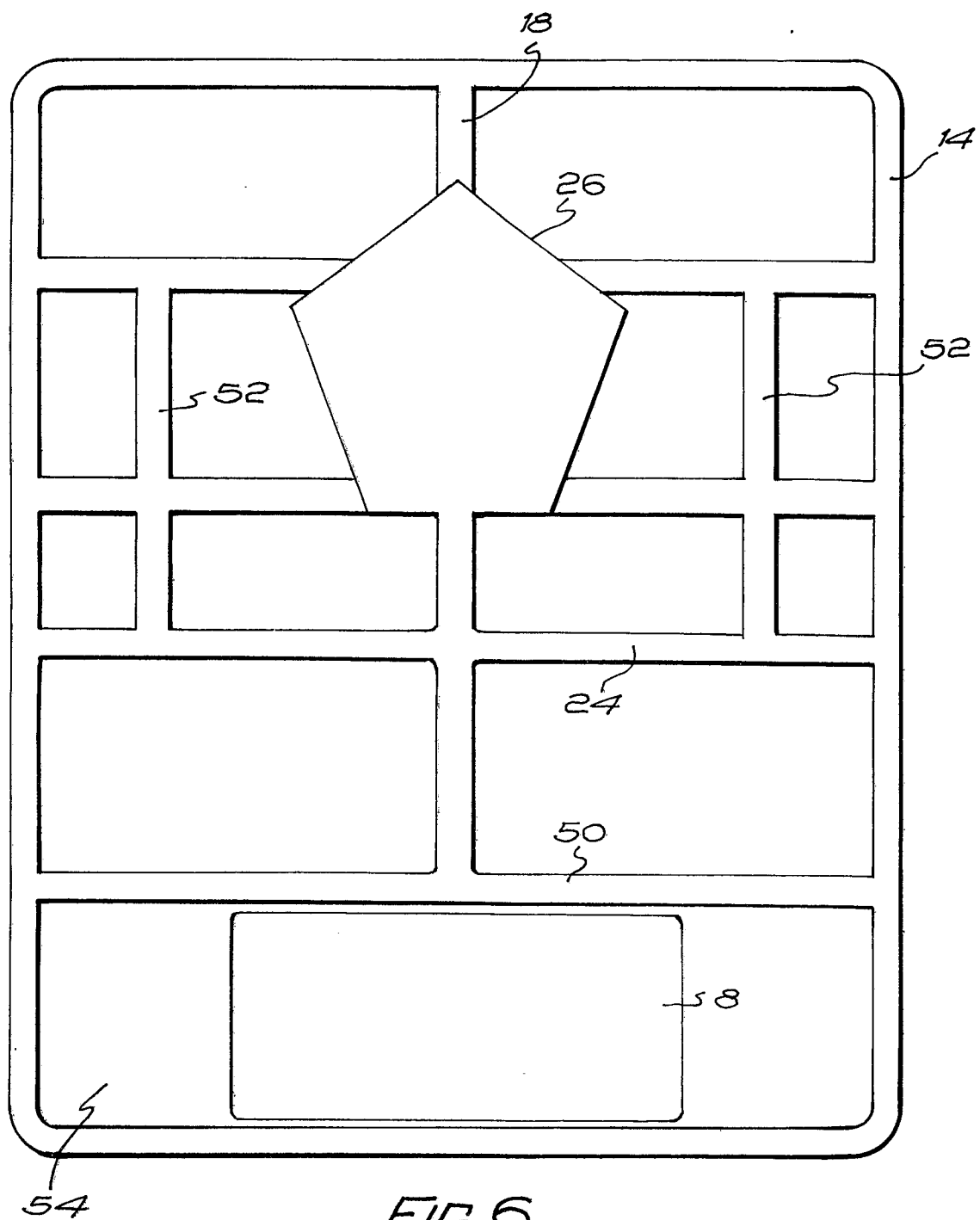


FIG. 6

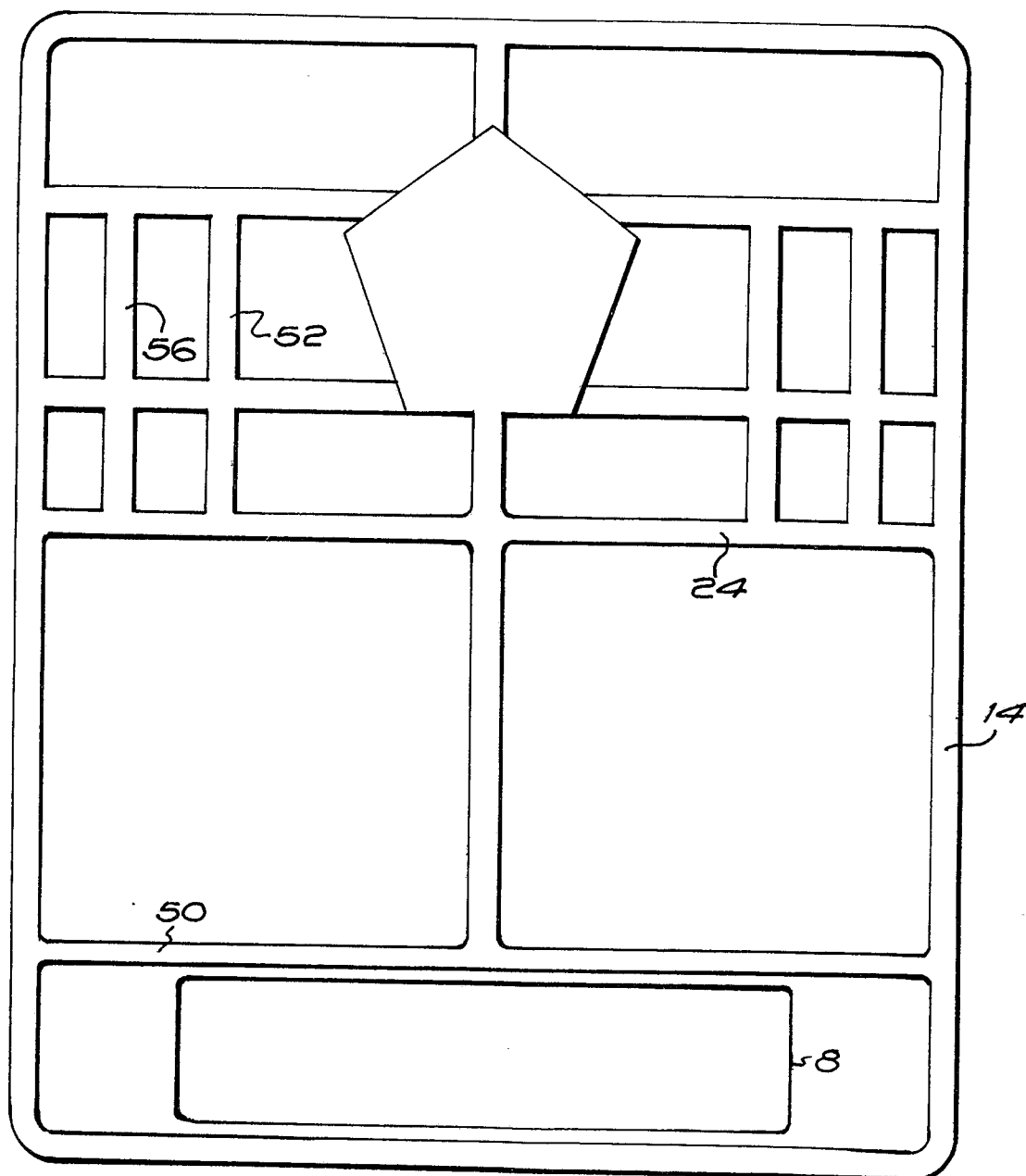


FIG. 7.



DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.4)
A	AU-B- 562 359 (SCHOELLER INTERNATIONAL GmbH) * Figures 2,4-6; page 1, lines 8-16; page 4, lines 14-18; claims 1,2 * ---	1,2	B 65 D 21/02
A	FR-A-2 189 274 (PASSEMENTERIES DU MIDI) * Figures 1,2; page 2, lines 1-11 * ---	3,4,5	
A	DE-A-1 586 868 (WESTFORM PLASTIKWERKE GmbH) * Figures 1-5; page 2, paragraph 2; page 6, last paragraph; claims 1-3 * -----	1-5	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			B 65 D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 28-11-1988	Examiner PERNICE, C.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			