

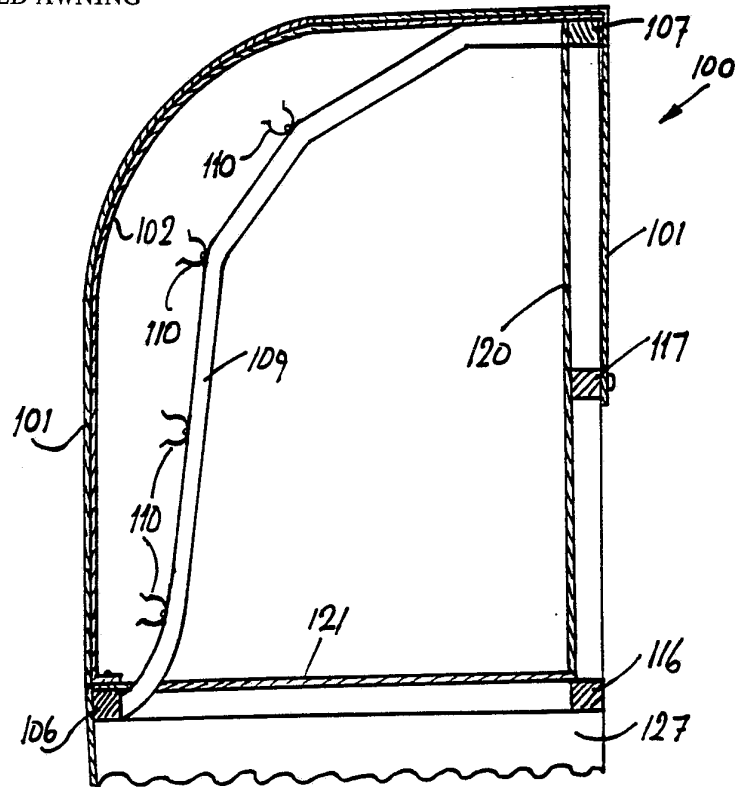


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<p>(21) International Application Number: PCT/IE93/00028 (22) International Filing Date: 18 May 1993 (18.05.93) (30) Priority data: 921582 18 May 1992 (18.05.92) IE (71) Applicant (for all designated States except US): ILLUMINATED AWNING SYSTEMS LIMITED [IE/IE]; Belgard House, Greenhills Industrial Estate, Walkinstown, Dublin 12 (IE). (72) Inventors; and (75) Inventors/Applicants (for US only) : BARRY, Martin [IE/IE]; 22 Heather Grove, Parkway Downs, Palmerstown, Dublin 20 (IE). McKEOWN, David [IE/IE]; 113 Beatty Grove, Celbridge, County Kildare (IE).</p>	<p>(74) Agents: O'CONNOR, Donal, H. et al.; Cruickshank & Co., 1 Holles Street, Dublin 2 (IE). (81) Designated States: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DE (Utility model), DK, DK (Utility model), ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, US, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i></p>
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(54) Title: AN ILLUMINATED AWNING



(57) Abstract

An awning (1, 100, 130) comprises an outer sheet (3, 101) of flexible material supported on a rigid translucent support (17, 102). The awning (1, 100, 130) is illuminated by strip lights (5) mounted on a support framework (2, 105), which is stepped back from the rigid translucent support (15, 102). An even illumination is achieved with no shadow lines on the flexible sheet (3, 101). The sheet (3, 101) may have advertising indicia or logos.

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"An Illuminated Awning"

The invention relates to canopies and in particular to an awning for positioning above retail and/or service locations such as shop fronts, automated bank teller machines and the like.

- 5 Various awnings of this type are known, however, they are costly to install and maintain and in general are not particularly effective as advertising locations and in assisting and protecting customers. In particular the illumination of conventional awnings is generally uneven.
- 10 This invention is directed towards providing an awning which will overcome at least some of these problems and in particular to providing an awning in which the illumination is substantially even.

15 According to the invention there is provided an awning comprising:

a sheet material;
a support means for the sheet material; and
illumination means for illuminating the sheet material, wherein the support means is translucent.

- 20 In one embodiment of the invention the illumination means is spaced rearwardly from the sheet material. Preferably the translucent support means comprises a substantially rigid support sheet of translucent material. The translucent support preferably conforms to at least
- 25 portion of the desired shape of the sheet material. Typically the translucent support sheet is of at least partially arcuate shape.

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In one embodiment of the invention the sheet support means is mounted to a framework. Preferably the framework comprises a lower support member and an upper support member to which the sheet support means is mounted.

5 In a particularly preferred arrangement the illumination means is mounted to the framework. Preferably the framework includes illuminating support means extending between upper and lower support members. Typically the illuminating support means comprises at least two spaced-
10 apart illuminating means support members which are stepped back from the sheet support means. In a preferred arrangement each illumination means support member extends from an upper support member to a lower support member.

15 Preferably the upper support member is a rearward support member and the lower support member is a forward support member.

In one arrangement the illuminating means is (are) supported on mounting clips provided on the illuminating means support members.

20 Preferably the illuminating means comprises strip lights.

Typically the awning includes a pair of side panels. Preferably the awning also includes a bottom panel.

In one arrangement the framework is arranged to receive a security shutter housing.

25 Preferably the sheet material is of flexible material. Most preferably the flexible sheet material is mounted to facilitate tensioning of the sheet.

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In a preferred embodiment of the invention the sheet material has an advertising indicia and/or logo marked thereon.

5 The invention will be more clearly understood from the following description thereof given by way of example only with reference to the accompanying drawings, in which:-

Fig. 1 is a perspective view of an awning according to the invention;

Fig. 2 is a perspective view of the awning in use;

10 Fig. 3 is a perspective view from the rear of the awning;

Fig. 4 is a side view of the awning in use;

Fig. 5 is a transverse cross-sectional view of the awning;

15 Fig. 6 is a perspective view of a framework forming part of the awning;

Fig. 7 is a perspective, partially exploded, view of part of the framework;

Fig. 8 is a perspective view of part of the awning;

20 Fig. 9 is a side cross-sectional view of another awning according to the invention;

Fig. 10 is a cross sectional view of an enlarged scale of parts of the awning of Fig. 9;

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Fig. 11 is a perspective view from the front of a support framework forming part of the awning of Fig. 9;

5 Fig. 12 is a perspective view from the rear of a translucent support forming part of the awning of Fig. 9;

Fig. 13 is a perspective view from the rear of the awning;

Fig. 14 is a perspective view of the awning; and

10 Fig. 15 is a side cross sectional view of a further awning according to the invention.

Referring to the drawings and initially to Figs. 1 to 8 thereof there is illustrated an awning according to the invention indicated generally by the reference numeral 1. The awning 1 comprises translucent sheet supporting means 15 17 and a main support framework 2 for the translucent sheet supporting means which is stepped back from the translucent sheet supporting means and defines therebetween an area 10 through which light is transmitted from strip lights 5 through the flexible sheet material 3. 20 The strip lights 5 are mounted by brackets 6 to the support framework 2. The translucent flexible sheet material 3 has indicia or logos such as advertising indicia or logos thereon for example, applied by printing or the like to front and/or side areas 7, 8 respectively. 25 The areas 7, 8 may be of any desired size, shape and/or configuration.

In more detail, the framework 2 comprises a front lower support member 15, a rear upper support member 16, both of which, in this case, are of round bar construction so that 30 the flexible sheet material 3 may be led over them without

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damaging the sheet material. The translucent sheet supporting means comprises a sheet 17 of rigid translucent material such as perspex material which is attached to support bars 18, 19 of the main support framework. In this case the rigid sheet 17 is of generally convex shape to conform with the desired shape of the flexible sheet material 3.

As will be particularly apparent from Figs. 5 and 8, in this case the ends 20, 21 of the flexible sheet material 3 have eyelets 25 through which tie wraps 26 are inserted and looped around respective upper and lower frame members 27, 28 of the main support framework. The sheet material 3 is tensioned by tightening the tie wraps 26 which draws the sheet material tautly over the arcuate support 17 and the front lower support member 15 and rear upper support member 16. Because of this arrangement the flexible sheet material 3 is taut over its full visible length so that no unsightly shadow lines are visible in use.

The flexible sheet material 3 in this case also includes side panels which are attached to vertical frame members 30 of the main support framework as will be particularly apparent from Fig. 3.

In addition to the frame members 18, 19, 27, 28 and 30 already referred to, the main support framework 2 also includes horizontal and vertical side frame members 40, 41 respectively, a lower rear horizontal main frame member 42, base frame members 43 and three intermediate frame members 44 extending as illustrated in Fig. 6 between the rear frame members 30 and base frame members 43.

A rim 50 is bolted to the base framework to retain lower flaps 51 of the flexible sheet material 3.

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The awning may include a bib section 60 having a flap 61 which is folded inwardly as illustrated in Fig. 1 and may be retained in position by the rim 50.

5 The awning may be of any suitable materials of construction.

10 The sheet material supporting member 17 may be of polyethylene terephthalate, polycarbonate, acrylic or polyvinylchloride material. The sheet may be curved over a radius section. It may be hot-line bent and fixed by means of rivets to the support framework. Alternatively the sheet may be vacuum formed. The translucent sheet may be cold curved around the two gable sections imparting rigidity to the resulting form. Alternatively the front face may be heat formed to a self supporting structure
15 prior to application of the gable sections. The face and gables may alternatively be heat formed to the required shape, generally by pressure or vacuum means to provide self supporting strength and shape to the face and the gables. Particularly in the case of the supporting sheet being self supporting, for example if formed by vacuum or
20 heat forming at least part of the support framework may be omitted. In particular, the curved set-back support members. In this case the lighting may be of the forward projecting type which may be mounted adjacent to the back shining forwardly and sidewardly to illuminate the front
25 and gables which carry the decorated format.

30 The flexible sheet material may be of woven polyethylene/nylon reinforced vinyl/PVC and may be opal white or light transmitting colour with light transmission properties exceeding opaque.

The radius and/or the straight section of the sheet material may contain advertising logos or indicia which

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may be formed by coloured ink on the sheet leaving an opal white coloured message area. Alternatively the sheet material may be of standard opal form having a logo or indicia on a translucent coloured ink which may be screen
5 printed or adhesively bonded. Many different decoration techniques may be applied to the flexible sheet material. Ink may be applied to a substrate which is in turn adhered to the front or rear face(s) of the sheet. The substrate may be a self adhesive substrate. The bib section of the
10 awning may also carry logos or indicia such as a proprietor's details.

It will be appreciated that portion, for example a top rear portion of the sheet material, may be rendered opal or light transmitting to illuminate a building,
15 advertising sign or the like.

It will be appreciated that any suitable tensioning system may be applied to tension the flexible sheet material in use.

Typically the framework is of fabricated stainless steel
20 welded construction in which all welds are ground to prevent damage to the tensioned sheet material.

At least part of the frame may be of extruded aluminium, mild steel - powder coated or plain finish, galvanised -
25 plastic coated or enamelled or of moulded structure plastic such as polyethylene, polypropylene, polyurethane or alloy of any of these materials.

The back section of the awning is preferably a white faced aluminium sheet secured by means of rivets to the
30 framework. The downlit area of the awning is covered by a sheet of light diffusing material such as high carbonate material or the like and may be rivetted to the framework.

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Referring now to Figs. 9 to 13 there is illustrated another awning according to the invention indicated generally by the reference numeral 100. The awning 100 is similar to the illuminated awning described above with reference to Figs. 1 to 8 except that in this case the construction is substantially simpler.

The awning 100 comprises a flexible sheet material 101 which typically bears advertising indicia or logos and a support means in the form of a substantially rigid support sheet 102 of translucent material around which the flexible sheet 101 is led and tensioned.

The awning 100 also includes a support framework 105 which is shown in detail in Fig. 11 and comprises a front forward support member 106 an upper rear support member 107 to both of which the rigid support sheet 102 is mounted. The support framework also comprises two illuminating support members 108, 109 which are spaced-apart and are stepped back from the support sheet 102 in use as will be particularly apparent from Fig. 9. Each illuminating means support member 108, 109 carries four spaced-apart mounting clips 110 to which strip lights (not shown) are mounted. The framework in this case also includes horizontal and vertical side support members 114, 115, an additional longitudinal support members 116, 117 extending between the vertical side supports 115. Typically the framework 105 is fabricated from extruded aluminium sections.

Referring particularly to Fig. 12 the translucent rigid sheet material 102 comprises a main generally convex portion 102a having an inturned forward lip portion 102b, a down-turned rearward lip portion 102c and a pair of side panel sections 102d, 102e. The lip portions 102b, 102c

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are riveted to the front lower support member 106 of the support framework and the upper rearward support member 107 of the support framework respectively. A rear panel 120 and a bottom panel 121 are also provided. One or more
5 of the panels may be removable for access.

As described in more detail above, the flexible sheet material bearing the advertising indicia or logo 101 is wrapped around the rigid support sheet 102 and secured in position by fixing to the front support member 106 of the
10 framework 100 and hooking eyelets of the flexible sheet 101 over hooks 125 provided on the rear of the support member 117 of the framework 105. The flexible sheet 101 may also be provided with the bib portion 127.

Referring to Fig. 14 there is illustrated another awning
15 130 according to the invention, which is similar to the awning described above with reference to Figs. 9 to 13 and like parts are assigned the same reference numerals. In this case the awning is constructed and arranged to define a cut-out section 130 for receiving a security shutter
20 housing 132 provided over an opening 133 covered by the awning 130.

The awnings according to the invention represent a substantial improvement over prior art illuminated awnings. The invention provides an awning in which the
25 illumination of the sheet material is substantially even. This is achieved by supporting the flexible sheet on a translucent support. In addition, the illumination of the sheet material is achieved by spacing lights, and in particular strip lights, stepped back away from the sheet
30 material. There are no parts of the framework lying between the illuminating lights and the flexible sheet which are not transparent. Thus, no shadows are cast on the sheet and the illumination is substantially even.

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The invention is not limited to the embodiments hereinbefore described which may be varied in both construction and detail.

CLAIMS:

1. An awning comprising:

a sheet material;
a support means for the sheet material; and
5 illumination means for illuminating the sheet material,
wherein the support means is translucent.
2. An awning as claimed in Claim 1 wherein the
10 illumination means is spaced rearwardly from the sheet material.
3. An awning as claimed in Claim 1 or 2 wherein the translucent support means comprises a substantially rigid support sheet of translucent material.
- 15 4. An awning as claimed in Claim 3 wherein the translucent support preferably conforms to at least portion of the desired shape of the sheet material.
- 20 5. An awning as claimed in Claim 4, wherein the translucent support sheet is of at least partially arcuate shape.
6. An awning as claimed in any preceding claim wherein the sheet support means is mounted to a framework.
- 25 7. An awning as claimed in Claim 6 wherein the framework comprises a lower support member and an upper support member to which the sheet support means is mounted.

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8. An awning as claimed in Claim 6 or 7 wherein the illumination means is mounted to the framework.
9. An awning as claimed in Claim 8 wherein the framework includes illuminating support means extending between upper and lower support members.
10. An awning as claimed in Claim 9 wherein the illuminating support means comprises at least two spaced-apart illuminating means support members which are stepped back from the sheet support means.
11. An awning as claimed in Claim 10 wherein each illumination means support member extends from an upper support member to a lower support member.
12. An awning as claimed in any of Claims 7 to 11 wherein the upper support member is a rearward support member and the lower support member is a forward support member.
13. An awning as claimed in any of Claims 9 to 12 wherein the illuminating means is (are) supported on mounting clips provided on the illuminating means support members.
14. An awning as claimed in any preceding claim wherein the illuminating means comprises strip lights.
15. An awning as claimed in any preceding claim including a pair of side panels.

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16. An awning as claimed in any preceding claim including a bottom panel.
17. An awning as claimed in any of Claims 6 to 16 wherein the framework is arranged to receive a security shutter housing.
18. An awning as claimed in any preceding claim wherein the sheet material is of flexible material.
19. An awning as claimed in Claim 18 wherein the flexible sheet material is mounted to facilitate tensioning of the sheet.
20. An awning as claimed in any preceding claim wherein the sheet material has an advertising indicia and/or logo marked thereon.
21. An awning substantially as hereinbefore described with reference to the accompanying drawings.

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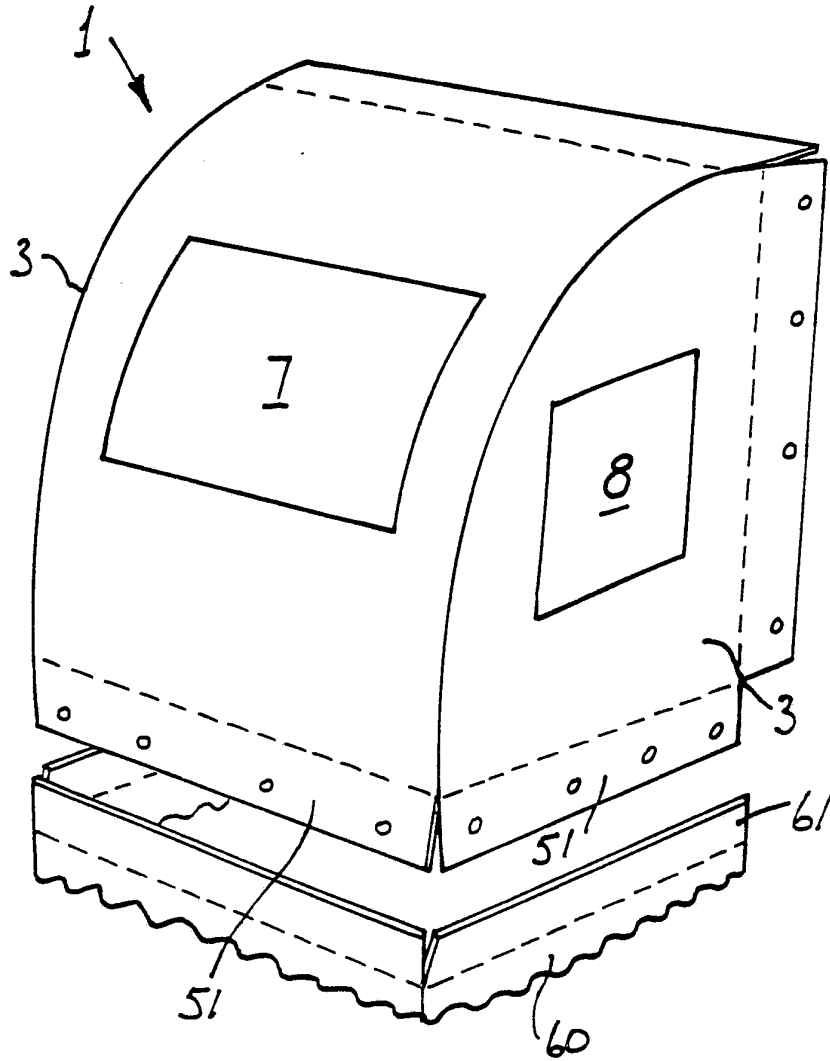


Fig. 1

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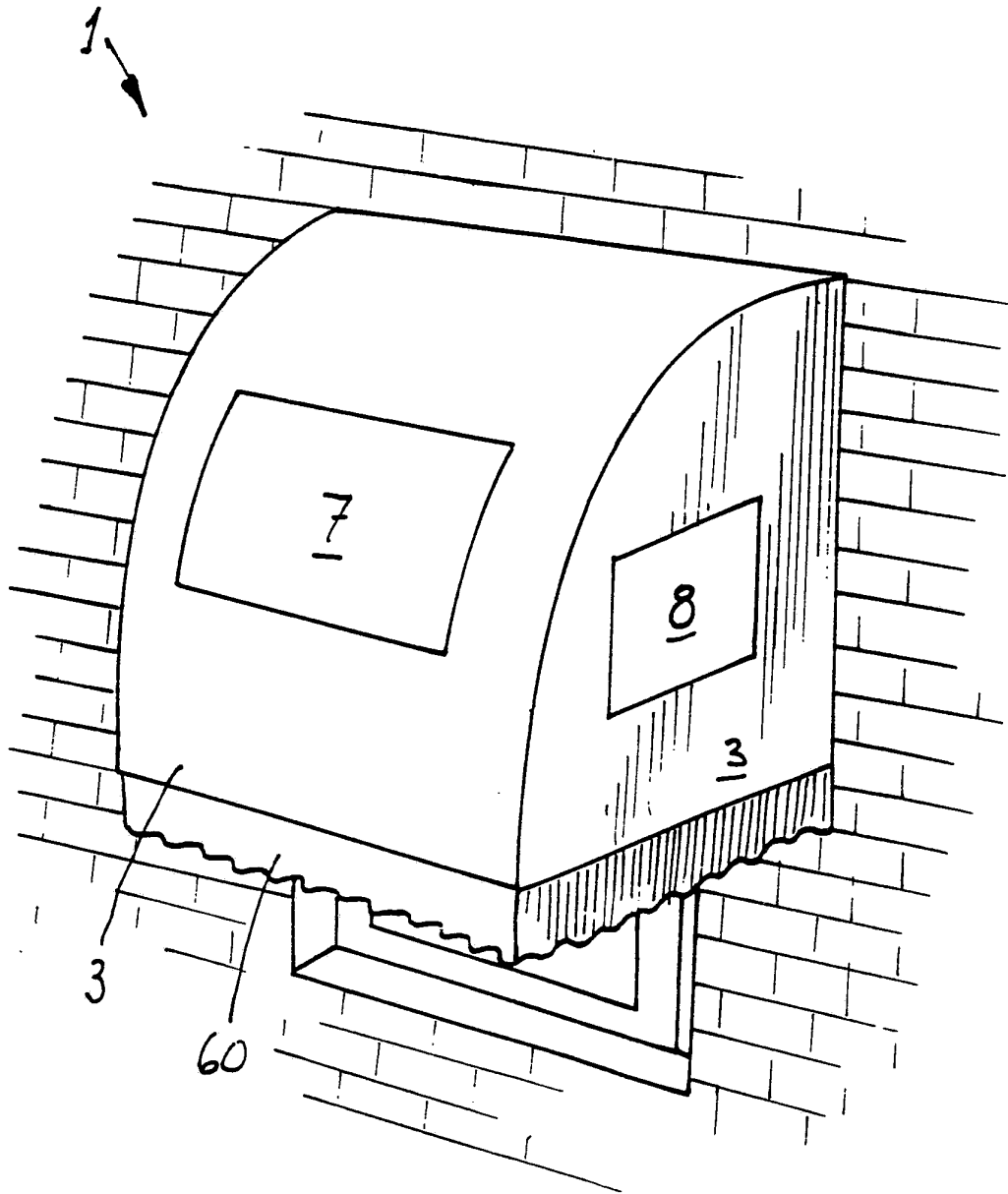
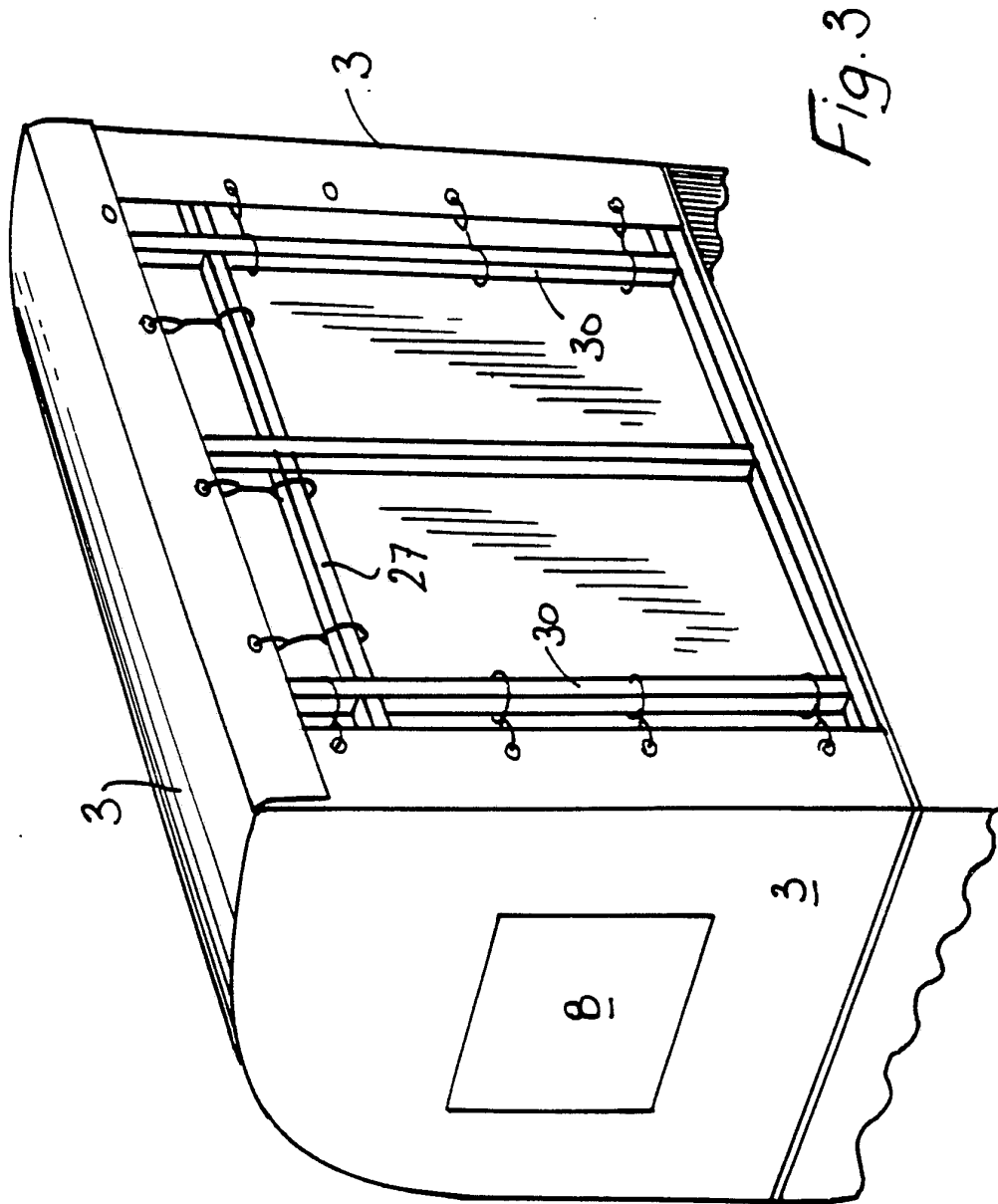


Fig. 2

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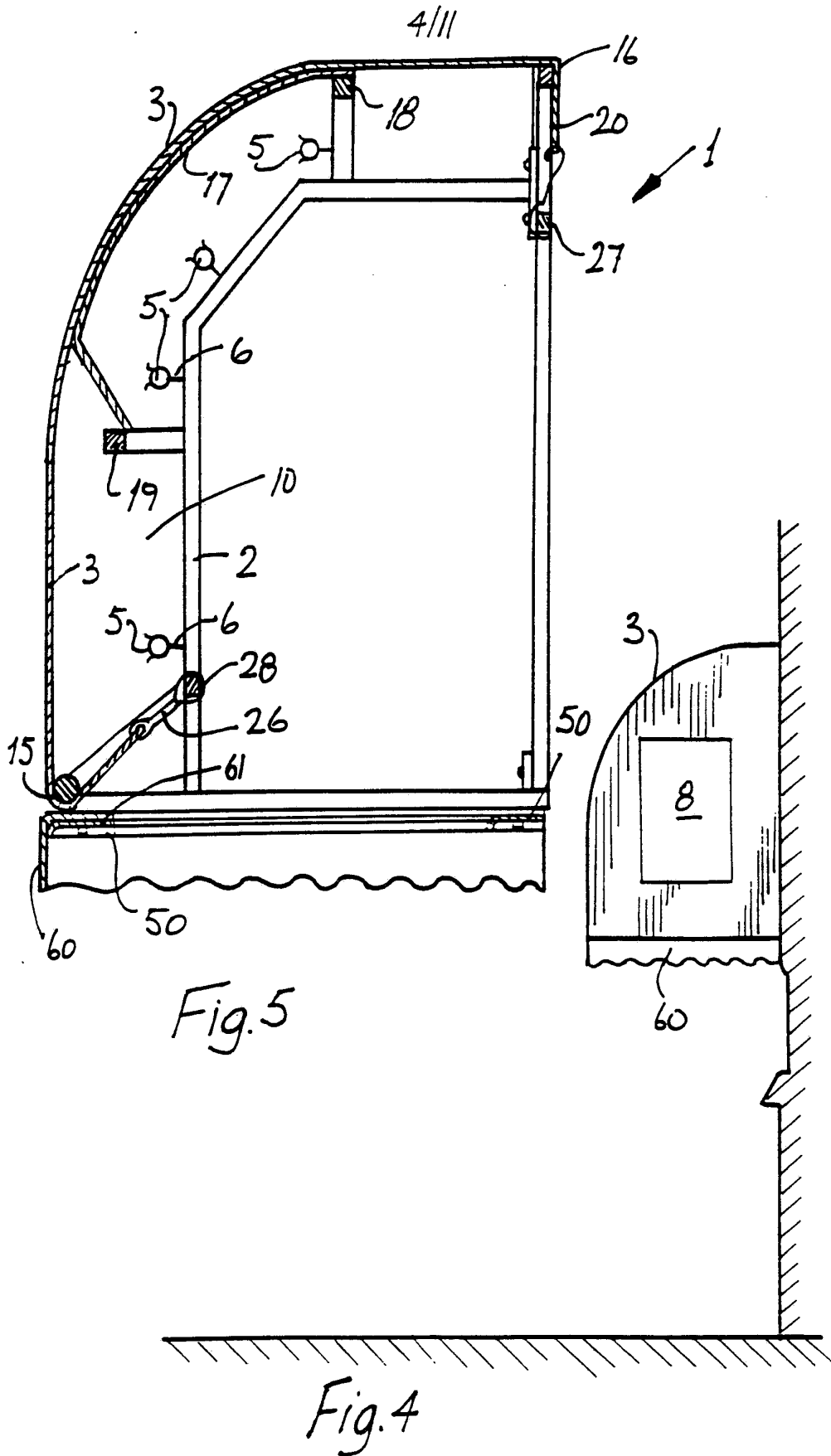


Fig.5

Fig.4

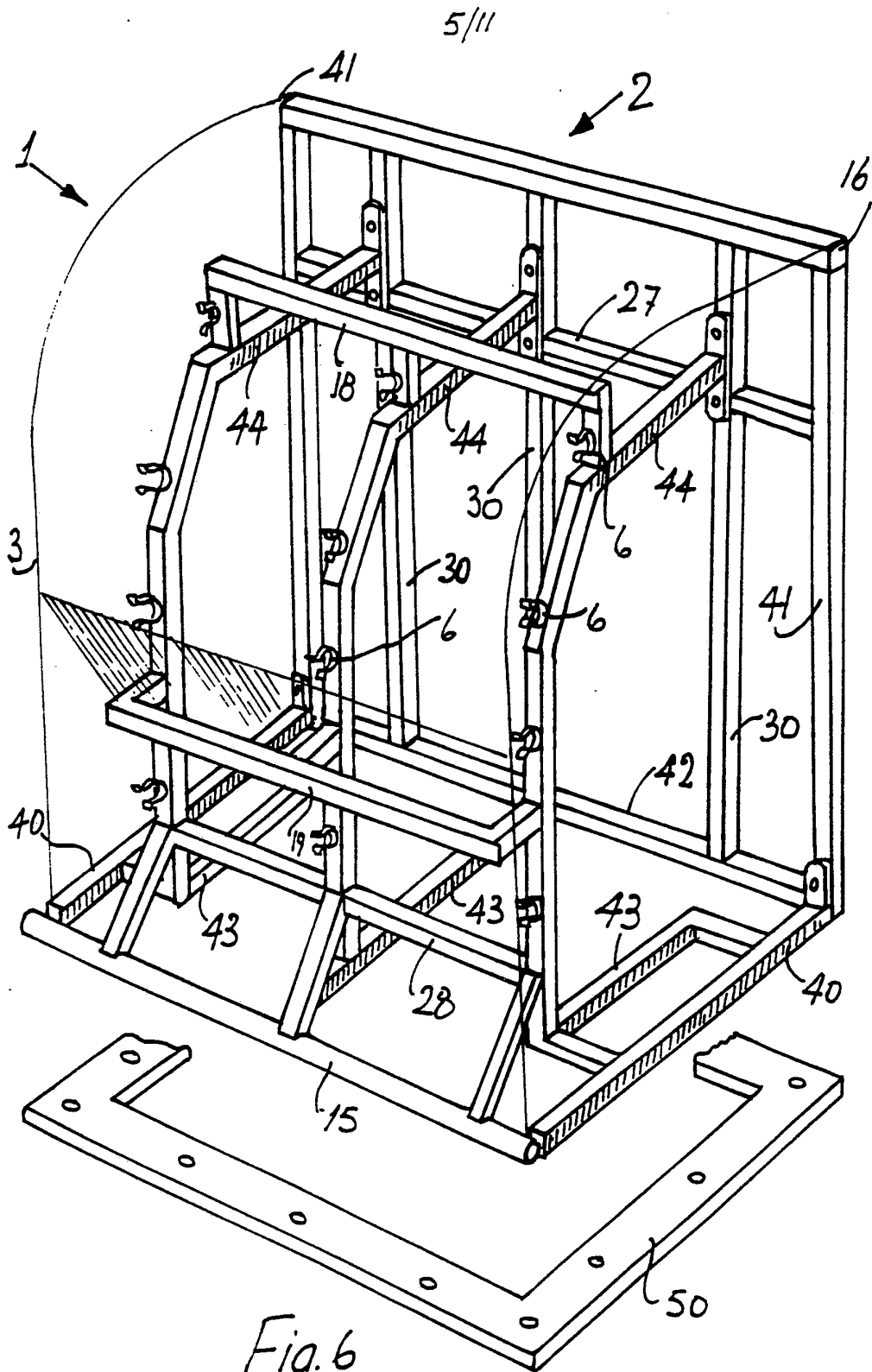
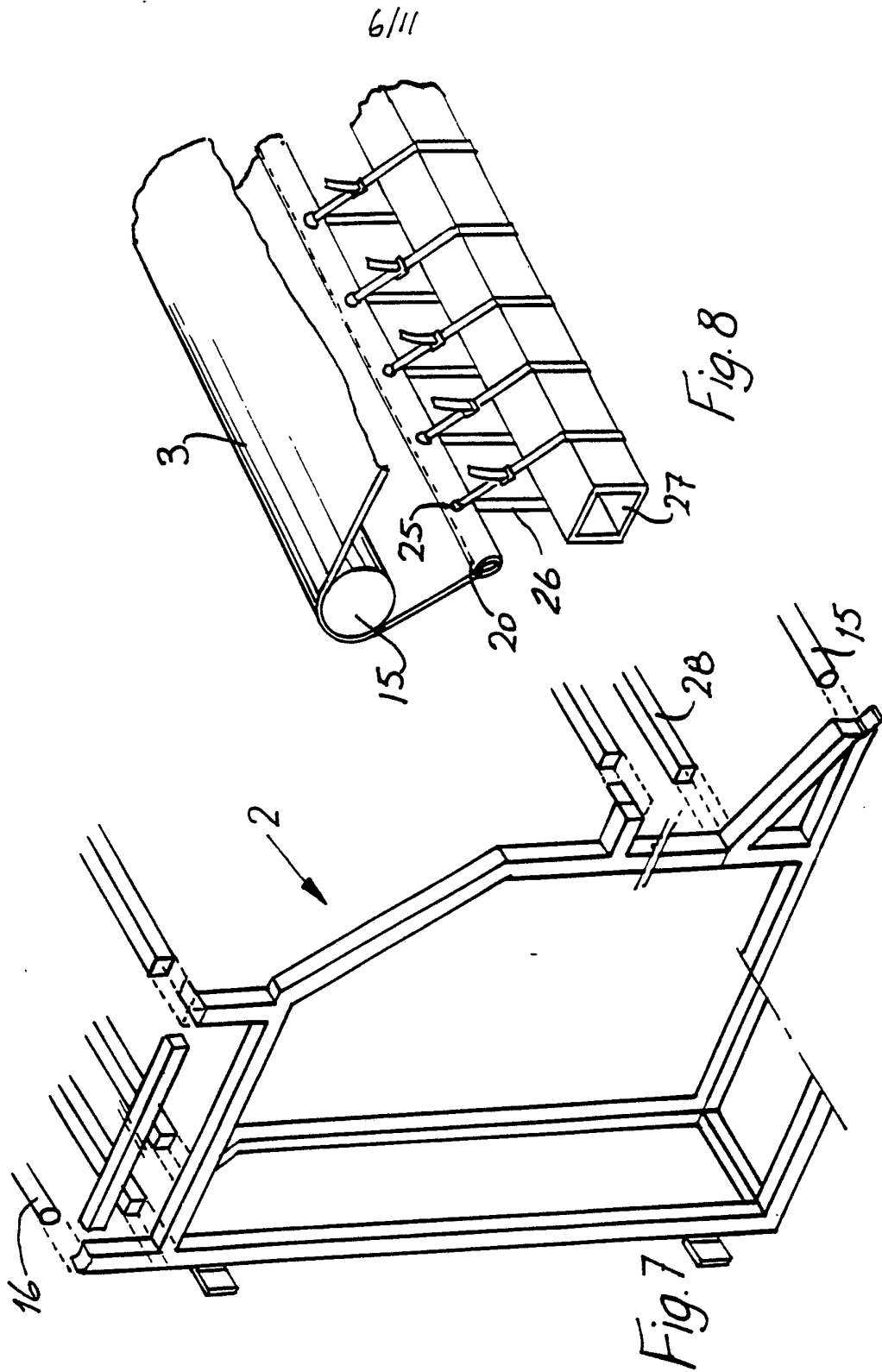


Fig. 6



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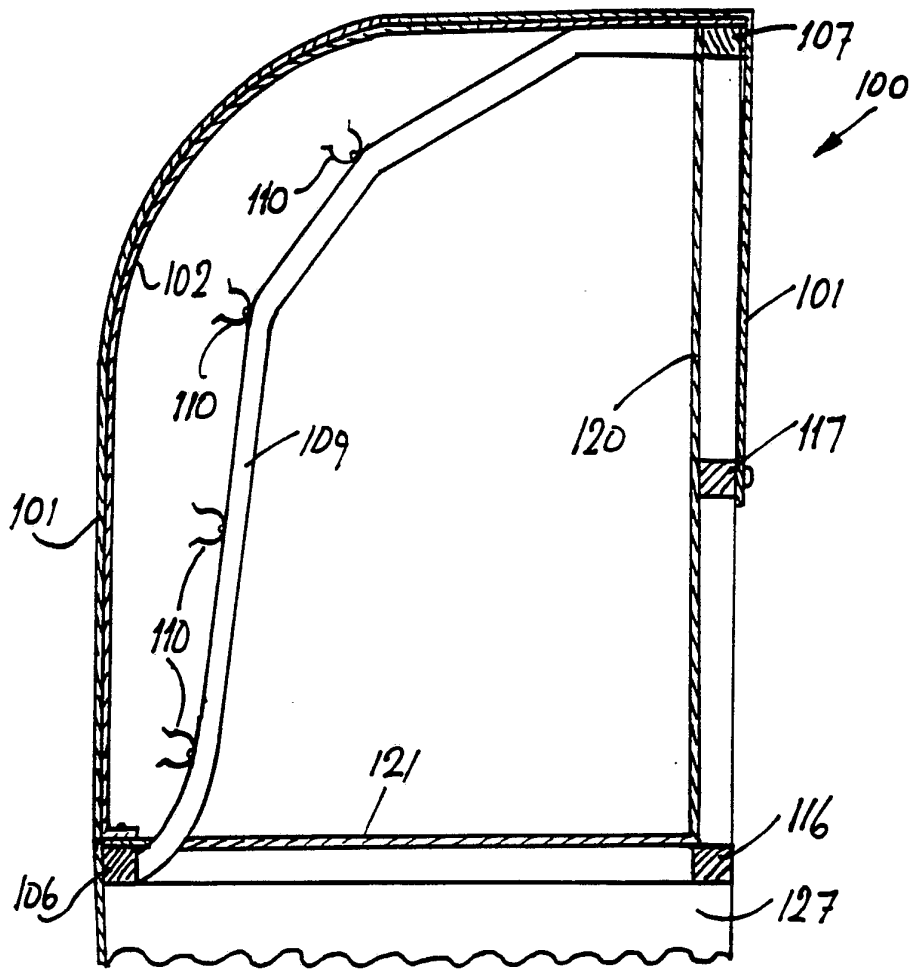


Fig. 9

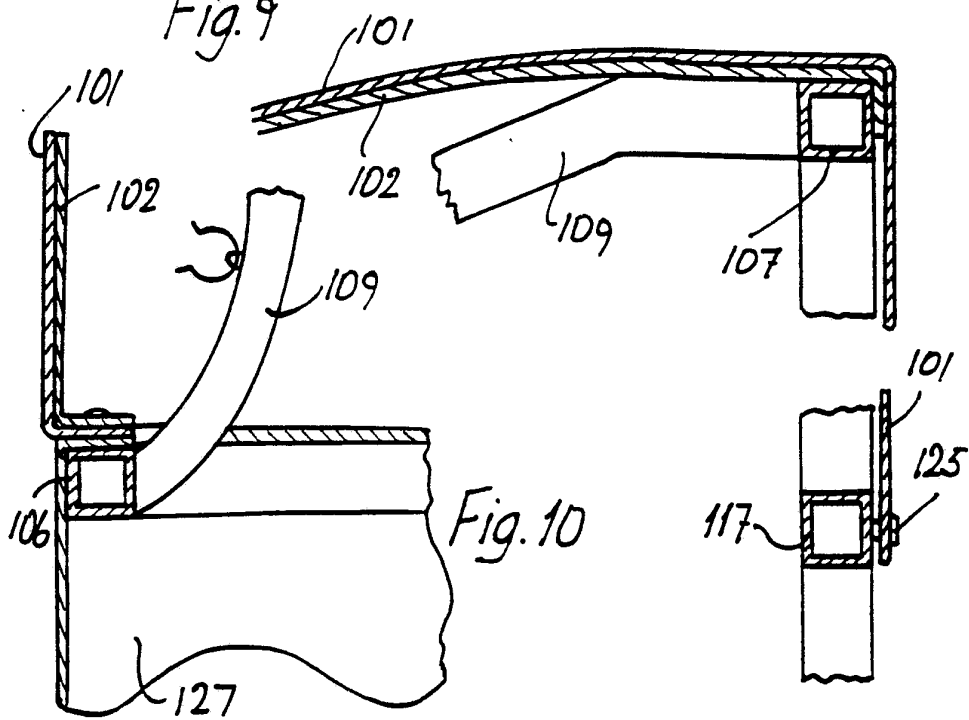


Fig. 10

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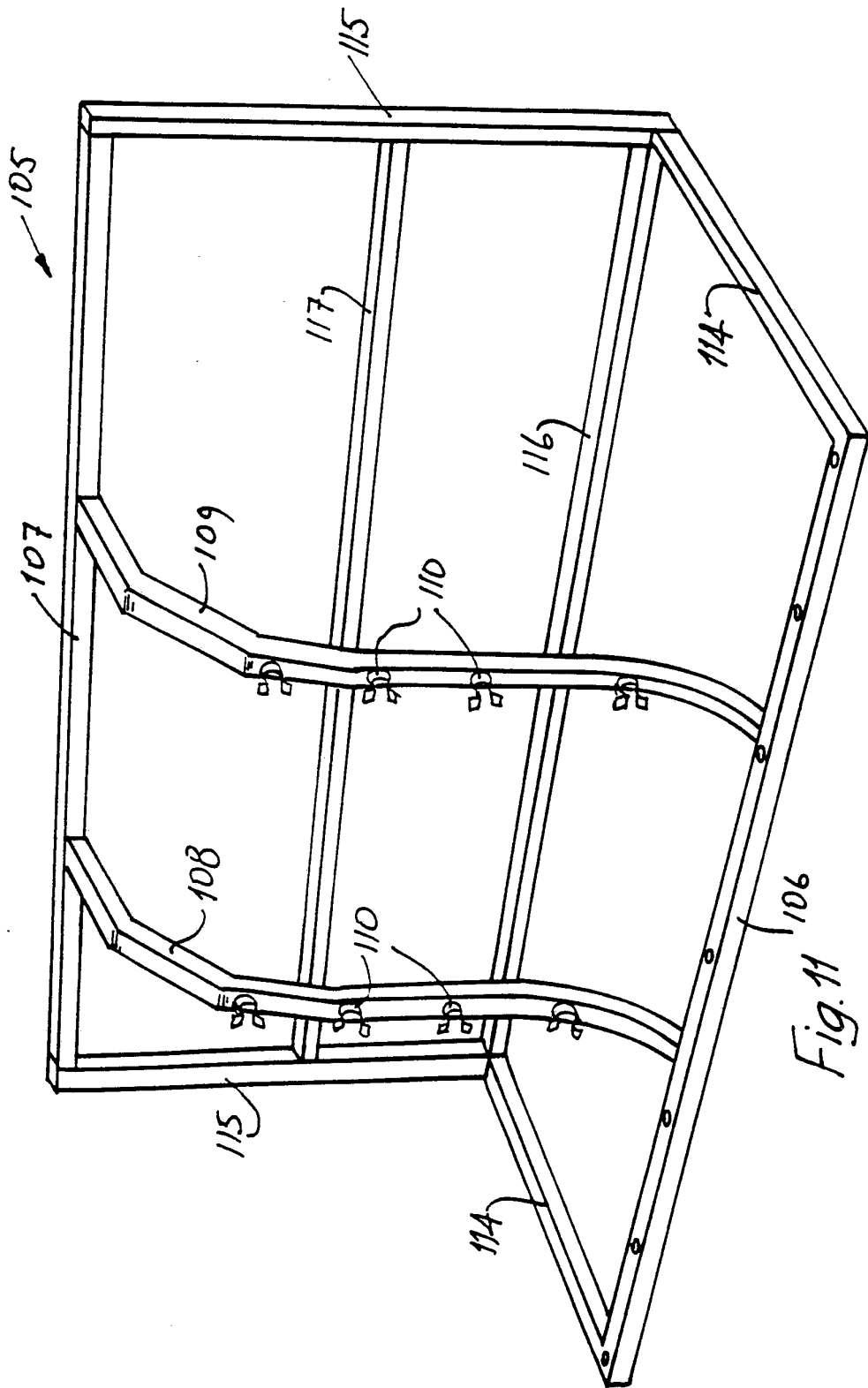


Fig. 11

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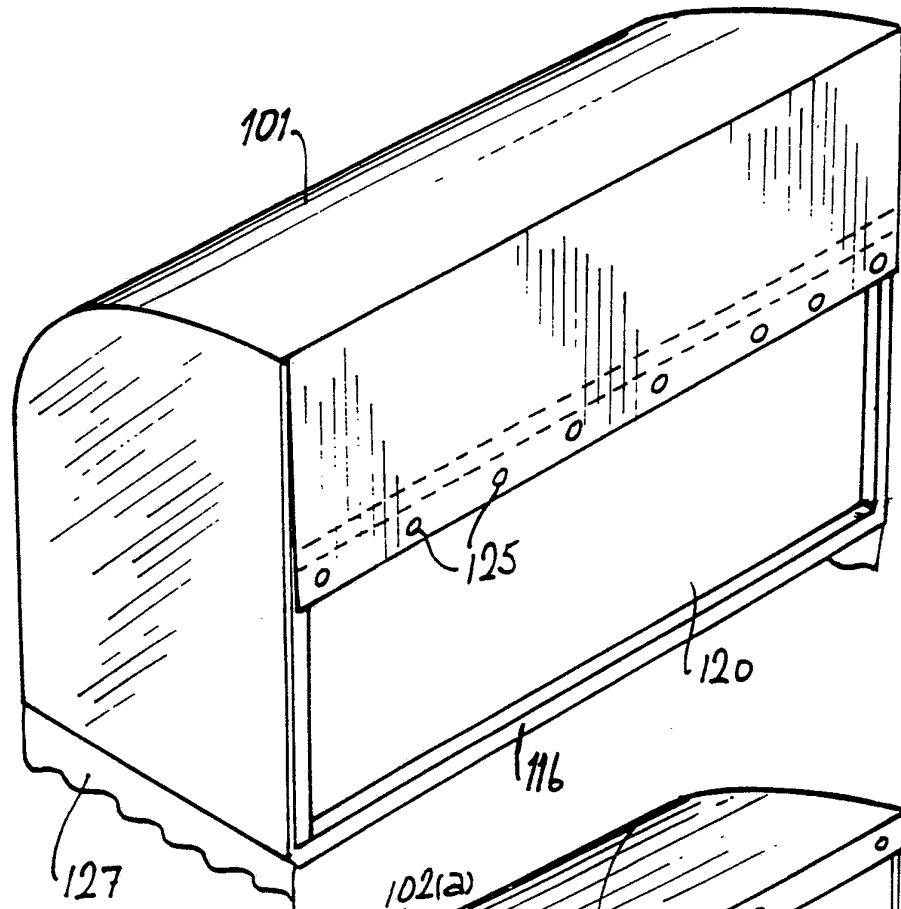


Fig. 13

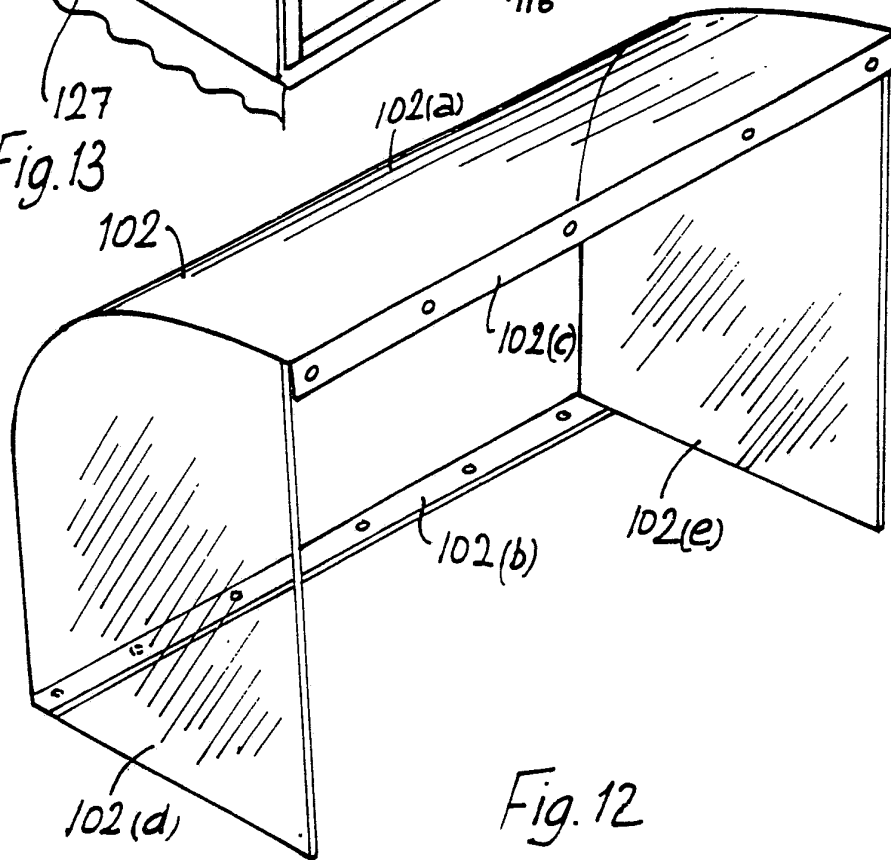
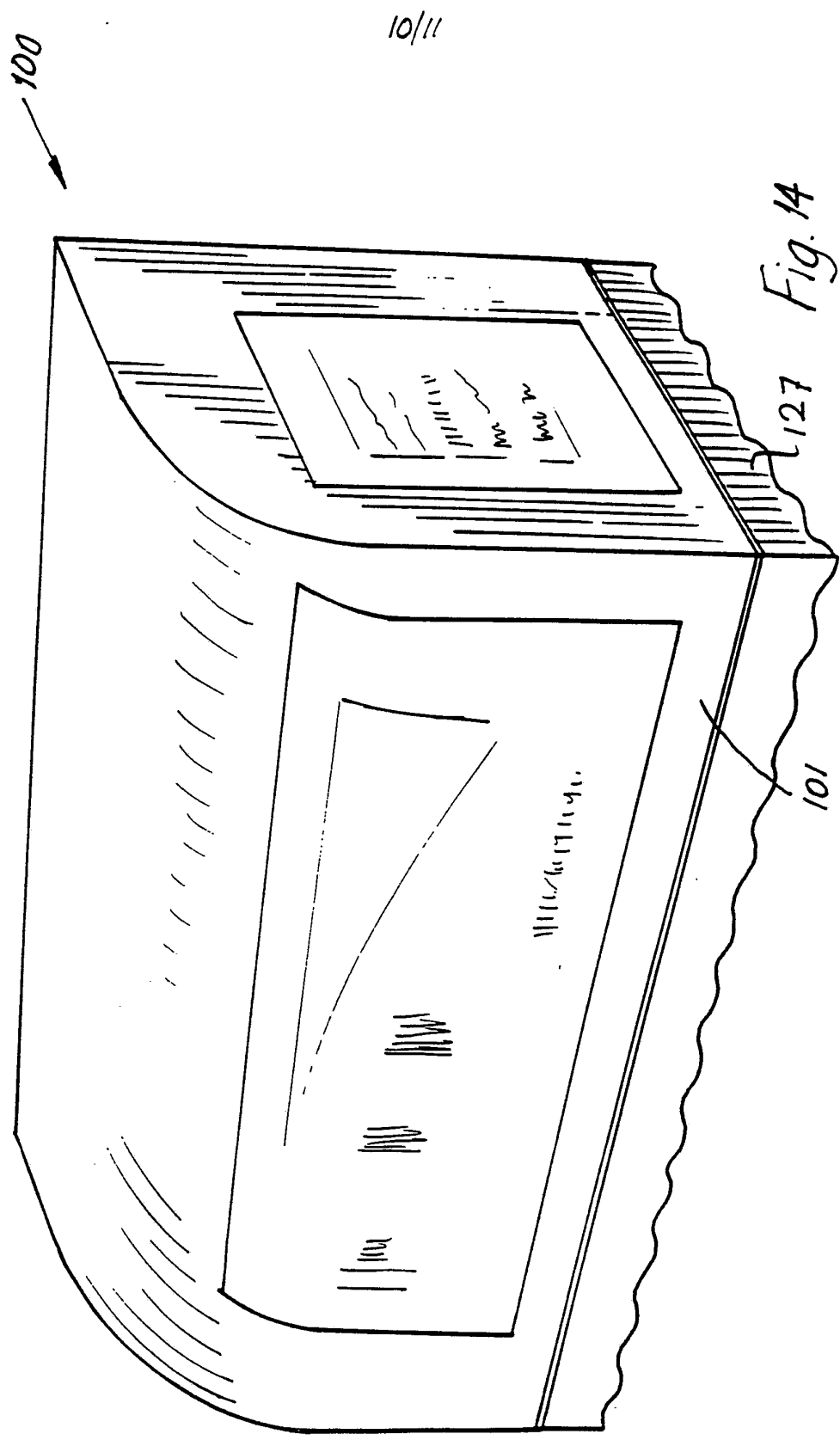


Fig. 12



SUBSTITUTE SHEET

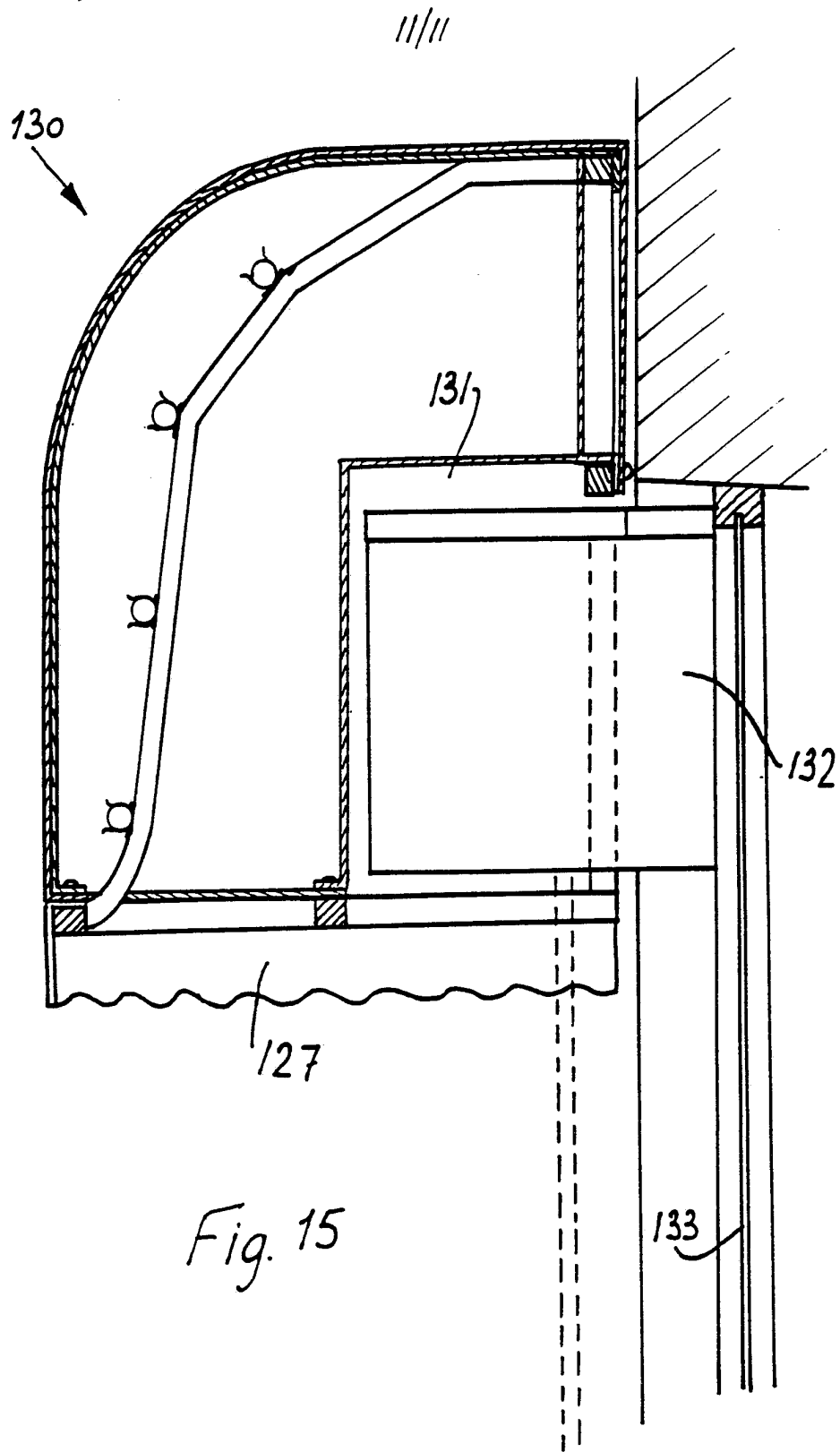


Fig. 15

INTERNATIONAL SEARCH REPORT

PCT/IE 93/00028

International Application No

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶		
According to International Patent Classification (IPC) or to both National Classification and IPC Int.Cl. 5 E04F10/00; G09F15/00; F21V33/00		
II. FIELDS SEARCHED		
Minimum Documentation Searched ⁷		
Classification System	Classification Symbols	
Int.Cl. 5	E04F ; G09F ; F21V ; F21S F21P	
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸		
III. DOCUMENTS CONSIDERED TO BE RELEVANT ⁹		
Category ^o	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³
A	EP,A,0 210 872 (SIGNTECH INC.) 4 February 1987 see page 7, line 13 - page 16, line 5; figures 1-13 ---	1,2,6,7, 12, 14-16, 18-20
A	EP,A,0 285 425 (UNIVERSAL COMPONENTS LTD.) 5 October 1988 see column 1, line 57 - column 3, line 40; figures 1-3 ---	1,2,8, 14,18,19
A	DE,A,2 437 631 (STAHL GEB. JUDEK) 26 February 1976 see page 1, line 1 - line 32; claim 1; figures 1-4 --- -/--	1,14,15, 18,20
^o Special categories of cited documents : ¹⁰ "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "I" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
IV. CERTIFICATION		
Date of the Actual Completion of the International Search 23 JULY 1993		Date of Mailing of this International Search Report 12. 08. 93
International Searching Authority EUROPEAN PATENT OFFICE		Signature of Authorized Officer AYITER J.

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category °	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No.
A	DE,A,3 832 688 (EDU HUNDT & CO) 5 April 1990 see the whole document -----	1, 15, 16, 18

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

IE 9300028
SA 73522

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the European Patent Office EDP file on
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23/07/93

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A-0210872	04-02-87	US-A- 4692847	08-09-87
		AU-B- 577472	22-09-88
		AU-A- 5944786	05-02-87
		CA-A- 1255569	13-06-89
		JP-A- 62032489	12-02-87

EP-A-0285425	05-10-88	GB-A- 2203182	12-10-88
		US-A- 4894960	23-01-90

DE-A-2437631	26-02-76	None	

DE-A-3832688	05-04-90	None	
