(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 098 124**
A1

(12) # EUROPEAN PATENT APPLICATION

(21) Application number: **83303663.5**

(51) Int. Cl.³: **G 09 F 7/08**

(22) Date of filing: **24.06.83**

(30) Priority: **25.06.82 GB 8218428**

(43) Date of publication of application:
11.01.84 Bulletin 84/2

(84) Designated Contracting States:
AT BE CH DE FR GB IT LI LU NL SE

(71) Applicant: **Letraset Limited**
St. George's House 195-203, Waterloo Road
London SE1 8XJ(GB)

(72) Inventor: **Elcock, Kenneth William Albert c/o Letraset Ltd.**
Kingsnorth Industrial Estate Wotton Road
Ashford Kent(GB)

(72) Inventor: **Woodman, Michel Andre Ghilain**
Kingsnorth Industrial Estate Wotton Road
Ashford Kent(GB)

(74) Representative: **Gallafent, Richard John et al,**
GALLAFENT & CO. 8 Staple Inn
London WCIV 7QH.(GB)

(54) **Signs and signage systems.**

(57) A sign unit is described which may be used in a variety of ways to make up signs. The unit consists of an extruded section having a flat central web (1, 30) and two flanges (2, 3, 32, 33). The outer surface of web (1) remote from the flanges can have a legend printed on it. Alternatively a sign plate (14, 15, 37, 38) may be inserted between flanges (2 and 3) and held against e.g. ribs (4) or in grooves (35, 36). The flanges or formations thereon may be dimensioned to cooperate with a holder on which the unit may be clipped. The sign unit is preferably made of aluminium alloy or rigid plastics material.

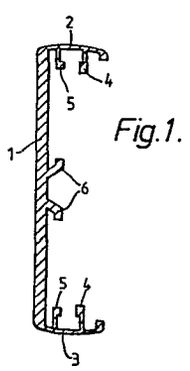


Fig.1.

Fig.3.

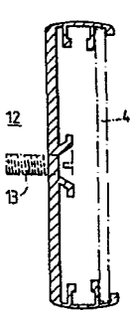


Fig.5.

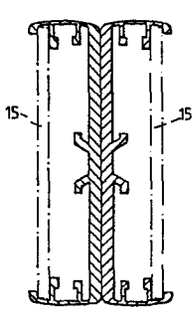
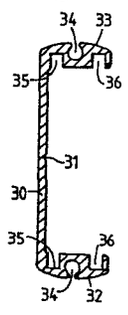


Fig.9.



EP 0 098 124 A1

Signs and signage systems

This invention relates to signs and signage systems, particularly for indoor use.

A wide variety of signs and signage systems has been developed for use in buildings. Many such systems are difficult to operate in practice due to the wide variety of mechanical support and fixing means and of sign panels which need to be used. In addition, many known signage systems are inflexible and do not lend themselves easily to change to reflect desired changes in signage, e.g. where it is desired to change one sign legend for another. Often the entire sign must be renewed and this gives rise to difficulties in practice.

A well-tried approach in interior signage is to provide some sort of frame member into which sign indicia may be inserted. Examples of this type of signage are described inter alia in British Patent Specifications 937,188; 951,870; 966,550; 969,500; 972,369; 1,404,801 and United States Specification 4,334,372.

An alternative approach which has been adopted is to provide flat panels which can be clipped to a base and which can receive sign legends. Systems of this type are described in British Patent Specifications 1,532,995 and 2,034,391.

Many of these systems are dedicated to one

particular type of legend display and are inflexible. We have now found that by careful design it is possible to produce signs and a signage system which is exceptionally versatile but which uses a relatively small number of basic components. The most fundamental component, which constitutes a first feature of the present invention, is an extruded section which can be used either way round in signage applications, as will be described in more detail below.

Thus in accordance with a first feature of the present invention there is provided a multi-purpose sign unit consisting of an extruded section formed of a flat central web and two flanges extending from the two edges thereof and both on the same side thereof, the extrusion having a generally elongated C-shape in cross section, and wherein the flat outer surface of the web on the side opposite the flanges is adapted to receive a legend and wherein the section is characterised by formations on the facing surfaces of the two flanges which formations are adapted to receive a sign plate and hold it in a position parallel to and spaced from the central web.

A length cut from such an extruded section may be used in one of two main ways: first, a sign legend may be applied directly to the surface of the central web remote from the two flanges. The mode of application may vary widely, for example by printing, adhesion of vinyl film letters thereto or adhesion thereto of translucent film carrying thereunder or having printed thereon one or more legible indicia.

Alternatively, a sign sheet may be inserted between the two flanges and supported on the formations, the extrusion then constituting a frame for the sign sheet. Such a sign sheet may be for example a plastics sign sheet having a sign legend applied

thereto. The invention is of particular value with so-called sub-surface signs consisting of a sheet of transparent or translucent plastics through which the legend is visible and right reading having the legend adhered thereto. A particularly preferred method of manufacturing such signs is claimed and described in British Patent Specification 2,005,596.

In a particularly preferred embodiment the extruded section comprises formations on the facing surfaces of the two flanges which enable two plates to be inserted and held in positions parallel to and spaced from the central web. The first may be a sign plate bearing a legend and the other, the more remote from the central web, may be a transparent or translucent cover plate. Alternatively, an opaque cover plate extending only part way, e.g. half way along the length of the piece of extrusion may be mounted in the channel more remote from the central web and may be slidable in the channel to expose or cover a legend on the sign plate between it and the central web.

Extruded sign components according to the present invention may be used singly in either of the two ways indicated above. They are also particularly well adapted for use in pairs. Thus for example two identical sections may be assembled with their flanges and accordingly hollow sides facing one another. Alternatively, the two channel sections may be welded or otherwise secured back to back and the same or different signs inserted into each of the frames thereby formed.

In order to use the extruded sections to the best advantage, a number of accessories may be provided. For example base members may be provided having projections thereon over which the extruded

sections may be clipped with the two flanges resiliently engaging formations on the base member in the fashion of a spring clip. In a particularly preferred embodiment, the outwardly facing surfaces of the two flanges bear a key configuration groove, i.e. a groove of wider cross section more remote from the external surface of the flange than nearer to it. The cross section may be a dovetail or other suitable key configuration. Preferably such configuration is located substantially halfway across the flange in order that two such configurations lie the same distance apart when two extruded sections are placed back to back as when they are placed front to front. Simple extruded key pieces may be used in connection with such key configurations to link two extruded sections together.

A further way in which the sign unit may be used is as a receiving unit for a tile holder, into which tile holder tiles bearing, e.g. letters or numbers may be interchangeably inserted. This way of using the unit is useful where there is a need to vary sign information.

The extruded sign unit may be made of any suitable material. Aluminium alloy extrusions are preferred, though rigid plastics can be used also.

The invention is illustrated by way of example in the accompanying drawings, in which:

Figure 1 is a cross section of an extruded component according to the invention;

Figure 2 is a cross section of the sign component according to the invention mounted on a wall in use as a first surface sign;

Figure 3 is a similar view showing the component of the invention used as a sign frame with a sub-surface sign;

Figure 4 is a section through a flag sign formed

using two components according to the invention;

Figure 5 is a cross section through an alternative form of flag sign;

Figure 6 is a cross section through a desk bar again using the component according to the invention;

Figure 7 is a cross section through an alternative form of desk bar;

Figure 8 is a cross section of an alternative embodiment showing its use as a component of a variable sign.

Figure 9 is a cross section through a third embodiment;

Figures 10, 11 and 12 are cross sections through signs made using the third embodiment;

Figures 13, 14, 15, 16 and 17 show in perspective part exploded view further types of sign made using the third embodiment and using a variety of accessory pieces;

Figure 18 shows how a sign made up using the extrusions shown in Figures 9 and 12 may be enclosed in an outer frame;

Figures 19 and 20 show in exploded view hanging sign configurations;

Figure 21 shows a flag sign configuration, and

Figure 22 shows a desk bar.

Referring to Figures 1 to 8 of the drawings, each shows in cross section one or more extruded components, as shown in Figure 1 or 8. The extruded component consists of a central web 1 and two flanges 2, 3. Moulded integrally with flanges 2, 3 are two upstanding ribs. viz. an outer rib 4 and an inner rib 5. In the case of Figures 1 to 7, moulded integrally with central web 1 is a pair of ribs 6 defining the centre of the web and constituting a guide for attachment of the extruded section. In the case of Figure 8, a central groove 20 is formed on web 1.

Not all of the ribs 4, 5 and 6 are used in all sign applications. Thus for example Figure 2 shows the use of ribs 4 and 5 to clip the extruded section over a bracket 7 itself fixed to a fixed structure 8 such as a wall or notice-board by means of a bolt 9. Component 7 may likewise be made from an extruded plastics section or it may be a moulded plastics unit. Ribs 4 and 5 clip resiliently on to beads 10 on component 7. As shown in Figure 2, two or more extruded sections may be located side by side.

Figure 3 shows the extruded section mounted on a wall 12 by means of a screw 13 the head of which fits between ribs 6. A sign plate 14 is spring-clipped between flanges 2 and 3 and held vertical by ribs 4.

Figures 4 and 5 show double sided sign units formed by two extrusions. In the case where webs 1 are adjacent, each extrusion has a sign sheet 15 clipped into it. In both cases a generally rectangular plastics end cap may be used to unite the two extrusions and hold them together.

Figures 6 and 7 show desk bars, where two extrusions are held between two plastics end caps 16 each of which consists of a base of the shape of an equilateral triangle with its corners cut off and a side wall of hexagonal shape with three longer sides and three shorter. In the desk bar of Figure 7, the legend is on its two clipped-in sign sheets 17.

Figure 8 shows a sign consisting of three components, viz. a sign unit according to the invention, a tile holder insert 21 and a set of tiles 22. The holder 21 fits in place between ribs 4 and web 1 and has a grooved face with grooves 23. Interchangeable tiles 22 have rearward resilient ribs 24 on one face which are dimensioned to fit into grooves 23 and bear

against the flanks of grooves 23 to hold tile 22 in place as illustrated. Two associated ribs 25 abut the surface of holder 21 to ensure that the plane of tile 22 is parallel to the plane of web 1. Letters, numbers or other symbols are e.g. printed on to the face of each tile 22 opposite ribs 24 and 25.

Referring now to Figures 9 to 22, these show the use of an extruded section of different configuration. As is clear from Figure 9 the extruded configuration consists of a central web 30 having a centre groove 31 formed on one side thereof and having two flanges 32, 33 extending each side. Each flange has an external key configuration groove 34 and two internal facing grooves 35 closer to web 30 and 36 more remote therefrom. Plates such as sign panels 37 or translucent protective sheets 38 may be inserted into the pairs of grooves as shown in Figures 10 and 11. Also a ribbed plate 48 may be inserted between grooves 35 which may receive letter-carrying tiles 39 each of which has a pair of resilient prongs 40 on its rear face which is engaged in the grooves in plate 48. To complete such a sign which is shown in detail in Figure 12 and in exploded form in Figure 13 a transparent plate 41 may be fitted into grooves 36. The ends of such a sign may be finished by injection moulded plastics end members 42 which have a pair of prongs 43 moulded thereon which are a press-fit in grooves 34.

Figure 14 shows a simple form of sign consisting of a single-piece extrusion carrying a sign sheet 50 the sign being finished with end plates 42. The sign may be affixed to e.g. a wall using screws 51 which pass through holes 52 drilled in the centre of the web 30. The groove 31 ensures that both holes are drilled centrally.

Figure 15 shows an alternative approach where the flat outer face of web 30 is used for the sign. In this case, a mounting panel 52 having a pair of holes 53, through which screws pass, is mounted on a wall or the like with suitable spacing means between plate 52 and the wall. The extrusion is then slid on with its flat face outwards and end caps 42 press fitted in the usual way.

Figure 16 shows in exploded view how an array of extruded sections may be placed on a wall fitted by means of simple bent flat metal clips 60 into sections 61 which are mounted e.g. on a wall and which have apertures 62 into which the clips 60 are a spring fit.

An alternative fixture system using clips 70 which fit into grooves 34 is shown in Figure 17. All the clips 70 are identical and are made of spring steel. They fit into successive slots in a section, for example, a metal section 72, the edge of each clip 70 fitting into an edge of a rectangular aperture 73 punched in the central web of member 72. End caps 42 fit on to the ends of the extrusions by means of prongs as described above.

Figure 18 shows a sign in accordance with Figure 17 and protected by an exterior frame consisting of top and bottom members 80, two end plates 81 and a transparent front panel 82 which fits in opposed grooves 83 on members 80. Members 80 contain holes 84 at their ends into which fixing screws 85 fit to hold panel 81 in place. This sort of signage construction is of particular value in large directory signs, e.g. for use in the entrance lobbies of office blocks.

Figure 19 shows how the sign consisting of a section of extrusion and a sign plate 90 can be suspended by means of a wire 91 which passes through

the interior of the section. A small extruded link piece 92 fits in two grooves 34 to link two adjacent extruded sections together. Figure 20 shows a more substantial sign construction, again suspended by a wire 91 which hangs the sign up via a further extruded section 93 which engages in two grooves 34 of two side by side by side lying extruded sections, the web 30 of each of which bears a desired legend. The ends of these hanging signs are closed as previously by end caps 42.

A flag sign is shown in Figure 21 consisting of two extrusion sections, an extrusion linking section 93, two end caps 42 and mounting bracket 95, e.g. formed of plastics by impact moulding. The bracket 95 is placed on a wall and the section hung e.g. by means of a screw 96 which is driven into groove 34 from the end and which fits into a slot 97 on clip 95.

Finally, Figure 22 shows the use of a further simple extruded section 98 which has a bead which can slide into groove 34. A desk bar can simply be made out of an extruded section, two end caps 42 and a suitable legend-bearing sign plate. Extrusion 98 may have two holes, 99, bored in it through which screws 100 may pass to attach a desk bar to a desk.

C L A I M S

1. A multi-purpose sign unit consisting of an extruded section formed of a flat central web (1, 30) and two flanges (2, 3, 32, 33), extending from the two edges thereof and both on the same side thereof, the extrusion having a generally elongated C-shape in cross section, and wherein the flat outer surface of the web on the side opposite the flanges is adapted to receive a legend and wherein the section is characterised by formations (4, 5, 35, 36) on the facing surfaces of the two flanges which formations are adapted to receive a sign plate (14, 37) and hold it in position parallel to and spaced from the central web.

2. A sign unit according to claim 1 wherein the flanges or formations thereon are resilient to enable the sign unit to be spring clipped over a suitable base member.

3. A sign unit according to claim 1 or 2 wherein the formations include two pairs of grooves (35, 36), two in each flange, adapted to receive two sign plates (37, 38) such that both are held parallel to and spaced from the central web at differing distances therefrom.

4. A sign unit according to any one of claims 1 to 3 wherein the outwardly facing face of each of the flanges has a key configuration groove (34) therein.

5. A sign unit according to claim 4 wherein the grooves are located halfway up the unit when the flat outer surface of the unit is in a horizontal plane.

6. A sign comprising one or more sign units according to any one of the preceding claims and having a sign legend applied to the surface of the central web remote from the flanges.

7. A sign consisting of one or more sign units in accordance with any one of claims 1 to 5 together with one or more sign plates held between two flanges of the or each sign unit.

8. A sign according to claim 6 or 7 and including end pieces (42) press fitted into the ends of each sign unit.

9. A sign according to claim 6, 7 or 8 and including a plurality of sign units each resiliently clipped to one or more mounting rails (61, 72).

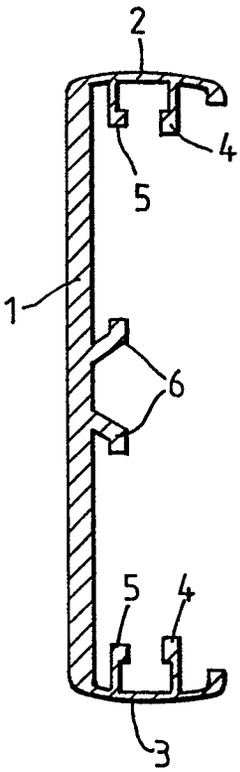


Fig.1.

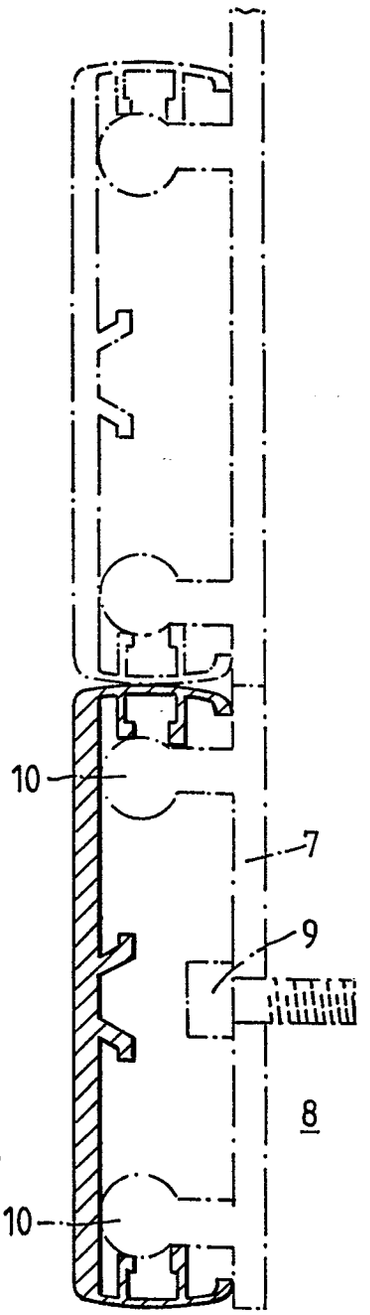


Fig.2.

Fig.5.

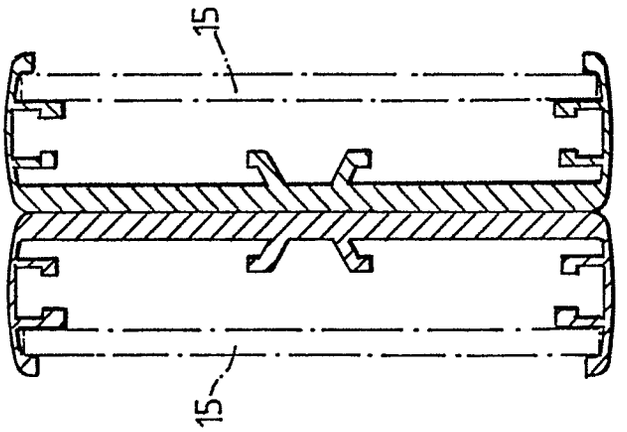


Fig.4.

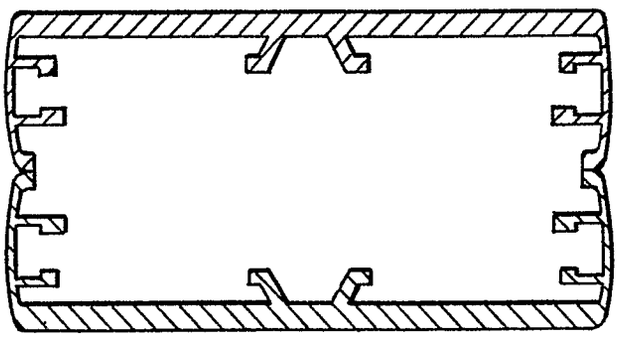
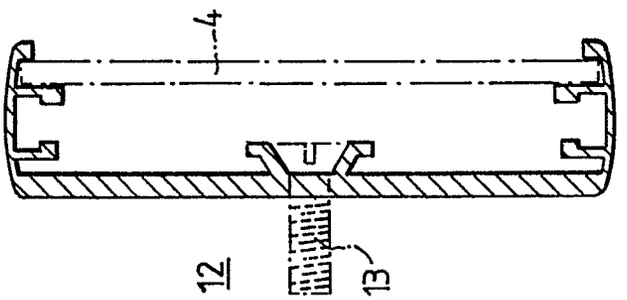


Fig.3.



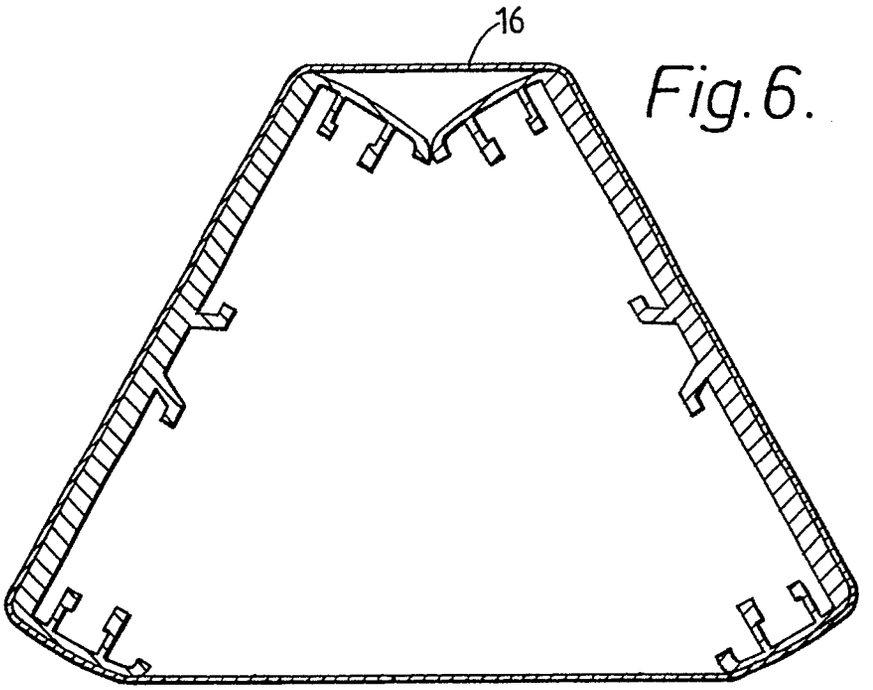


Fig. 6.

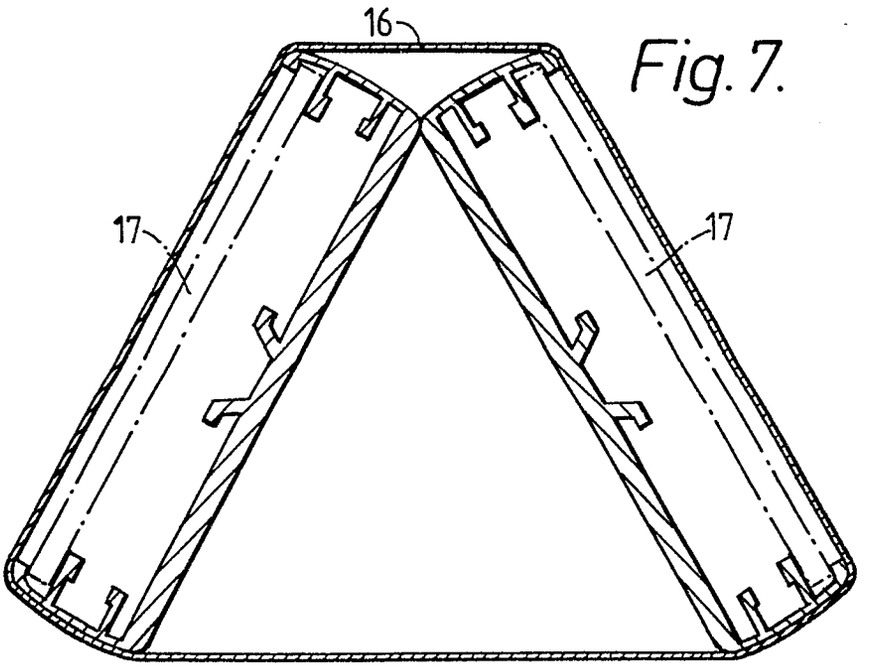


Fig. 7.

Fig.8.

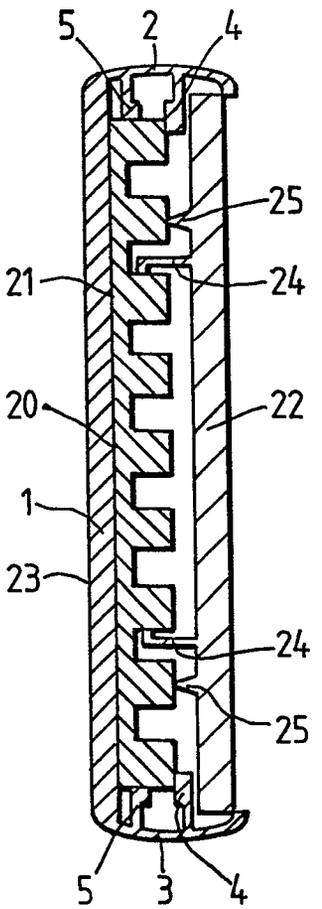


Fig.12.

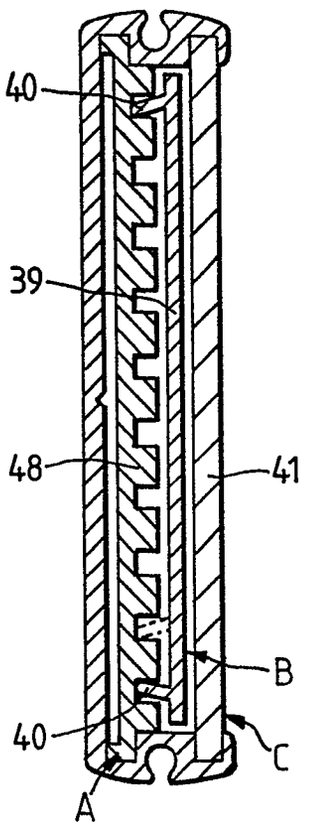


Fig.9.

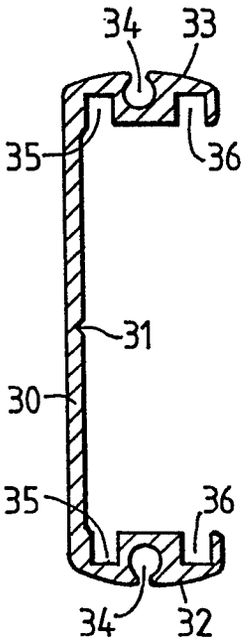


Fig.10.

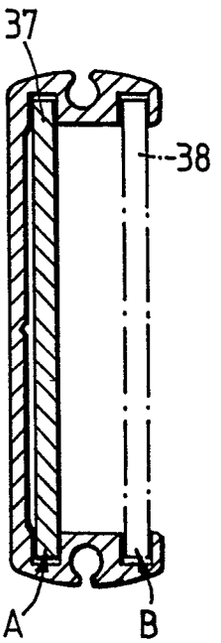
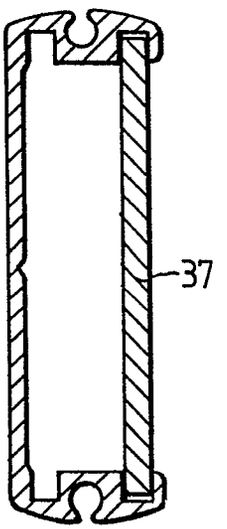


Fig.11.



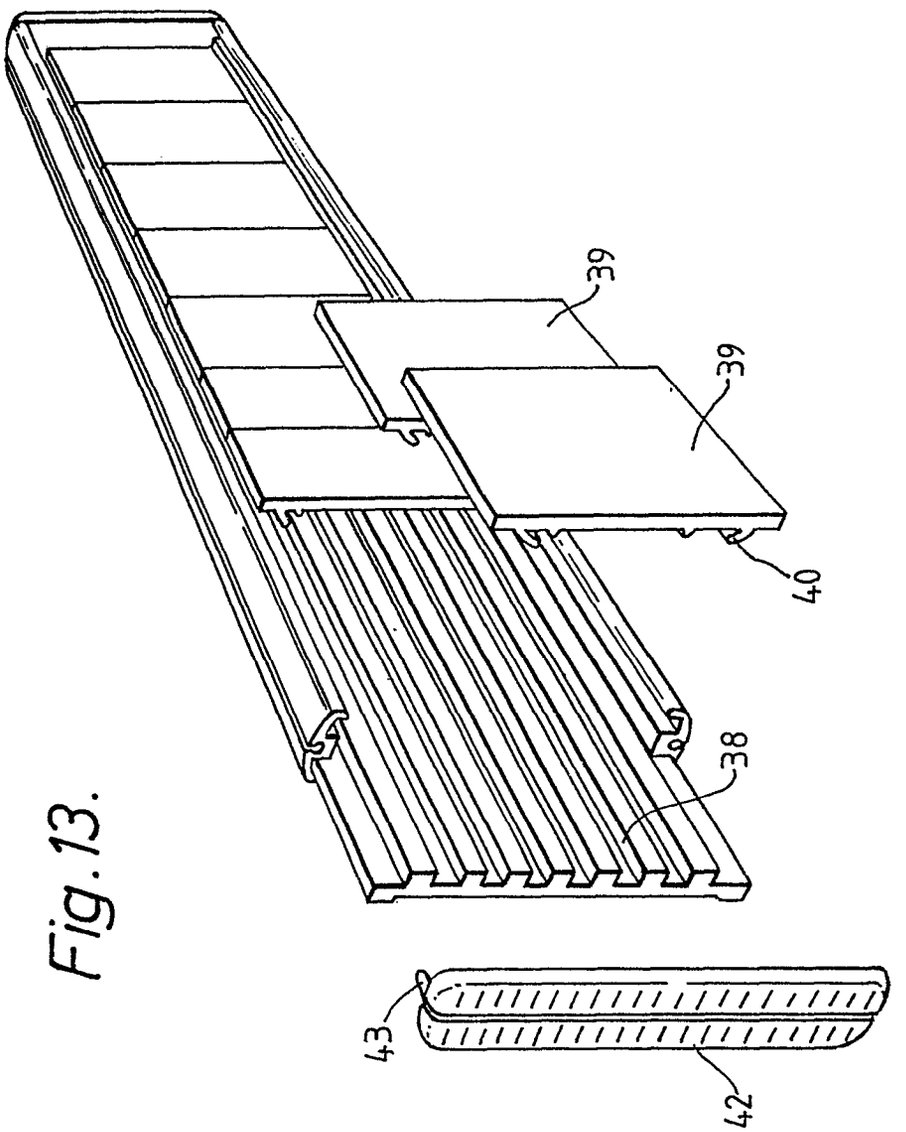


Fig. 13.

Fig.14.

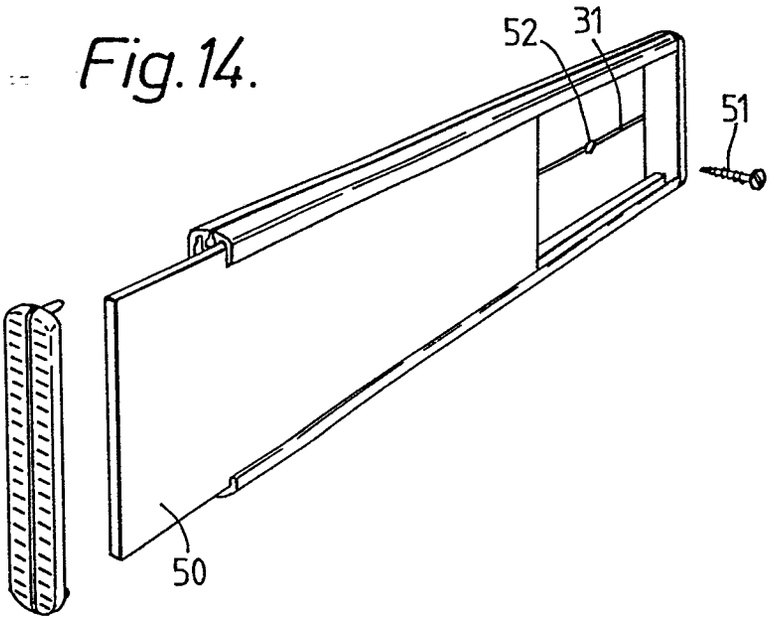
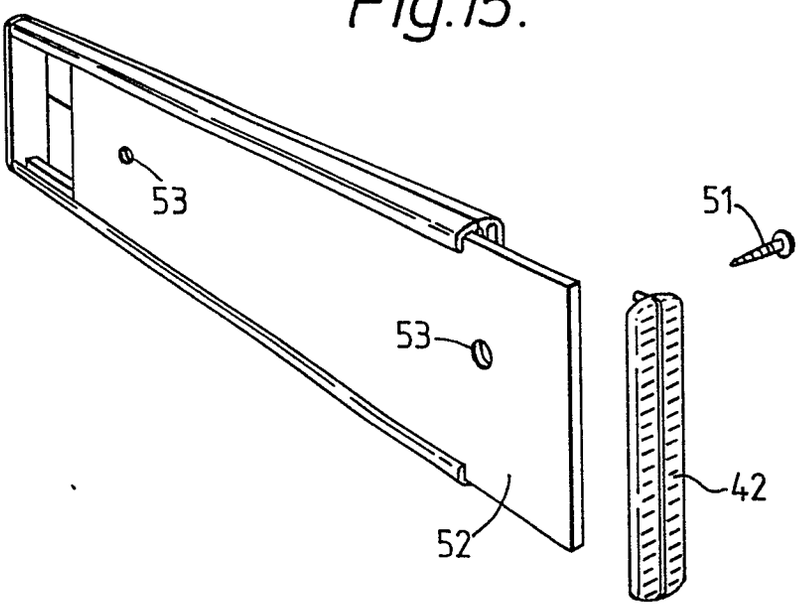


Fig.15.



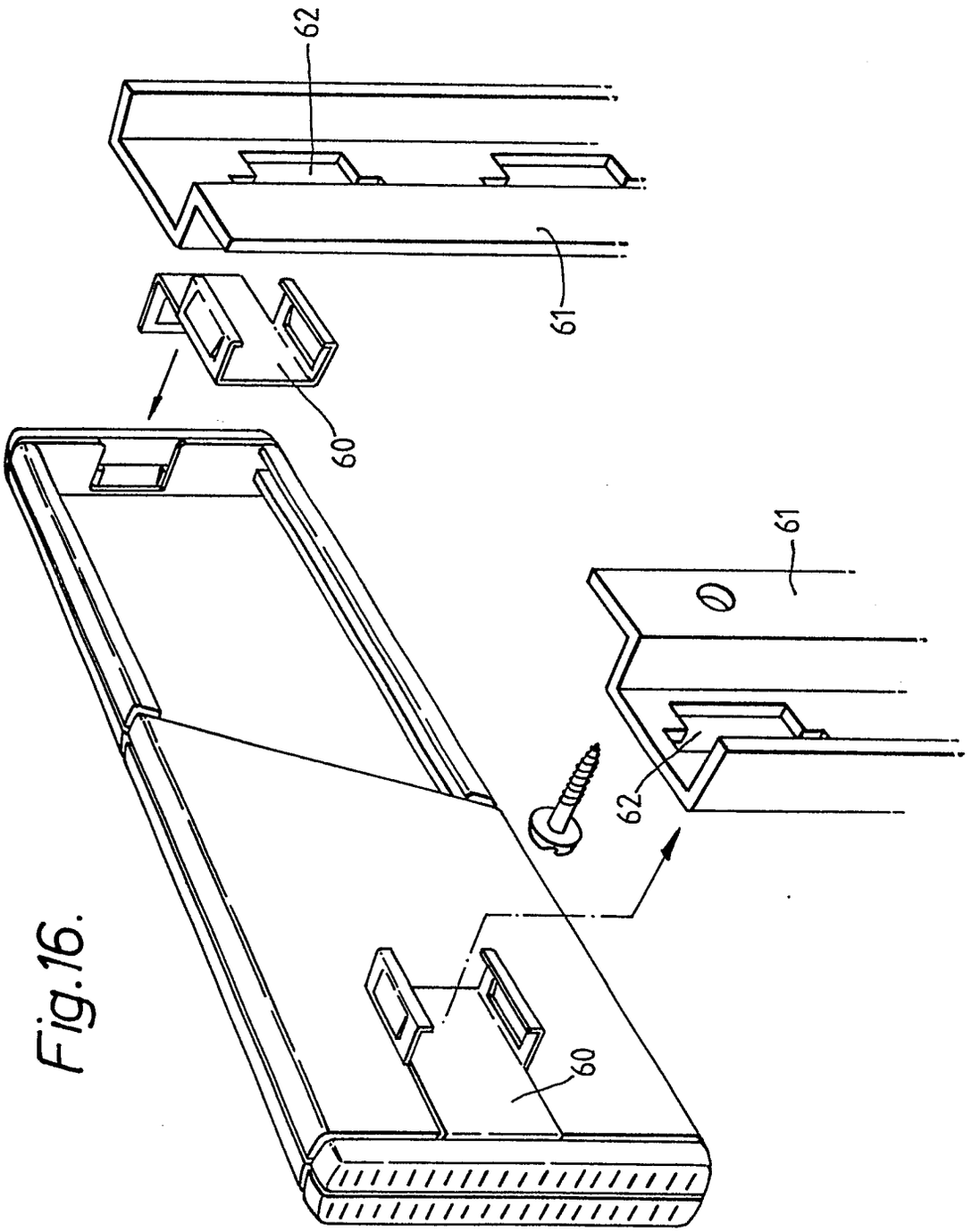
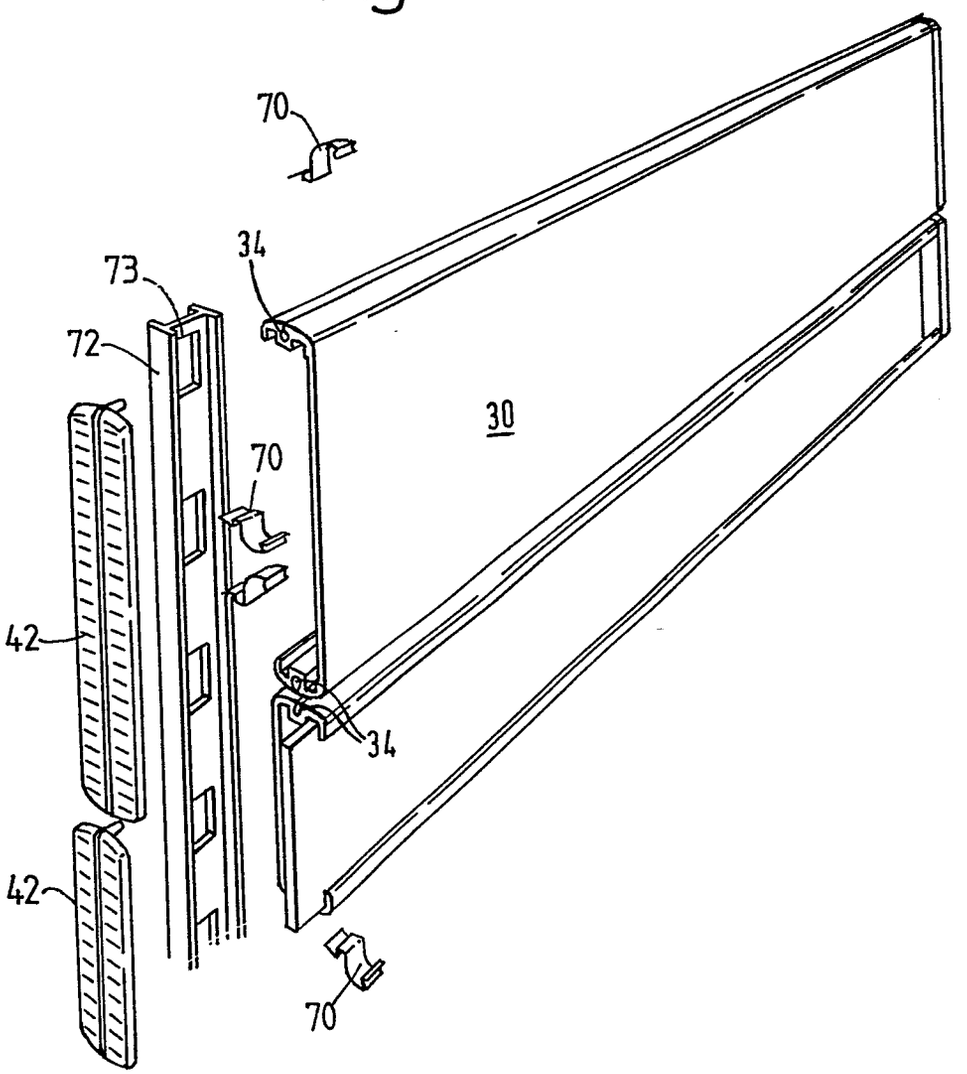


Fig.16.

Fig. 17.



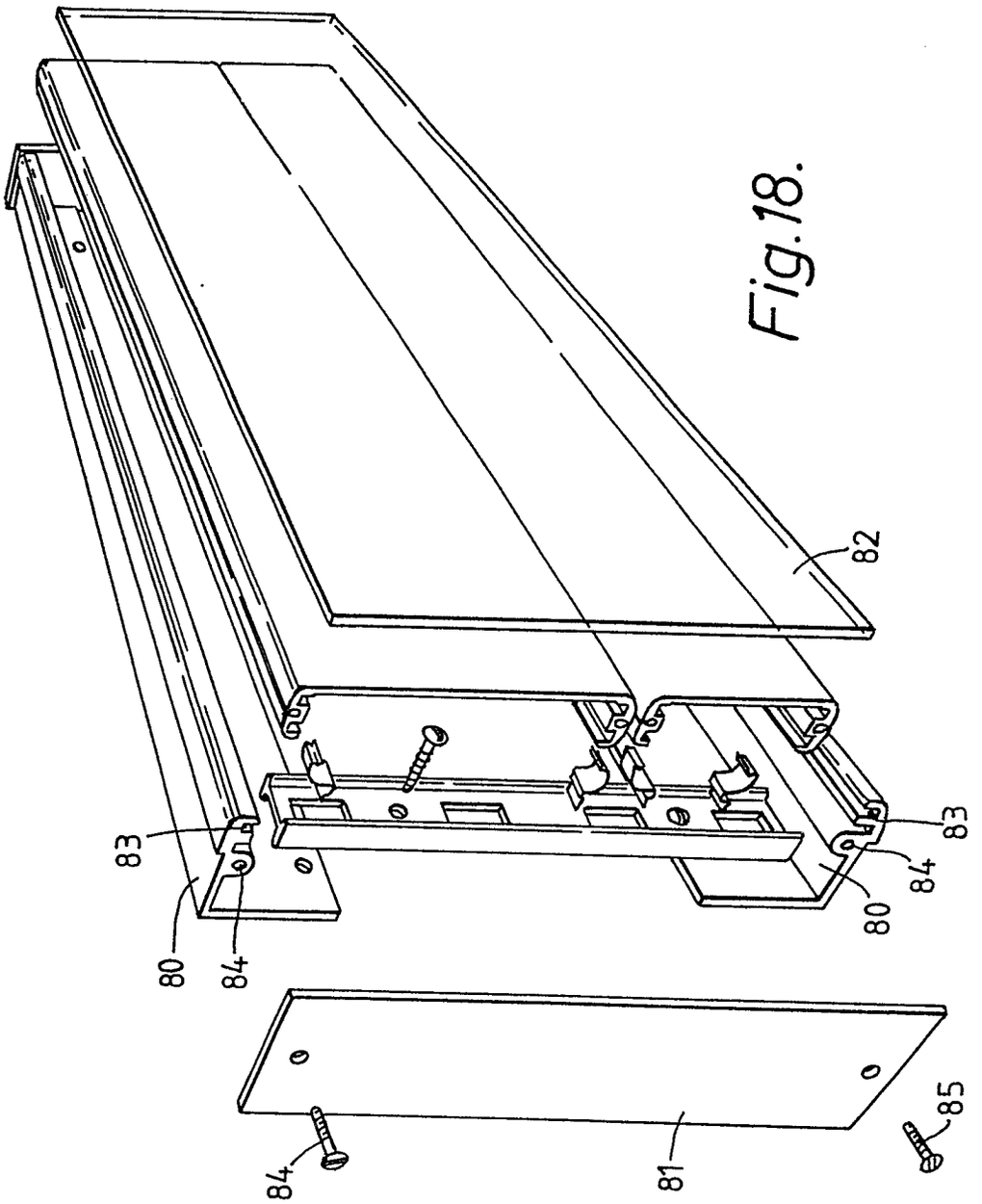


Fig.18.

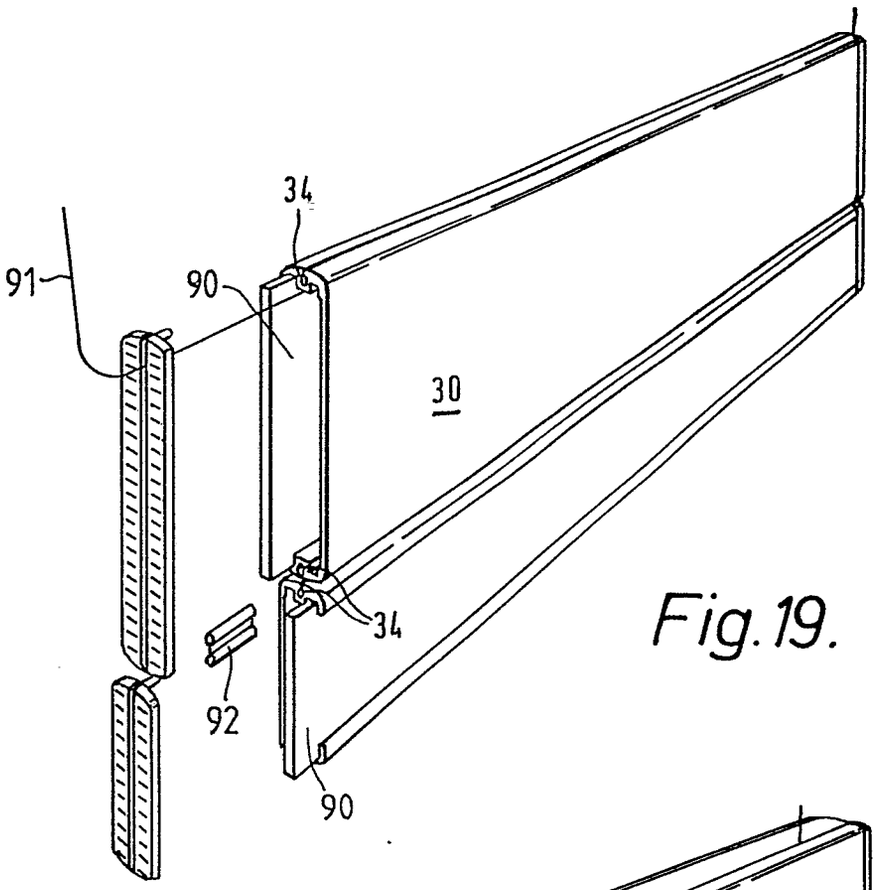


Fig. 19.

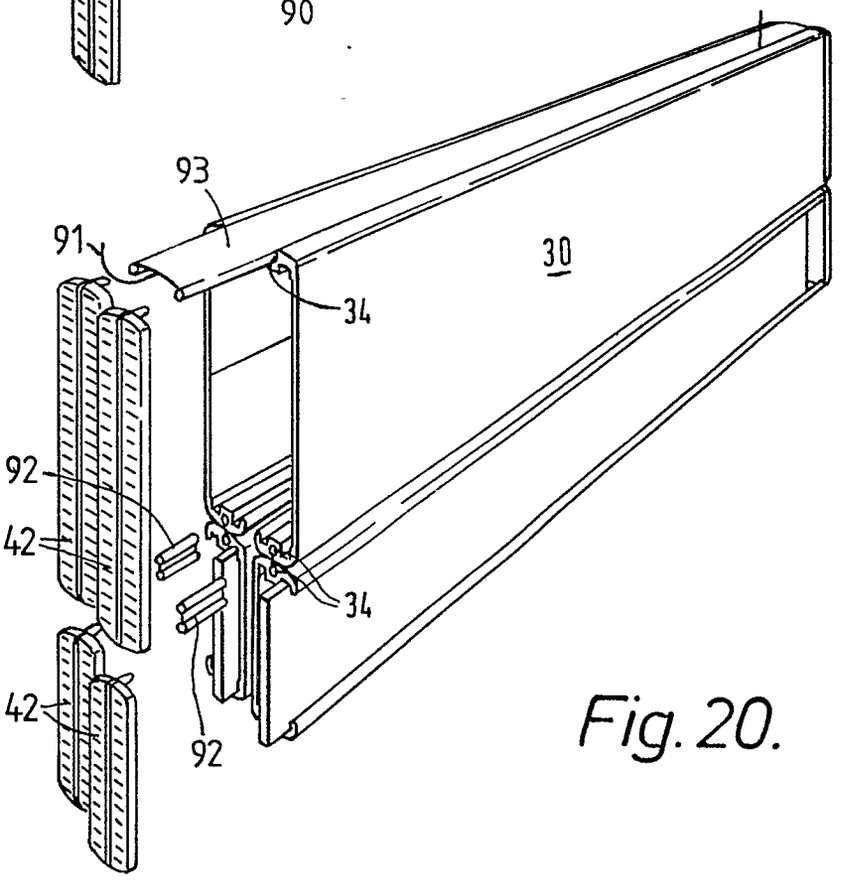


Fig. 20.

Fig.21.

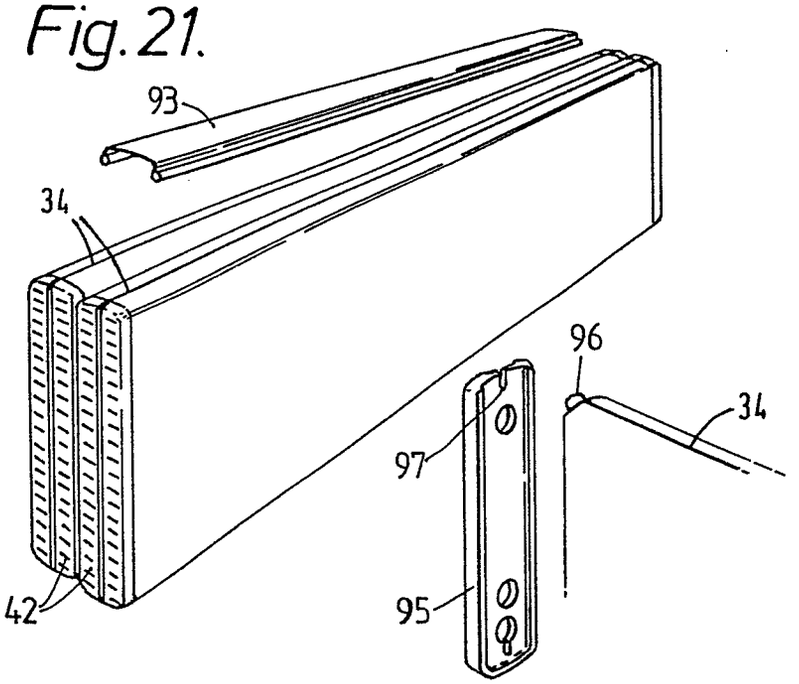
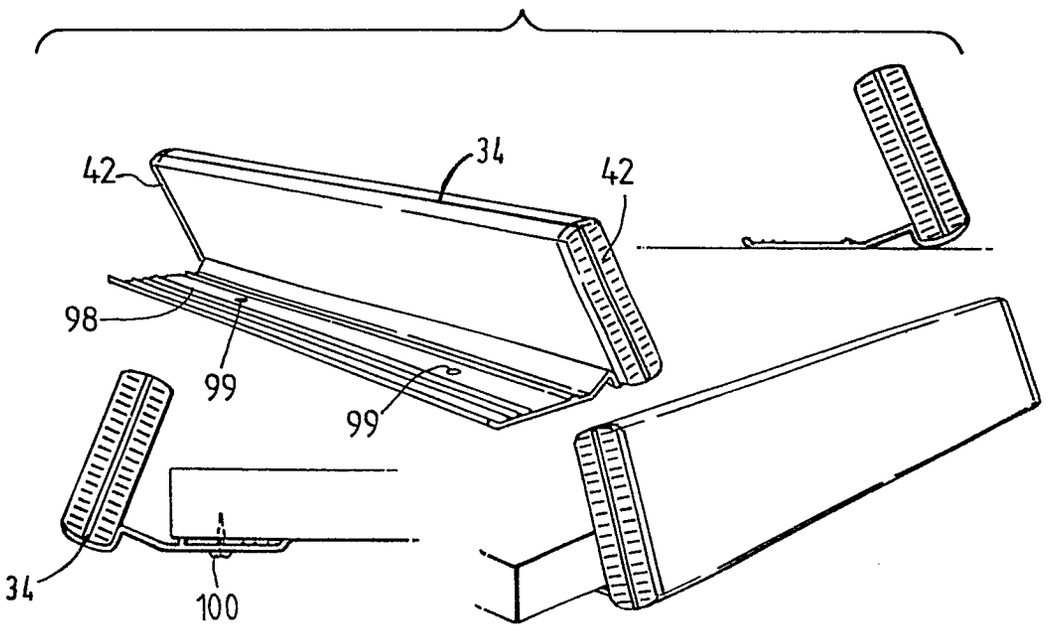


Fig.22.



0098124

European Patent Office

EUROPEAN SEARCH REPORT

Application number
EP 83 30 3663

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. ³)
D,Y	GB-A- 969 500 (K. STEINER) * Page 1, lines 45-71 *	1-3	G 09 F 7/08
D,Y	GB-A- 966 550 (K. STEINER) * Page 1, lines 45-66 *	1-3	
D,A	US-A-4 334 372 (J.E. COLMAR) * Column 1, lines 36-65 *	1,2,6	
D,A	GB-A-2 034 391 (C.E. DOBSON) * Page 1, lines 32-55 *	7-9	

TECHNICAL FIELDS SEARCHED (Int. Cl. ³)

A 47 B 95/04
G 09 F 3/20
G 09 F 7/00

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
BERLIN	31-08-1983	BOTTERILL K.J.

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

EPO Form 1503 03.82