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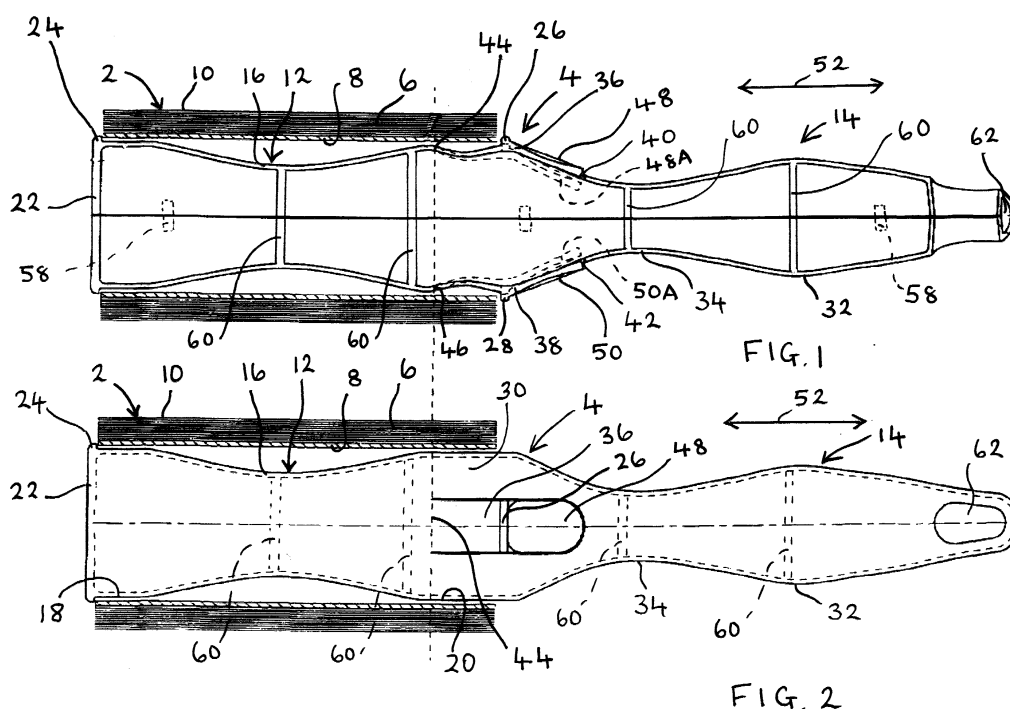
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(54) **Support for a lint remover**

(57) A support for a lint remover (2), the lint remover comprising a hollow open-ended cylindrical roll (6) of adhesive tape having an outwardly-facing adhesive surface (10). The support comprises an elongate hollow mounting portion (12) for rotatably receiving the lint remover (2) and an integral hollow handle portion (14) extending from the mounting portion. The mounting portion

tion (12) has at least one first restraining flange (24) for the lint remover at a first end (22) remote from the handle portion and at least one second restraining flange (26, 28) at a second end (30) adjacent the handle portion. The at least one second restraining flange (26, 28) is resiliently mounted for deflection to permit demountable assembly of the lint remover (2) with the mounting portion (12), over the handle portion (14).



Description

[0001] The present invention relates to a support for a lint remover and to an assembly of a support and a lint remover.

[0002] It is known, for example from GB-A-2 103 074, to provide a lint remover assembly for use in cleaning a surface and in which a cylindrical adhesive tape roll having an outwardly-facing adhesive surface is rotatably mounted on a hollow support cylinder with an open end, the hollow support cylinder having an integral elongate handle portion extending axially outwardly from its other end.

[0003] A fixed stop flange is provided at the handle end of the hollow support cylinder and multiple resiliently-mounted radially-extending flange elements are provided on the peripheral edge of the open outer end of the hollow support cylinder. The adhesive tape roll is retained, for rotation on the support cylinder, by means of the fixed stop flange and the multiple flange elements.

[0004] In order to mount or remove the adhesive tape roll on or from the support cylinder it is necessary to displace the resiliently-mounted flange elements at the open outer end of the support cylinder while feeding the adhesive tape roll over the flange elements. At the same time it may be necessary to provide support at the handle portion.

[0005] With such an arrangement, mounting and removal of an adhesive tape roll can be awkward.

[0006] It is an object of the present invention to overcome or minimise this problem.

[0007] According to the present invention there is provided a support for a lint remover, the lint remover comprising a hollow open-ended cylindrical roll of adhesive tape having an outwardly-facing adhesive surface, the support comprising an elongate hollow mounting portion for rotatably receiving the lint remover and an integral hollow handle portion extending from the mounting portion, the mounting portion having at least one first restraining flange for the lint remover at a first end remote from the handle portion and at least one second restraining flange at a second end adjacent the handle portion, the at least one second restraining flange being resiliently mounted for deflection to permit demountable assembly of the lint remover with the mounting portion, over the handle portion.

[0008] The lint remover when mounted on the mounting portion is rotatable on the mounting portion and held between the at least one first and the at least one second restraining flanges.

[0009] The at least one first restraining flange may be fixed, that is, so as to be substantially undeflectable.

[0010] The at least one first restraining flange may substantially surround the first end of the mounting portion.

[0011] The mounting portion may be closed at the first end thereof.

[0012] The or each second restraining flange may be

mounted on a resiliently-hinged cantilever which may be integral with the support.

[0013] The or each second restraining flange may be integral with its resiliently-hinged cantilever.

5 **[0014]** The or each resiliently-hinged cantilever may be in the form of an elongate tab located in an aperture in the support and resiliently hingeably secured along a first end thereof to a region of the second end of the mounting portion, the tab extending along part of the handle portion to a second end of the tab.

10 **[0015]** The second end of the or each tab may be deflectable into the handle portion, with corresponding deflection of the or each second restraining flange, to permit the lint remover to be slid over the or each second restraining flange for mounting or removal.

15 **[0016]** The second end of the or each tab may be manually deflectable, such as by finger and/or thumb pressure thereon, particularly to permit removal of the lint remover from the support.

20 **[0017]** The or each tab may be ramped from the second end thereof towards the or each second restraining flange thereon whereby sliding of the lint remover along the handle portion towards the mounting portion effects deflection of the or each tab by the lint remover to permit the lint remover to cross the or each second restraining flange and onto the mounting portion. The or each tab may be arranged to be ramped by forming the handle portion of waisted configuration whereby the handle portion is of reduced cross section at or near the second end of the or each tab.

30 **[0018]** Preferably two second restraining flanges are provided, opposed on the support.

35 **[0019]** The mounting portion and/or the handle portion may be of circular cross section. The mounting portion may be of cylindrical form, or may be of non-cylindrical form, such as a waisted form of circular cross section.

40 **[0020]** The handle portion may have a barrel-shaped region and may have a closed end which may be provided with a hook or aperture, such as for use in securing the support when not in use.

[0021] The support may be formed from two substantially identical halves, secured together, such as by means of clips, or by adhesive, or by welding.

45 **[0022]** The support may comprise a plastics material and may be formed by injection moulding.

[0023] The mounting portion and/or the handle portion may be provided with one or more internal strengthening ribs.

50 **[0024]** The present invention also provides a lint remover assembly comprising the support and the lint remover.

55 **[0025]** For a better understanding of the present invention and to show more clearly how it may be carried into effect reference will now be made, by way of example, to the accompanying drawings in which;

Figure 1 is a cross-sectional view of an embodiment

of a support for a lint remover according to the present invention assembled with a lint remover;

Figure 2 is a cross-sectional view of the embodiment of Figure 1 rotated through 90 degrees about a long axis thereof; and

Figure 3 is a cross-sectional view of two substantially identical support halves, used in the formation of the support of Figure 1.

[0026] A lint remover 2 is arranged to be rotatably mounted for use on a support 4.

[0027] The lint remover 2 comprises a roll 6 of adhesive tape provided on an open-ended cylindrical tube 8 and having an outwardly facing adhesive surface 10 for bearing against a surface to be cleaned.

[0028] The support 4 is suitably formed of plastics material and has an elongate hollow mounting portion 12 for rotatably receiving the lint remover 2.

[0029] A hollow handle portion 14, integral with the mounting portion 12, extends from the mounting portion 12 and is coaxial therewith.

[0030] The mounting portion 12 is of circular cross section and may be cylindrical. However, as shown in the accompanying drawings, it may be non-cylindrical, being of circular cross section with a waisted middle portion 16. Bearing surfaces 18, 20 are provided at opposite ends of the mounting portion 12 for rotatably supporting the lint remover 2.

[0031] A first end 22 of the mounting portion 12 is closed, but may optionally be open if required.

[0032] A first restraining flange 24 is provided for the lint remover 2 at the first end 22 of the mounting portion 12. The first restraining flange 24 is fixed so as to be undeflectable and surrounds the first end 22 of the mounting portion 12.

[0033] A pair of second restraining flanges 26, 28 for the lint remover 2 are diametrically opposed on the support 4 at a second end 30 of the mounting portion 12 adjacent the handle portion 14.

[0034] The lint remover 2 when mounted on the mounting portion 12 is rotatable thereon and held between the first restraining flange 24 and the second restraining flanges 26, 28.

[0035] The handle portion 14 of the support 4 is of circular cross section, having a barrel-shaped portion 32 and a waisted region 34 of reduced cross section.

[0036] The second restraining flanges 26, 28 are mounted on and integral with two resiliently-hinged cantilevers integral with the support 4 and in the form of elongate tabs 36, 38 on opposite sides of the handle portion 14. The tabs 36, 38 are located in apertures 40, 42 in the support 4 and are each resiliently hingeably secured along a first end 44, 46 respectively thereof to a region of the second end 30 of the mounting portion 12. The tabs 36, 38 extend along part of the handle portion 14 and have second ends 48 and 50 respectively.

[0037] The second ends 48 and 50 of the tabs 36 and 38 are deflectable into the handle portion 14, as shown by the dotted outlines 48A and 50A, with corresponding deflection of the second restraining flanges 26 and 28. Such deflection of the second restraining flanges 26 and 28 permits the lint remover 2 to be slid over the second restraining flanges 26, 28 and onto or from the mounting portion 12. Mounting and removal of the lint remover 2, on and from the support 4, takes place over the handle portion 14 in the direction of the arrows 52.

[0038] The second ends 48 and 50 of the tabs 36 and 38 are deflected into the handle portion 14 by finger and thumb pressure thereon from a user gripping the handle portion 14, to permit removal of the lint remover 2 from the support 4.

[0039] The tabs 36 and 38 are ramped from the second ends 48 and 50 thereof towards the second restraining flanges 26 and 28, whereby sliding of the lint remover 2 onto and along the handle portion 14, towards the mounting portion 12, effects deflection of the tabs 36 and 38 by the lint remover 2 to permit the lint remover 2 to cross the second restraining flanges 26 and 28 and onto the mounting portion 12. The ramped arrangement of the tabs 36 and 38 extends outwardly from the waisted region 34 of reduced cross section of the handle portion 14.

[0040] As shown in Figure 3, the support 4 is conveniently produced from two substantially identical halves 54 and 56 which are secured together by integrally formed clips 58 or by means of adhesive, or by welding. The two halves 54 and 56 are suitably formed by injection moulding.

[0041] One or more internal stiffening ribs 60 can be integrally formed in the two halves 54 and 56 of the support 4, the ribs 60 of the two halves being arranged to abut one another when the halves are assembled together to form the support 4.

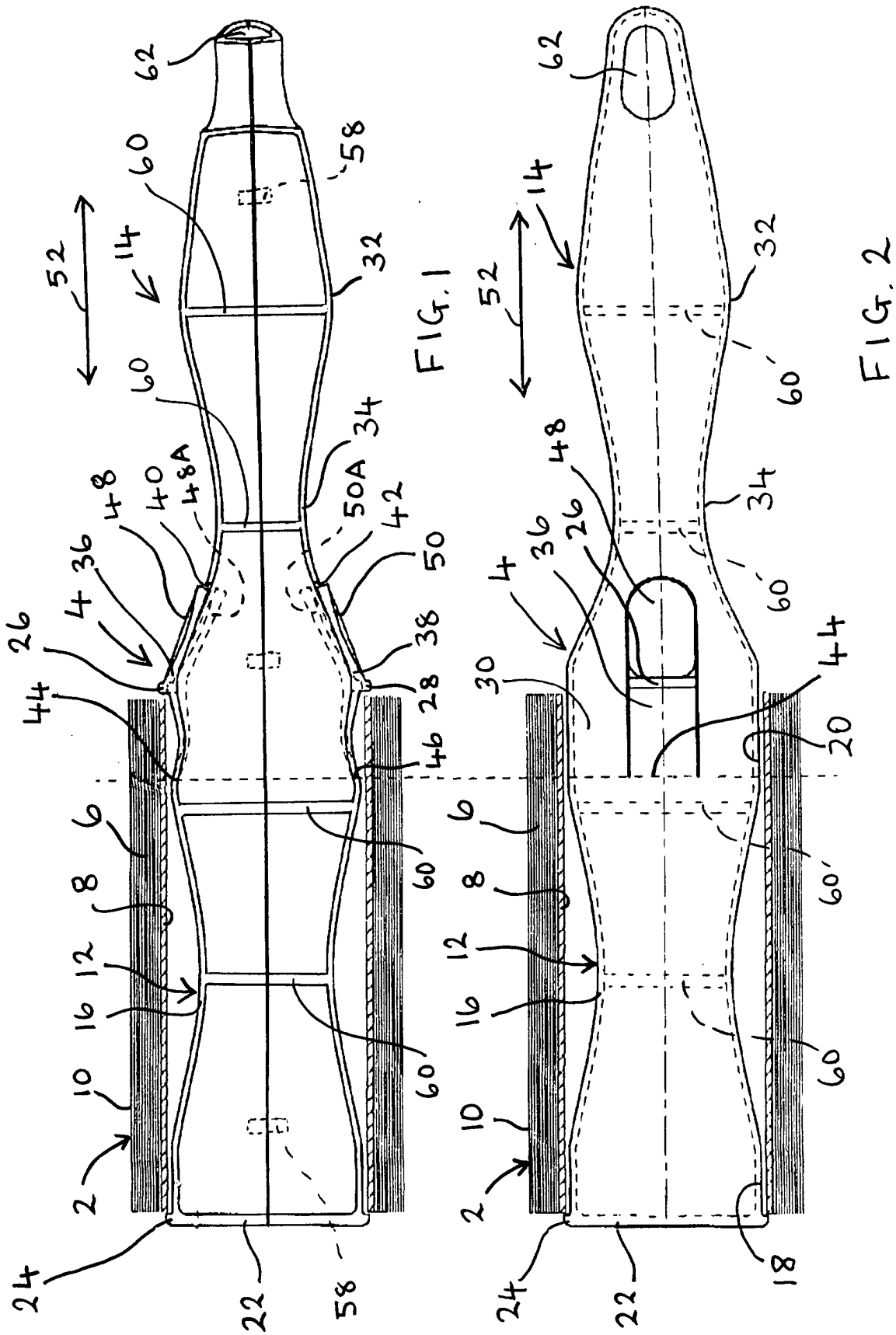
[0042] The handle portion 14 can have a closed end which can be provided with an aperture 62 or a hook, which can be used to secure the support 4, with or without the lint remover 2, when not in use and such as by hanging it on a suitable mounting means on a wall or in a cupboard.

[0043] The support 4 of the present invention provides quick mounting thereon and removal therefrom of the lint remover 2 over the handle portion 14, simple finger and thumb pressure on the tabs 48 and 50 allowing easy removal of the lint remover 2 from the support 4.

[0044] Although it is not shown in the drawings, intermediate the two opposed tabs 36, 38 for releasing the lint remover 2 from the support 4 there may be provided two opposed pads which are formed integrally with the handle portions and cannot be depressed. The pads are for receiving for example the user's thumb during use of the device in order to prevent inadvertent release of the lint remover 2 during use of the device due to the user pressing on the tabs 36, 38.

Claims

1. A support for a lint remover (2), the lint remover comprising a hollow open-ended cylindrical roll (6) of adhesive tape having an outwardly-facing adhesive surface (10), the support comprising an elongate hollow mounting portion (12) for rotatably receiving the lint remover (2) and an integral hollow handle portion (14) extending from the mounting portion, the mounting portion (12) having at least one first restraining flange (24) for the lint remover at a first end (22) remote from the handle portion and at least one second restraining flange (26, 28) at a second end (30) adjacent the handle portion, **characterised in that** the at least one second restraining flange (26, 28) is resiliently mounted for deflection to permit demountable assembly of the lint remover (2) with the mounting portion (12), over the handle portion (14). 5
2. A support according to claim 1, **characterised in that** the lint remover (2) when mounted on the mounting portion (12) is rotatable on the mounting portion and held between the at least one first (24) and the at least one second (26, 28) restraining flanges. 10
3. A support according to claim 1 or 2, **characterised in that** the at least one first restraining flange (24) is fixed, that is, so as to be substantially undeflectable. 15
4. A support according to any preceding claim, **characterised in that** the at least one first restraining flange (24) substantially surrounds the first end (22) of the mounting portion (12). 20
5. A support according to any preceding claim, **characterised in that** the mounting portion (12) is closed at the first end (22) thereof. 25
6. A support according to any preceding claim, **characterised in that** the or each second restraining flange (26, 28) is mounted on a resiliently-hinged cantilever which may be integral with the support. 30
7. A support according to claim 6, **characterised in that** the or each second restraining flange (26, 28) is integral with its resiliently-hinged cantilever. 35
8. A support according to claim 6 or 7, **characterised in that** the or each resiliently-hinged cantilever is in the form of an elongate tab (36, 38) located in an aperture (40, 42) in the support and resiliently hingeably secured along a first end (44, 46) thereof to a region of the second end (30) of the mounting portion (12), the tab extending along part of the handle portion (14) to a second end (48, 50) of the tab. 40
9. A support according to claim 8, **characterised in that** the second end (48, 50) of the or each tab (36, 38) is deflectable into the handle portion (14), with corresponding deflection of the or each second restraining flange (26, 28), to permit the lint remover (2) to be slid over the or each second restraining flange for mounting or removal. 45
10. A support according to claim 8 or 9, **characterised in that** the second end (48, 50) of the or each tab (36, 38) is manually deflectable, such as by finger and/or thumb pressure thereon, particularly to permit removal of the lint remover (2) from the support. 50
11. A support according to claim 8, 9 or 10, **characterised in that** the or each tab (36, 38) is ramped from the second end (48, 50) thereof towards the or each second restraining flange (26, 28) thereon whereby sliding of the lint remover (2) along the handle portion (14) towards the mounting portion (12) effects deflection of the or each tab (36, 38) by the lint remover to permit the lint remover to cross the or each second restraining flange (26, 28) and onto the mounting portion. 55
12. A support according to claim 11, **characterised in that** the or each tab (36, 38) is arranged to be ramped by forming the handle portion (14) of waisted configuration whereby the handle portion is of reduced cross section at or near the second end (48, 50) of the or each tab.
13. A support according to any preceding claim, **characterised in that** two second restraining flanges (26, 28) are provided, opposed on the support.



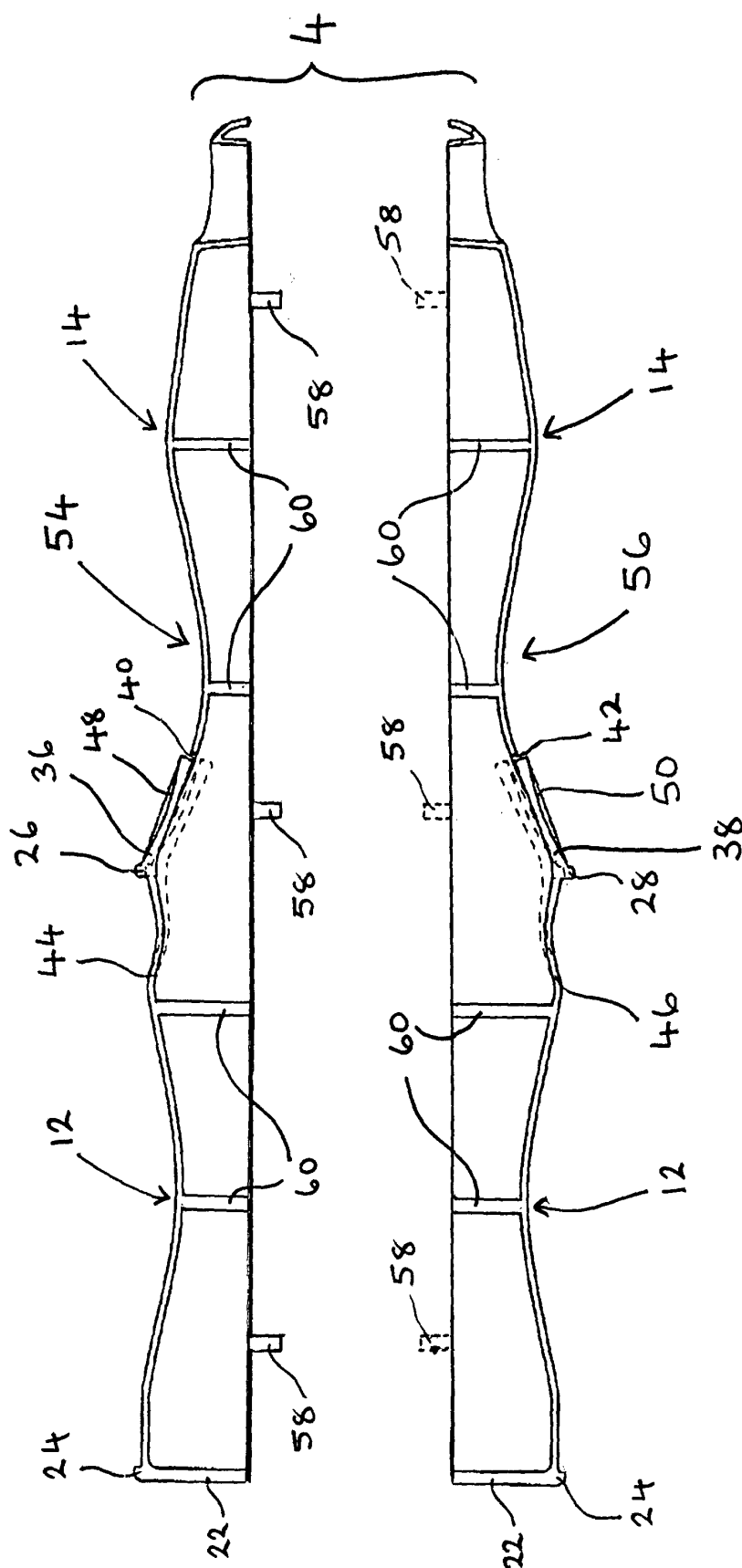


FIG. 3



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 01 30 3540

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.7)
A	DE 42 42 553 A (WENKO WENSELAAR GMBH & CO KG) 23 June 1994 (1994-06-23) * column 2, line 36 - line 38 * * column 5, line 67 - column 6, line 19 * * column 6, line 33 - column 7, line 15 * * claims 3-5,11,12,16,17; figures 3,4 * ---	1,2	A47L25/00
A	US 3 201 815 A (H. E. SELBY) 24 August 1965 (1965-08-24) ---		
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			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A47L
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 26 July 2001	Examiner: Bourseau, A-M
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			

EPC FORM 1503 03 82 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 01 30 3540

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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