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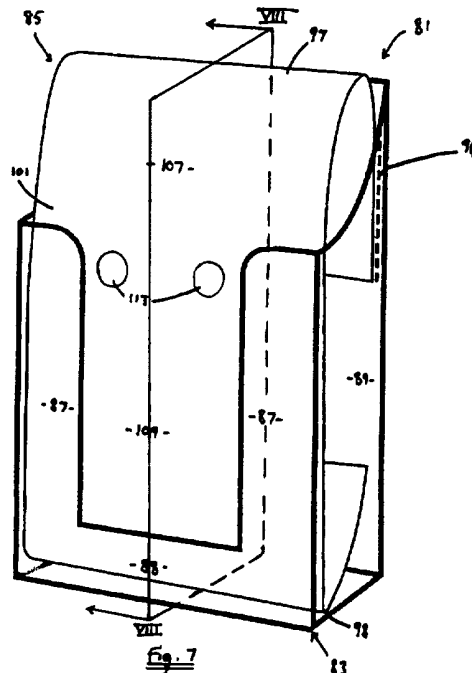
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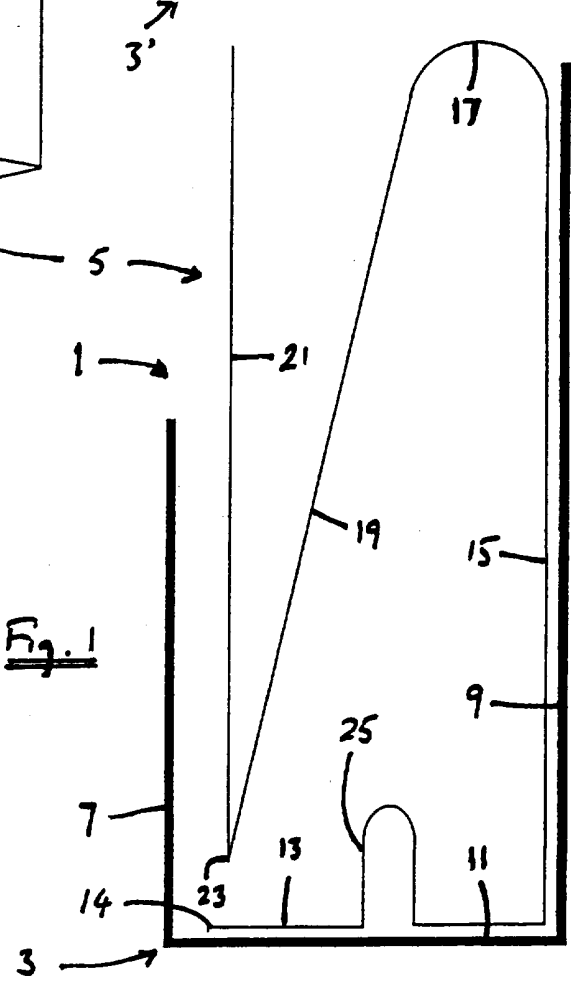
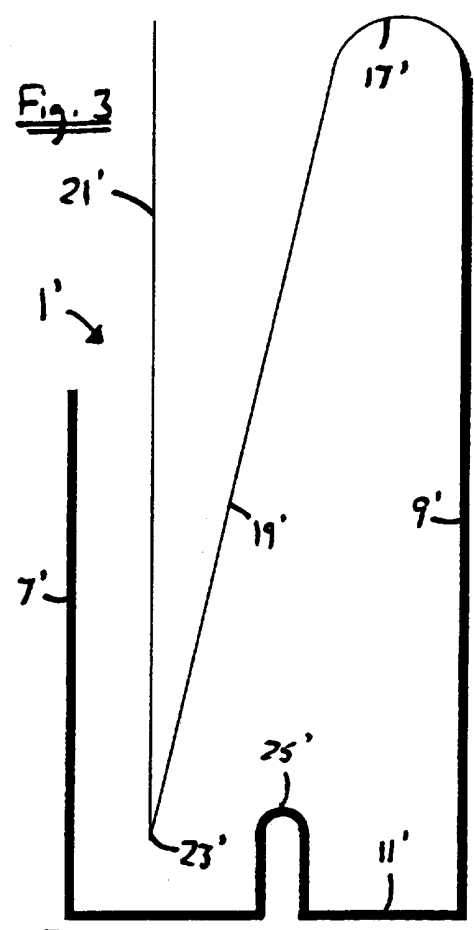
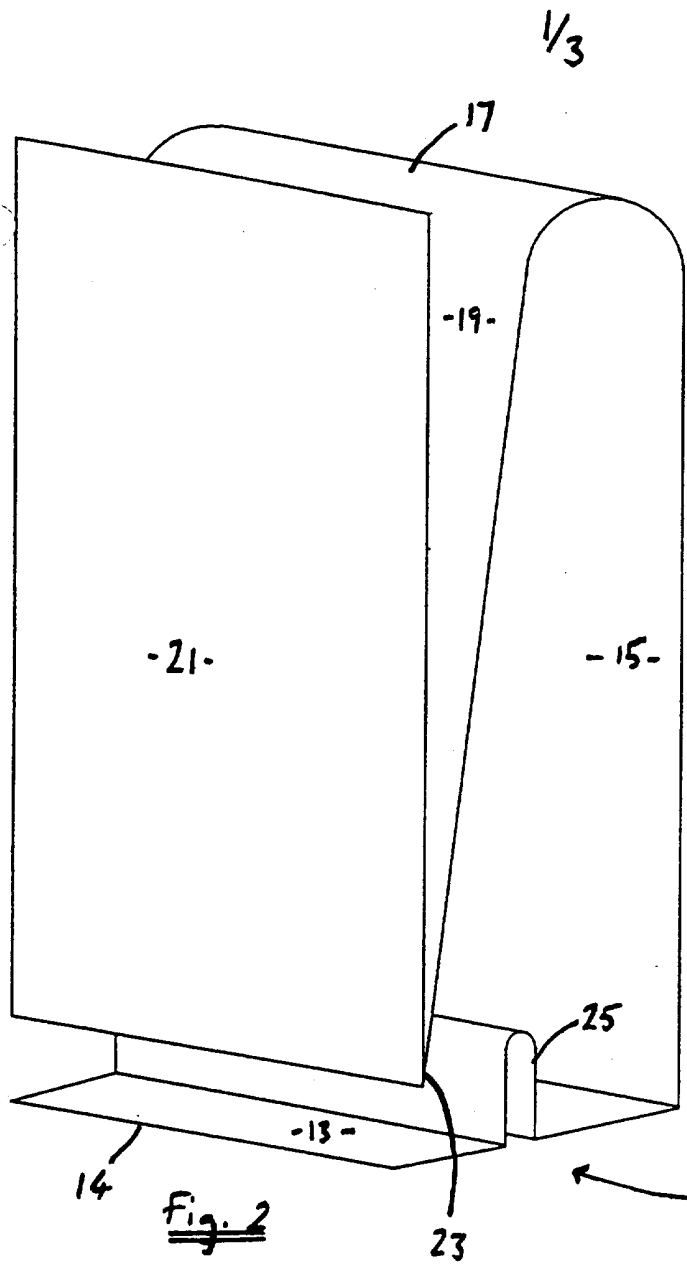
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(54) A leaflet dispenser and insert therefor

(57) A dispenser for sheet material, such as leaflets, comprises an open pocket 83 inside which there is a displaceable tongue 109 which is biased towards the front wall 87 of the pocket. In use, leaflets can be placed between the front wall and the tongue. The tongue may be formed integrally with the pocket (see figs 3 and 6) or may be provided as part of an insert 85 which may be attached for instance by adhesive 94 to the back wall 89 of the pocket. The tongue may have a resilient curved portion 97 and a rearwardly inclined portion 107 for supporting the tops of the leaflets. The pocket may be an open ended box which can be affixed to an upright surface.



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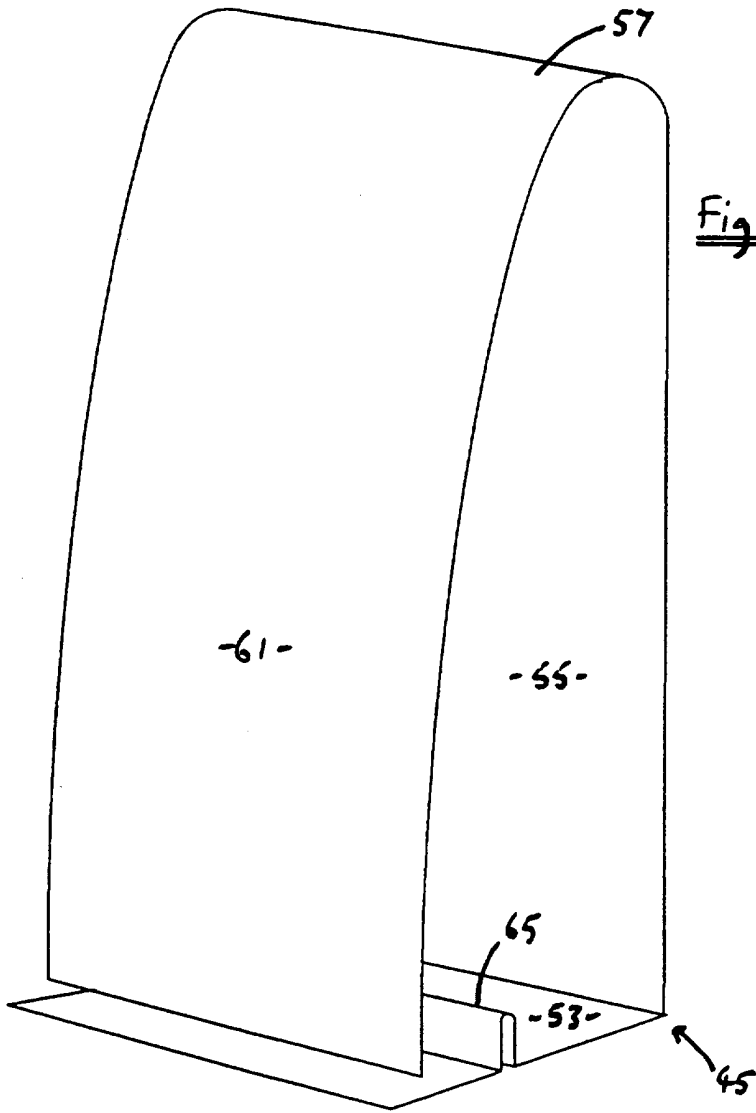


Fig. 5

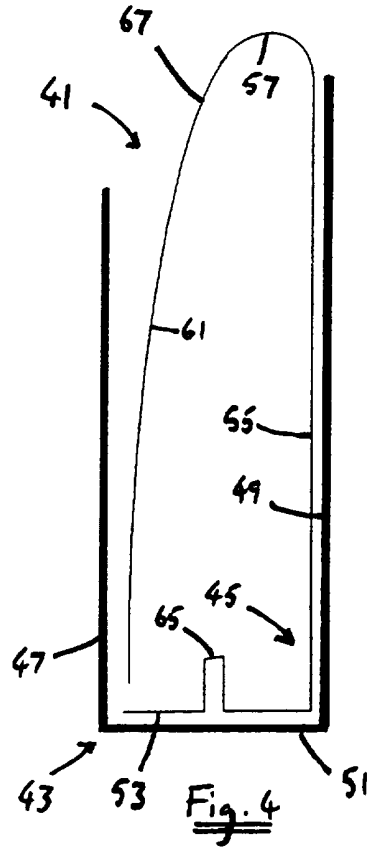


Fig. 4

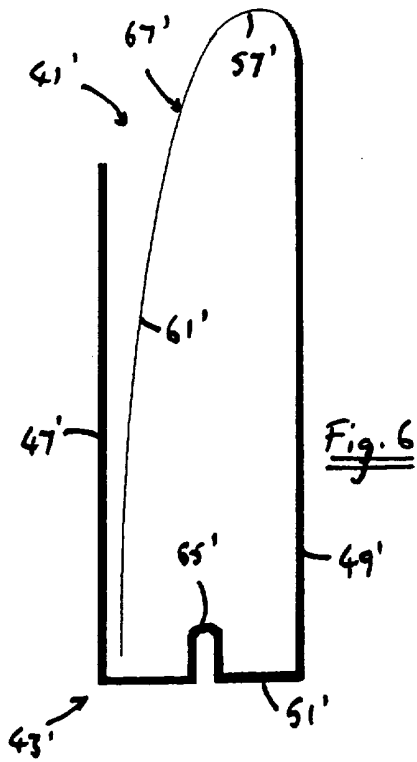


Fig. 6

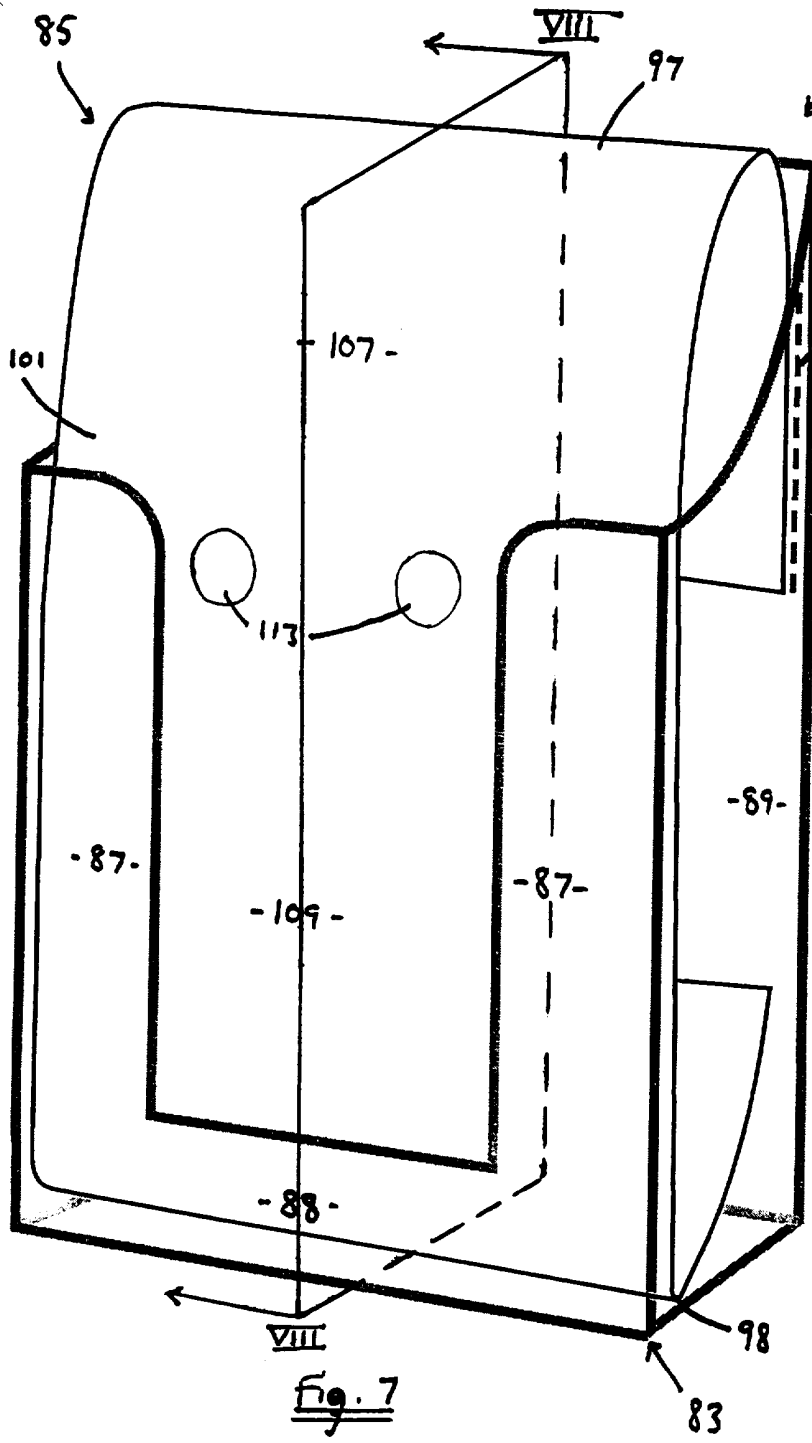


Fig. 7

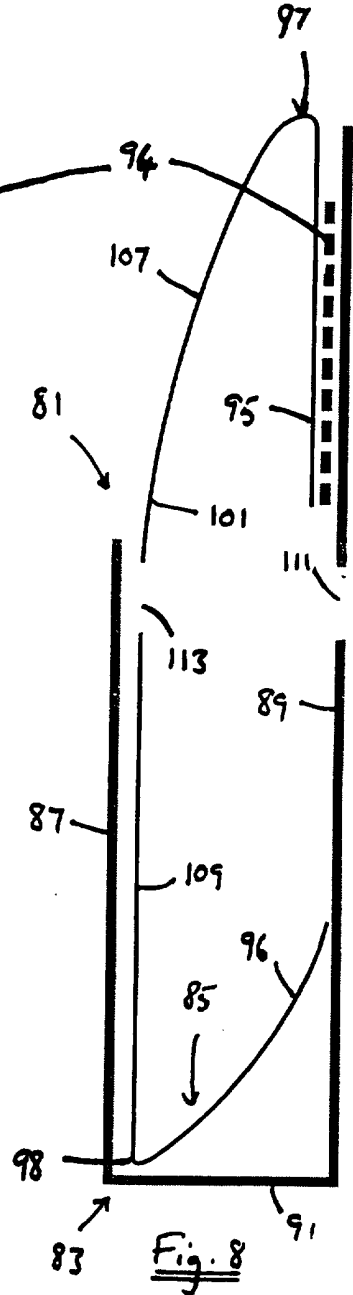


Fig. 8

DISPENSERS AND INSERTS THEREFOR

The present invention relates to dispensers, for example which hold and display flexible sheets such as forms or leaflets, in particular those which display sheets in a generally vertical position. In a second aspect it relates to inserts for dispensers.

A wide variety of dispensers which hold flexible sheets of e.g. paper is known in the art. These are usually in the form of open boxes. A common problem is that when the sheets are placed vertically in open-topped containers, they tend to buckle under their own weight within the containers and/or any protruding parts of the sheets tend to flop forwards over the front edge of the container. This is a particular problem when the dispensers are only part full and leads to waste and unsightliness.

The present invention provides a dispenser for sheet materials, having an open pocket inside which is a tongue which is biased towards the front wall of the pocket and displaceable towards the rear of the pocket, wherein sheets may be placed between the front wall and the tongue, thereby displacing the tongue towards the rear of the pocket, the sheets being held in place by the tongue against the front wall.

The biasing is preferably due to elastic resilience of the material of the tongue.

The pocket is preferably an open-ended cuboid box. However, a wide variety of alternatives are suitable, for example the pocket could be that of a wire magazine rack. The pocket need not have lateral sides, though this is generally preferable. Where the pocket is defined by a box, the front wall of the box is preferably transparent, so that the contents of the dispenser may be seen through it. The front wall of the pocket need not be continuous, but may for example consist of a grid or of two edge panels towards both of which the tongue is biased and against which the sheets may be held.

The tongue may be connected with the material forming the pocket, for example by being integrally formed with it. However, it is preferable that the tongue be provided on an insert which is inserted into a preformed pocket either as original equipment or to modify the pocket on site, to provide a dispenser according to the present invention. A non-integral insert will be secured to the material forming the pocket, against which it acts to bias the tongue towards the front of the pocket.

The insert is preferably a leaf spring, shaped from a laminar strip to have a major wall which provides the tongue and a portion (the "rear portion") which contacts the rear of the pocket. The spring is biased towards a state in which the tongue is close to or contacts and preferably presses against the front

wall of the pocket.

Desirably, the rear portion and tongue of the insert are linked by a single curved or folded section of the insert, the angle between the rear portion and tongue being acute, so that the rear portion lies behind the tongue and the curved or folded section provides the main resiliently deformable region of the insert. Alternatively, however, the insert may be in a Z shape with the tongue being upwardly-directed from the bottom of an inclined intermediate portion.

More desirably, the insert has a second rear portion, also linked by a resiliently deformable curved or folded section to the tongue, but via an opposite edge from the first rear portion. Only one of the rear portions is fixed to or integral with the rear of the pocket, with the other being slidable on it. The provision of a second rear portion allows the tongue to be biased more evenly towards the front of the pocket. Additionally, if there is a rounded profile at the bottom edge of the tongue this will assist in preventing the tongue from becoming lodged against the bottom of the pocket. The insert may have a third or more rear portions, for example connected to the sides of the tongue, though this is not generally preferred.

Although the tongue is usually generally planar, it may be slightly backwardly curved, particularly in the region near the open end of the pocket. This

allows sheets to be inserted more easily between the front wall of the pocket and the tongue.

Additionally, if the sheets and pocket are arranged so that the sheets protrude from the top of the pocket, such a backwardly curved area of the tongue can support the protruding parts of the sheets, preventing them from flopping forwards.

The insert may have a base portion, on which it may be stood on the bottom of the pocket.

Alternatively or additionally the insert may be held in position by friction. More preferably, however, the insert has a rear portion at the top edge of the tongue (the open end of the pocket also being at the top) which is attached face-to-face to the material forming the rear of the pocket, for example by adhesion or welding.

The tongue is preferably of plastics material, particularly High Impact Polystyrene resin or acrylic resin. The insert is preferably shaped from a single strip of material, by bending or folding whilst being heated. This method of shaping imparts particularly suitable properties, since the material has a tendency to return to its original conformation, providing the necessary bias. This effect is intensified in warm environments, making such inserts especially suitable for indoor applications.

The thickness of the material of the tongue or insert may be varied according to the intended use, in

particular the distance between the front and rear of
the pocket and the properties of the items to be
dispensed. For example in a rigid dispenser with a
separation of 25 mm between the front and back walls
5 and sized for dispensing A4 sheets, a suitable
thickness to a High Impact Polystyrene resin insert is
0.75 mm.

All the above relates equally, *mutatis mutandis*,
10 to an integral tongue.

In a second aspect, the present invention
provides an insert which may be fitted to a pocket to
form a dispenser as described and defined above. The
preferred features of the insert are as described and
15 defined above.

Such inserts may be retro-fitted to existing
dispensers to provide dispensers according to the
first aspect of the invention.

Embodiments of the invention will now be
20 described by way of example only, with reference to
the following drawings, in which:

Figure 1 is a median cross section through a
dispenser according to the present invention;

Figure 2 is an oblique view of an insert which
25 forms part of the dispenser of Figure 1;

Figure 3 is a cross section through a second
embodiment of the invention;

Figures 4 to 6 are corresponding drawings of a

third and fourth embodiment of the invention;

Figure 7 is a perspective view of a fifth embodiment of the invention; and

Figure 8 is a section on the plane VIII-VIII of
5 Figure 7.

The first dispenser 1, shown in Figure 1, consists of an open pocket in the form of a generally cuboid, open-topped box 3 of perspex or similar durable transparent material, in which is located an
10 insert 5, which is also shown in Fig. 2. The major walls of the box are at the front and rear, though the front wall 7 is shorter than the rear wall 9, the side edges of the open top being oblique to these walls. The box may be supported by standing on its bottom 11,
15 or e.g by hanging via the rear wall. The front wall may be continuous or may be of a discontinuous, flanged, nature as seen in Figure 7.

The insert is a Z-shape formed of a laminar strip of High Impact Polystyrene resin which has been bent
20 and folded into shape whilst being heated. At one end of the formed strip is a base portion 13, at right angles to which is a rear portion 15. At the top of the rear portion is a curved section 17 which is the principal resiliently deformable region of a leaf
25 spring formed by the strip. An intermediate portion 19 links the curved section to the bottom edge of a front portion which is a tongue 21. The middle portion and tongue are continuous via a tight fold 23

in the formed strip, the strip in the region of the fold having greater rigidity than the curved section, such that when pressure is applied normal to the tongue, it is the curved section which is deformed.

5 The tongue and rear portion are substantially rectangular, normally parallel and almost co-extensive.

The insert is positioned inside the box with the base portion 13 of the insert resting on the bottom 11
10 of the box and the rear portion 15 of the strip contacting the rear wall 9 of the box. The insert is biased towards a state in which the rear portion on the one hand and the tongue and a front edge 14 of the base 13 on the other hand contact the rear and front
15 walls of the box, respectively. For clarity, the drawings do not have these parts in contact.

Sheets of paper, leaflets, forms etc. may be inserted into the dispenser between the tongue and the front wall of the box and are held in place by the
20 bias of the tongue 21 towards the front wall 9, thereby preventing the sheets from buckling inside the dispenser, especially when few sheets are present.

The base portion 13 of the insert has a ridge 25 about halfway between the front and back walls of the
25 box, sticking upwards into the box. This is formed by two sharp right angle folds, separated by a hairpin fold. This ridge provides a stop for the tongue, preventing it from being displaced more than about

halfway to the back of the box. If desired, these folds may be springy and the base portion suitably sized so that when placed in the box, it firmly presses out against both walls of the box, helping to keep the insert in place.

A second embodiment of dispenser 1', shown in Figure 3, is a modification of the first dispenser 1. Instead of the insert being supported on a base portion which rests on the bottom of the box and having a rear portion adjacent the rear wall of the box, the tongue 21', fold 23', middle portion 19' and curved section 17' are integrally formed with the rear wall 9' of the box 3'. The parts 17', 19', 21' and 23' are formed of the same material as the box parts 7', 9' and 11', but in order for the box to be sufficiently rigid and the curved section sufficiently flexible, the curved section may have smaller laminar thickness than the material of the box. The tongue and middle portion are of the same thickness as the curved section.

A ridge 25', corresponding to that of the first dispenser, is located on and formed from the bottom 11' of the box. Apart from these modifications, all other features of the dispenser are the same and the tongue is still biased, mainly by virtue of the curved section, towards the front wall 7' of the box.

A third dispenser 41, shown in Fig. 4, again consists of a box 43 and an insert 45, which is shown

separately in Fig. 5. The box is the same as in the first dispenser, but the insert has been modified, the intermediate portion having been removed, so that the tongue 61 is directly continuous (this time along its top edge) with the curved section 57. This removes the possibility of inadvertently inserting sheets between the tongue and intermediate portion rather than between the tongue and the front wall 47 of the box. In addition, the tongue is slightly rearwardly inclined, particularly near its top edge where it protrudes from the box (shown at 67). This facilitates insertion of sheets into the dispenser and additionally supports the tops of the sheets if they protrude from the top of the box: the sheets bend slightly backwards to be supported by the inclined section, rather than possibly flopping forwardly. The base and rear portions 53, 55 of the insert, the ridge 65 and the bottom 51 and rear wall 49 of the box all correspond to those features in the first dispenser.

As can be seen from Fig. 6, a fourth dispenser 41' differs from the third in exactly the same way that the second differed from the first. The tongue 61' is continuous via the curved section 57' to the rear wall of the box 43', which has front and rear walls 47' and 49' and a bottom 51', with a ridge 65'. Again the tongue is rearwardly inclined at 67'.

A fifth dispenser 81 is shown in Figs. 7 and 8. As with the first and third dispensers, it consists of

a box 83 and an insert 85. The box is of clear plastics material, allowing the insert to be seen through its walls. The front wall 87,88 of the box has a gap, such that it is generally U-shaped in elevation. The gap is one of a number of possible variations in the design of the box that are possible without affecting the ability of the insert to hold sheets against the front wall; by way of example only, the bottom flange part 88 of the wall could be discontinuous from flanges 87.

The insert is made of a shaped acrylic laminar sheet. It has a generally planar tongue 101, continuous with the top and bottom edges of which are resiliently deformable curved sections 97,98, which each connect with a rear portion 95,96. The rear portions are each at an acute angle to the tongue, so as to lie behind the tongue in a U shape.

The insert is located inside the box, the upper rear portion 95 being attached to the inside of the rear wall 89 of the box, near its top. The attachment is achieved by means of adhesive (shown in the drawings as a dashed line 94), but could equally well be by welding or mechanical fixers. The tongue is inclined slightly backwardly near its top edge, in the area 107 which protrudes upwardly of the oblique opening, such that a substantially entirely planar area 109 of the tongue which is entirely inside the box is generally parallel with the front wall 87 of

the box.

The curved sections of the insert have a tendency to straighten, whereby the angles between the rear portions and the tongue tend to increase. This has
5 the effect that the tongue is pressed against the inside of the front of the box and the edge of the lower rear portion 96 is pressed against the rear wall of the box. Thus bias of the tongue towards the front wall of the box is provided at both the top and bottom
10 of the tongue. The lower curved section 98 does not touch the base of the box at least initially, so that when the tongue is pivoted about the upper curved section 97, the insert does not lodge against the bottom 91 of the box. If at a later stage of rearward
15 movement it does come into contact with the bottom its rounded profile will help it to slide smoothly on it.

As with the previous dispensers, sheets may be inserted between the tongue and the front wall of the box and are held in position to prevent buckling. The
20 sheets may bend slightly backwardly to be supported on the inclined portion 107 of the tongue, preventing them from flopping forwards.

The back wall of the box is provided with keyholes 111, for hanging the box on e.g. nails or
25 screws. Holes 113 are provided in the tongue in alignment with the keyholes, both improving visibility during the hanging operation and providing screwdriver access so that supporting screws (not shown) may be

driven home to hold the dispenser firmly in place.

CLAIMS

1. A dispenser for sheet materials, having an open pocket inside which is a tongue which is biased towards the front wall of the pocket and displaceable towards the rear of the pocket, wherein sheets may be placed between the front wall and the tongue, thereby displacing the tongue towards the rear of the pocket, the sheets being held in place by the tongue against the front wall.
2. A dispenser according to claim 1, wherein the pocket is an open-ended box.
3. A dispenser according to claim 1 or claim 2, wherein the tongue is integrally continuous with the material forming the pocket.
4. A dispenser according to claim 1 or claim 2, wherein the tongue is provided on an insert.
5. A dispenser according to claim 4, wherein a portion of the insert acts against the material forming the pocket to bias the tongue towards the front of the pocket.
6. A dispenser according to claim 5, wherein said portion acts against material forming the rear of the

pocket.

7. A dispenser according to claim 6, wherein the tongue is continuous, via a curved section of the insert, with said portion, and wherein the curved
5 section tends to straighten, so biasing the tongue towards the front of the pocket.

8. A dispenser according to any of claims 5 to 7, wherein the insert has a plurality of said portions, continuous with different regions of the tongue.

10 9. A dispenser according to any of claims 6-8, wherein said portion or one of said portions is attached to the material forming the rear of the pocket.

10. A dispenser according to any of the preceding
15 claims, wherein the tongue protrudes from the pocket and is rearwardly inclined in the protruding region.

11. A dispenser substantially as herein described with reference to and as illustrated in Figures 1, 3, 4, 6, 7 and 8 of the accompanying drawings.

20 12. An insert for a dispenser as defined in any of the preceding claims.

13. An insert substantially as herein described with reference to and as illustrated in Figures 1, 2, 4, 5, 7 or 8 of the accompanying drawings.



Application No: GB 9717814.9
Claims searched: 1-13

Examiner: Michael Logan
Date of search: 10 November 1997

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:
UK CI (Ed.O): B8P (PE2E, PG3D, PG3E, PG3X)
Int CI (Ed.6): A47F 1/00, 1/06, 1/12, 7/00; B65D 83/08, 83/10, 83/12, 85/62
Other: Online: WPI

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
X	GB 2270899 A (FORDS OF BRISTOL) see figs and page 4, lines 4-6	1,2,4-6,12
X	GB 2213470 A (MARLER HALEY) see figs 1-5	1,2,4-6,9,10,12
X	US 5409133 (GRINGER) see integral arm 30	1-3
X	US 4993589 (McLAUGHLIN) see leaf spring 40	1,4-7,9,12
X	US 3710929 (MORALES) whole document relevant	1,2,4-6,8,9,12

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
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