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

(11) **EP 1 647 634 B9**

(12) **CORRECTED EUROPEAN PATENT SPECIFICATION**

(15) Correction information:
Corrected version no 1 (W1 B1)
Corrections, see
Description Paragraph(s) 3, 6

(48) Corrigendum issued on:
19.01.2011 Bulletin 2011/03

(45) Date of publication and mention of the grant of the patent:
04.08.2010 Bulletin 2010/31

(21) Application number: **04742062.5**

(22) Date of filing: **15.07.2004**

(51) Int Cl.:
E01F 13/02 *(2006.01)*

(86) International application number:
PCT/ES2004/000334

(87) International publication number:
WO 2005/007972 (27.01.2005 Gazette 2005/04)

(54) BARRIER ELEMENT FOR CONSTRUCTION SITES AND SIMILAR

SPERRENELEMENT FÜR BAUSTELLEN U. Ä.

ELEMENT DE BARRIERE POUR TRAVAUX ET ANALOGUES

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL HR LT LV MK

(30) Priority: **17.07.2003 ES 200301709 U**

(43) Date of publication of application:
19.04.2006 Bulletin 2006/16

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EP 1 647 634 B9

Description

[0001] The present invention relates to a hoarding element intended for buildings and the like which has many advantages over currently known hoarding elements for similar purposes.

[0002] Hoardings for buildings and signs are used to delimit areas to which public access is limited and for other similar purposes, and is based on the disposition of hoarding elements in a longitudinal succession so as to constitute an actual separating hoarding line.

[0003] These hoarding elements have to meet various requirements, including considerable strength combined with considerable lightness, ease of mutual coupling of the elements to constitute the hoarding, ease of transport, and the like, a known such element is shown in EP-A-957 206.

[0004] These characteristics are achieved to a greater or lesser extent in currently known hoarding elements which are often of complicated construction which is translated into relatively awkward use of the hoarding elements, damage in transit, etc., which give rise to significant discarding of the hoarding elements during the use thereof.

[0005] The object of the present invention is to disclose hoarding elements having characteristics which are advantageous over currently known hoarding elements owing to the simplicity of construction thereof, in particular in the mutual coupling of two successive elements and also in the constitution of the hoarding support feet, with a system for the rotation thereof which enables the hoarding element to be reduced to a substantially planar element which in turn considerably facilitates the storage and transit thereof.

[0006] The hoarding element according to the present invention defined in claim 1, basically comprises a moulded plastics material body equipped with a reinforcing rim round its whole periphery and rigidifying cross-bars as well as apertures for easy fastening without the need for external grips which are very vulnerable to handling of the hoarding element which, at the ends, has special, very effective attachment structures of very simple construction basically consisting of a structure of substantially U-shaped open hooks in a horizontal disposition, on one of the smaller sides and a simple longitudinal beam with a bridge on the other side for the connection of said bridge elements.

[0007] The rotating feet of the hoarding element have rods which are accommodated in orifices in the lower edge of the hoarding element, resulting in an easy disposition of the foot in the operating position, perpendicular to the hoarding, and service position parallel thereto.

[0008] The accompanying non-limiting explanatory drawings of a preferred embodiment of the present invention will assist the understanding thereof.

Fig. 1 is a front elevation of a complete hoarding element according to the present invention.

Fig. 2 is a plan view of the hoarding element.

Fig. 3 and 4 are respective elevations of each end of the hoarding element.

Fig. 5 is a cross-section and detail through the indicated sectional planar.

Fig. 6 is a complete section of the hoarding element according to the invention.

Fig. 7 is a section of the coupling of a foot of the hoarding element.

Fig. 8 is a perspective view of the foot and the recess in the hoarding element.

Fig. 9 and 10 are respective sectional details through the indicated sectional planars.

Fig. 11 shows a detail of the coupling of the hoarding elements according to the invention.

Fig. 12 is a perspective view of a hooking device on one of the sides of the hoarding element.

Fig. 13 and 14 show respective sectional details of the coupling of the hook elements at one end.

Fig. 15 is a front elevation of the hoarding element similar to that shown in Fig. 1 but of a shorter length.

[0009] As shown in the drawings, the hoarding element according to the present invention comprises a principal part moulded in one piece, as indicated by reference numeral 1, and the rotating feet 2 and 3, in other words it basically consists of three principal elements, and this significantly simplifies production and assembly.

[0010] The principal element 1 has an elongate structure of variable shape with a flat laminar flange 4 which extends right round the periphery of central body and has a laminar shape so that each of the sections has a double T-shaped structure, as shown in Fig. 5, which illustrates the formation of said flange 4 by means of a central portion and upper and lower regions 5 and 6, which generally have a structure similar to a double T to provide high strength with minimal material. Said structure is repeated in intermediate cross-bars such as 7, 7', 7", etc., which connect the top and bottom sides of the central element of the body 1. Fig. 5 shows a detail of the shorter cross-bar 8 which has a structure similar to the cross-bars 7, 7', 7", etc. but of shorter length, transverse elements 9 and 10 making up said double T-shaped structure being illustrated. A slim panel 11 which is joined by attenuated regions 12 forms the upper laminar central portion of the central body.

[0011] The frame 4, in its upper portion, has various transverse apertures such as 13, 14 and 15 intended to act as grips for easy handling of the hoarding element.

[0012] It will be appreciated that the number of cross-bars 7, 7', 7", etc., and 8 will be variable, depending on the length of the hoarding element. Thus, for example, Fig. 15 shows a hoarding element indicated in its entirety by reference numeral 16 and having a structure similar to that of the hoarding element 1 in Fig. 1, the only significant difference being the length which, in the case illustrated, is much shorter than that of the hoarding element 1 as it has only two cross-bars 17 and 18.

[0013] A characteristic of the present invention is based on the disposition in one of the smaller sides 19 (Fig. 1) of two substantially U-shaped hooks with unequal arms which originate from said edge 19 and have been indicated by reference numerals 20 and 21. Said hooks, of which two have been illustrated but of which there may obviously be more, have a structure of the type shown in Fig. 12, which shows the hook 20 consisting of a U-shaped structure with unequal arms 22 and 23 in an open hook disposition, as shown in Fig. 13 and 14. One of the hooks is directed forward and the other backward from the hoarding element, as shown in Fig. 13 and 14, which show the hooks 20 and 21 respectively, of which the constitution is similar with said mere difference of being directed forward or backward. To mate with said hooks, the hoarding element 1 has, on the shorter side 24 remote from the side 19, a single cross-bar 25 which is joined by upper arm 26 and lower arm 27 and optionally reinforced by an intermediate arm 28 which will have any type of structure, Fig. 13 and 14 showing a cross-section of ribbed shape to achieve greater strength. The coupling of the hooks 20 and 21 to the cross-bar 25 of an adjacent hoarding element is achieved very easily owing to the structure of said hooks and the flexibility of the material, a perfect connection of two successive hoarding elements being obtained.

[0014] The feet have a very simple constitution in which a flattened foot 30 equipped with an internal counterweight 31 is coupled to the lower region of an external tubular element 29 introduced into a recess in the lower portion of the element 1.

[0015] The element 29 has an upper internal rod 32 which is actually introduced into the recess 33 in the lower portion of the hoarding element, a U-shaped part 34 held by the cap 38 (Fig. 8) being introduced in a corresponding transverse recess, and the lower region comprising sets of windows 35 forming two mutually opposed pairs in which projecting resilient ribs 36 and 37 of the foot body 29 can be introduced, thus producing two stable positions of the feet in a perpendicular disposition.

[0016] It will be appreciated that with this disposition it is very easy to introduce the hoarding feet elements and to cause them to rotate so as to occupy the desired operating position perpendicular to the hoarding element or transit position parallel thereto.

Claims

1. A hoarding element for buildings and the like of the type comprising a moulded body of elongate structure equipped with a plurality of reinforcing cross-bars (7,7',7"), rotating support feet and connecting elements at the ends so as to form a hoarding line for successive coupling of hoarding elements, the hoarding body structure comprising a peripheral rim which extends round the structure, **characterised in that** one of the smaller sides has two open hooks (20,21) which can be connected to a cross-bar (25) joined to the other smaller side of the adjacent hoarding element so as to lengthen the hoarding elements.

2. A hoarding element for buildings and the like according to claim 1, **characterised in that** the open hooks, in a plan view, have a horizontal U-shaped structure with unequal arms, one of the hooks being directed toward the front face and the other toward the rear face of the hoarding element so as to allow more secure coupling to the cross-bar of the adjacent hoarding element.

3. A hoarding element for buildings and the like according to claim 1, **characterised in that** the cross-bar for joining the smaller side remote from the hooks is a single straight cross-bar joined to the corresponding smaller side of the hoarding element by means of transverse reinforcing arms.

4. A hoarding element for buildings and the like according to claim 3, **characterised in that** said cross-bar has a star-shaped cross-section so as to reduce the mass thereof.

5. A hoarding element for buildings and the like according to claim 1, **characterised by** the provision of apertures in the rim which extends at the periphery of the hoarding element to allow the fastening thereof.

6. A hoarding element for buildings and the like according to claim 1, **characterised in that** the foot elements comprise a base carrying a counterweight and a rod for the introduction thereof into a recess in the lower portion of the hoarding element, having a notch in the upper portion in which there is inserted a U-shaped element which may be press fitted and removed from the exterior by means of a retaining cap and having opposing flexible ribs in the region of its lower portion, which are capable of entering either of two pairs of mating windows in the base of the recess of the hoarding element so as to allow the disposition and fixing of the foot in two mutually perpendicular positions, of which one is perpendicular to the hoarding element and the other parallel thereto.

Patentansprüche

1. Bauzaunelement für Gebäude und dergleichen vom Typ mit einem Formkörper länglicher Struktur, ausgestattet mit mehreren Verstärkungs-Querstäben (7, 7', 7"), Dreh-Stützfüßen und Verbindungselementen an den Enden, um eine Bauzaunreihe zum sukzessiven Koppeln von Bauzaunelementen zu bilden, wobei die Bauzaunkörperstruktur einen Um-

fangsrand aufweist, der sich rund um die Struktur erstreckt, **dadurch gekennzeichnet, dass** eine der kleineren Seiten zwei offene Haken (20, 21) besitzt, die mit einem Querstab (25) verbindbar sind, der an der anderen kleineren Seite des benachbarten Bauzaunelements angebracht ist, um die Bauzaunelemente zu verlängern.

2. Bauzaunelement für Gebäude und dergleichen nach Anspruch 1, **dadurch gekennzeichnet, dass** die offenen Haken im Grundriss eine horizontale U-förmige Struktur mit ungleichen Armen aufweisen, wobei einer der Haken zur Vorderseite und der andere zur Rückseite des Bauzaunelements weist, um ein sichereres Koppeln des Querstabs des benachbarten Bauzaunelements zu ermöglichen.

3. Bauzaunelement für Gebäude und dergleichen nach Anspruch 1, **dadurch gekennzeichnet, dass** der Querstab zum Verbinden der kleineren Seite abgewandt von den Haken ein einzelner gerader Querstab ist, der mit der entsprechenden kleineren Seite des Bauzaunelements mittels Quer-Verstärkungsarmen verbunden ist.

4. Bauzaunelement für Gebäude und dergleichen nach Anspruch 3, **dadurch gekennzeichnet, dass** der Querstab einen sternförmigen Querschnitt aufweist, um seine Masse zu reduzieren.

5. Bauzaunelement für Gebäude und dergleichen nach Anspruch 1, **gekennzeichnet durch** die Anordnung von Öffnungen in dem Rand, der sich am Umfang des Bauzaunelements erstreckt, um dessen Befestigung zu ermöglichen.

6. Bauzaunelement für Gebäude und dergleichen nach Anspruch 1, **dadurch gekennzeichnet, dass** die Fußelemente eine ein Gegengewicht tragende Basis und einen Stab für dessen Einführung in eine Ausnehmung im unteren Teil des Bauzaunelements aufweisen, wobei der Stab im oberen Teil eine Aussparung aufweist, in die ein U-förmiges Element im Presssitz einführbar und von außen her aus dem Element entfernbar ist mit Hilfe einer Haltekappe, wobei das Element einander gegenüberliegende flexible Arme im Bereich seines unteren Teils aufweist, die in zwei Paare passender Fenster in der Basis der Ausnehmung des Bauzaunelements einführbar sind, um die Anordnung und Fixierung des Fußes in zwei zueinander rechtwinkligen Stellungen zu ermöglichen, von denen die eine rechtwinklig zum Bauzaunelement und die andere parallel dazu verläuft.

Revendications

1. Elément de barrière pour des bâtiments et autres du type comprenant un corps moulé de structure allongée équipé d'une pluralité d'entretoises de renforcement (7, 7', 7"), de pieds de support rotatifs et d'éléments de connexion aux extrémités afin de former une ligne de barrière pour l'accouplement successif d'éléments de barrière, la structure du corps de barrière comprenant un rebord périphérique qui s'étend autour de la structure, **caractérisé en ce que** l'un des plus petits côtés présente deux crochets ouverts (20, 21) qui peuvent être reliés à un poteau (25) joint à l'autre plus petit côté de l'élément de barrière adjacent afin d'allonger les éléments de barrière.

2. Eléments de barrière pour des bâtiments et autres selon la revendication 1, **caractérisé en ce que** les crochets ouverts, dans une vue planaire, présentent une structure en forme de U avec des bras inégaux, un des crochets étant dirigé vers la face avant et l'autre vers la face arrière de l'élément de barrière afin de permettre un accouplement plus sûr de l'entretoise de l'élément de barrière adjacent.

3. Elément de barrière pour des bâtiments et autres selon la revendication 1, **caractérisé en ce que** l'entretoise pour joindre le plus petit côté distant des crochets est une entretoise droite unique jointe au plus petit côté correspondant de l'élément de barrière au moyen d'éléments de pont transversaux de renforcement.

4. Elément de barrière pour des bâtiments et autres selon la revendication 3, **caractérisé en ce que** l'élément de renforcement présente une section transversale en forme d'étoile afin de réduire la masse de celui-ci.

5. Elément de barrière pour des bâtiments et autres selon la revendication 1, **caractérisé par** la disposition d'ouvertures dans le rebord qui s'étend à la périphérie de l'élément de barrière afin d'en permettre la fixation.

6. Elément de barrière pour des bâtiments et autres selon la revendication 1, **caractérisé en ce que** les éléments de pied comprennent une base supportant un contrepoids et une tige pour l'introduction de ceux-ci dans un renfoncement dans la partie inférieure de l'élément de barrière, ayant une encoche dans la partie supérieure dans laquelle un élément en forme de U est inséré, lequel peut être inséré par pression et enlevé de l'extérieur au moyen d'un bouchon de retenue et ayant des nervures flexibles à l'opposé dans la région de sa partie inférieure, qui sont capables d'entrer dans deux paires de fenêtres d'accouplement dans la base du renfoncement de

l'élément de barrière afin de permettre la disposition et la fixation du pied dans deux positions perpendiculaires mutuellement, l'une d'entre elles étant perpendiculaire à l'élément de barrière et l'autre parallèle à celui-ci.

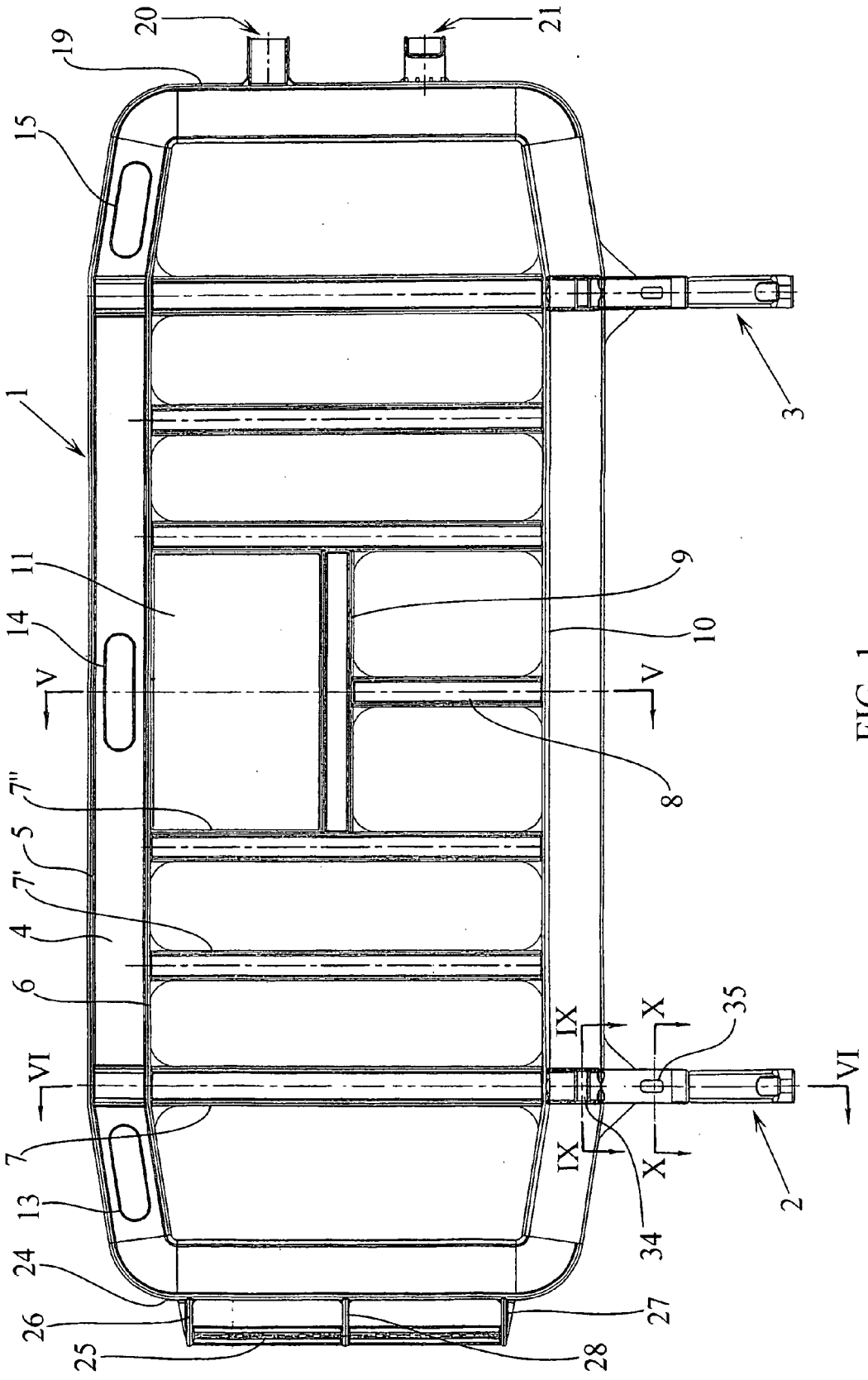
20
21
19
15
1
3
11
9
14
10
V
V
8
7"
5
7'
4
6
VI
IX
X
35
VI
7
IX
X
13
34
2
24
26
27
25
28

FIG. 1

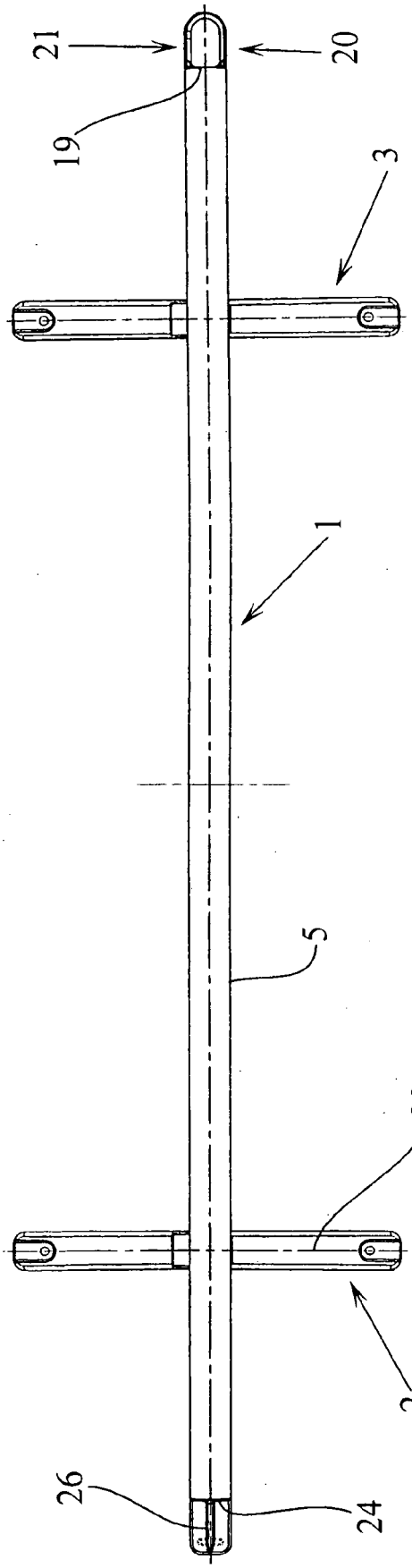

FIG. 2

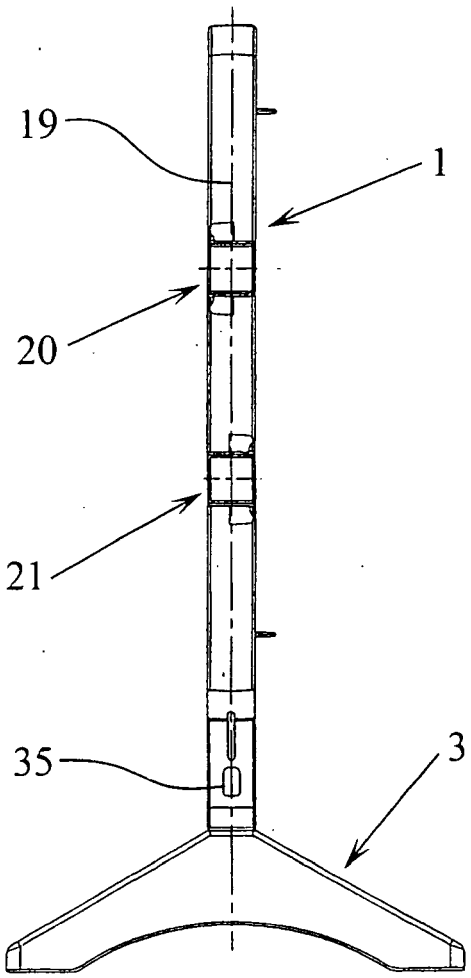

FIG. 3

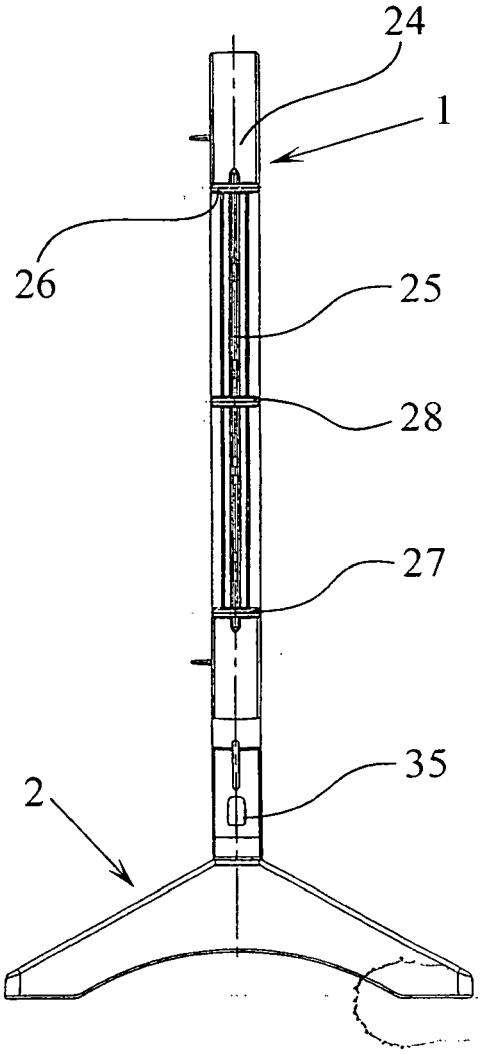

FIG. 4

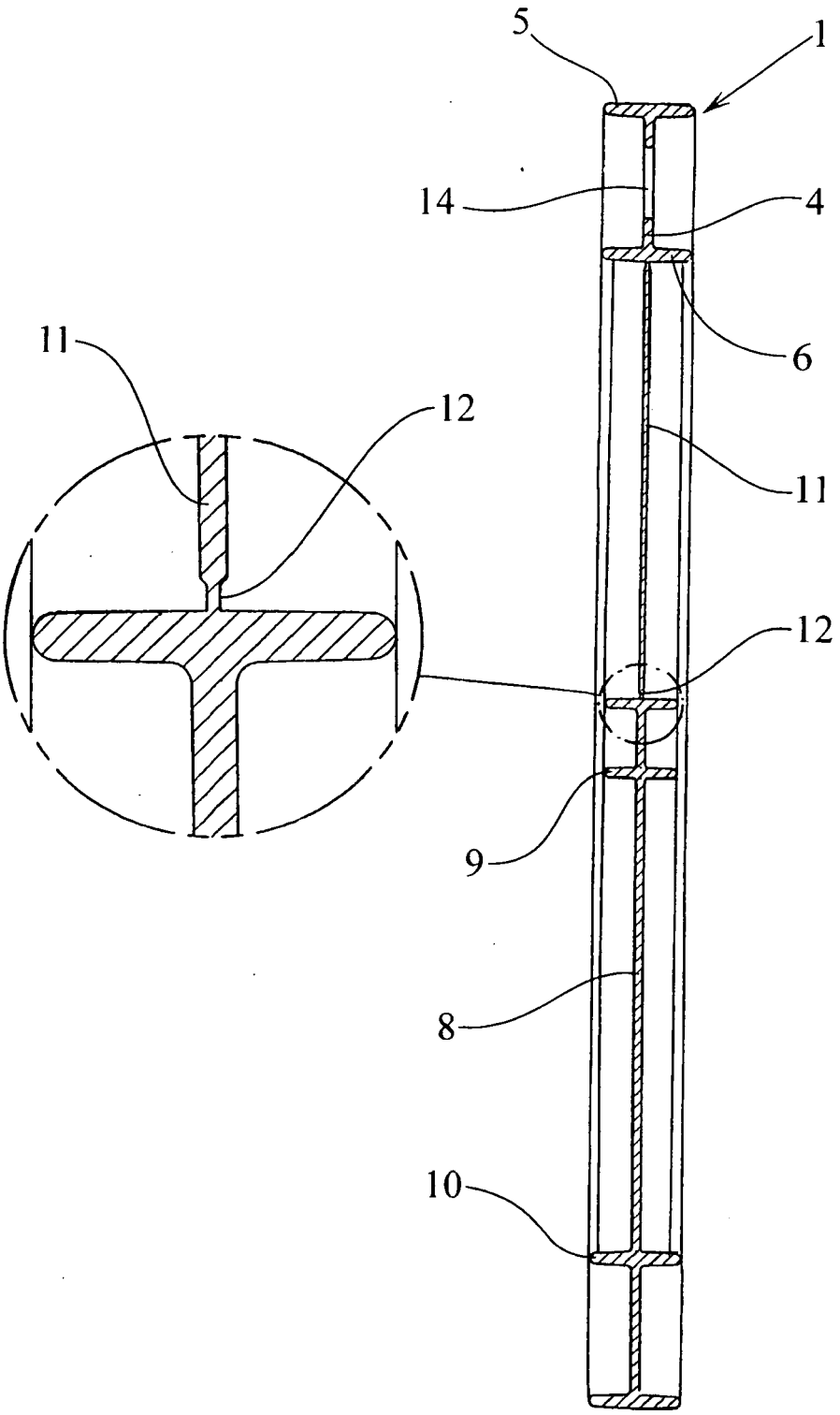

FIG. 5

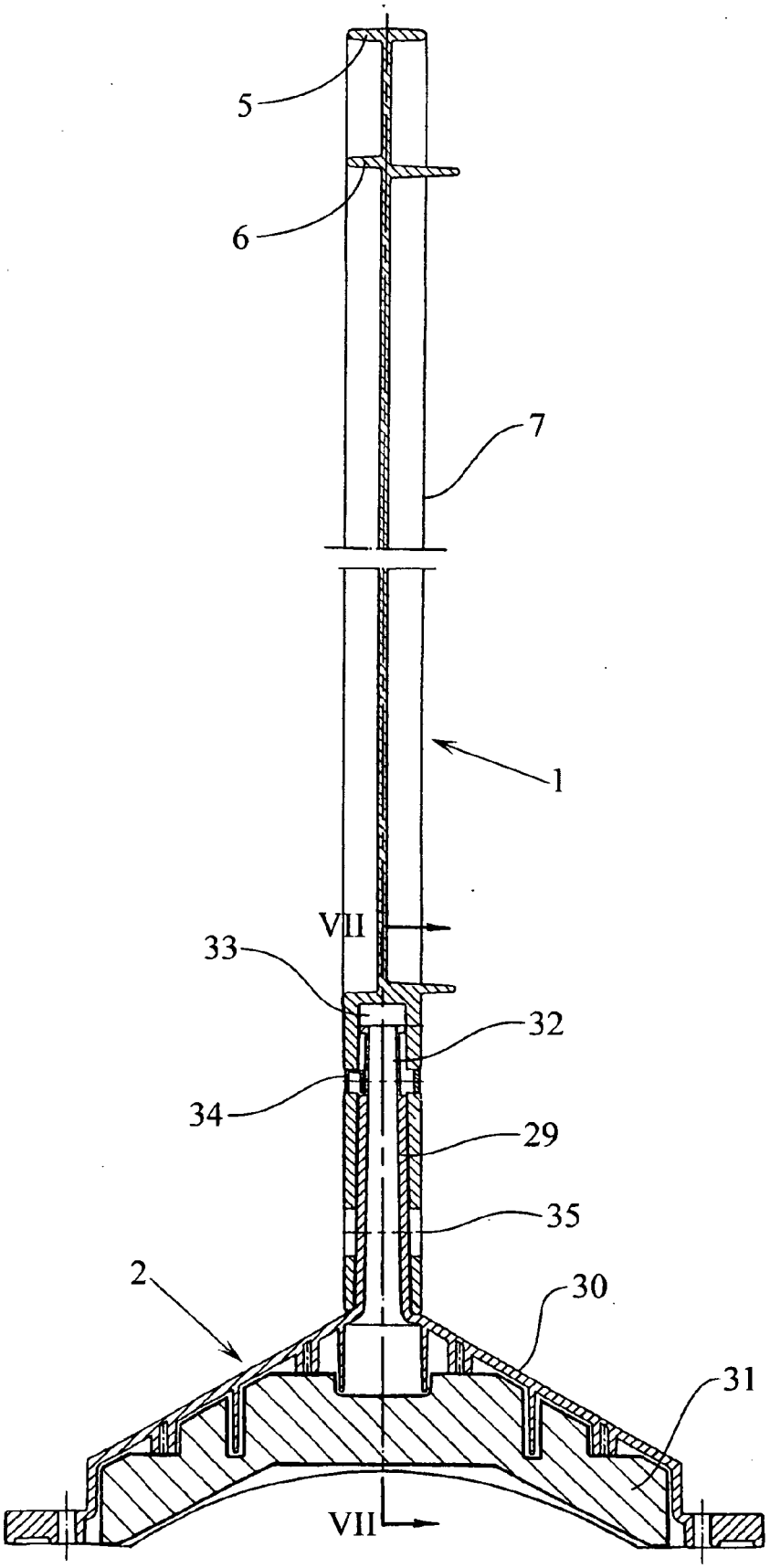

FIG. 6

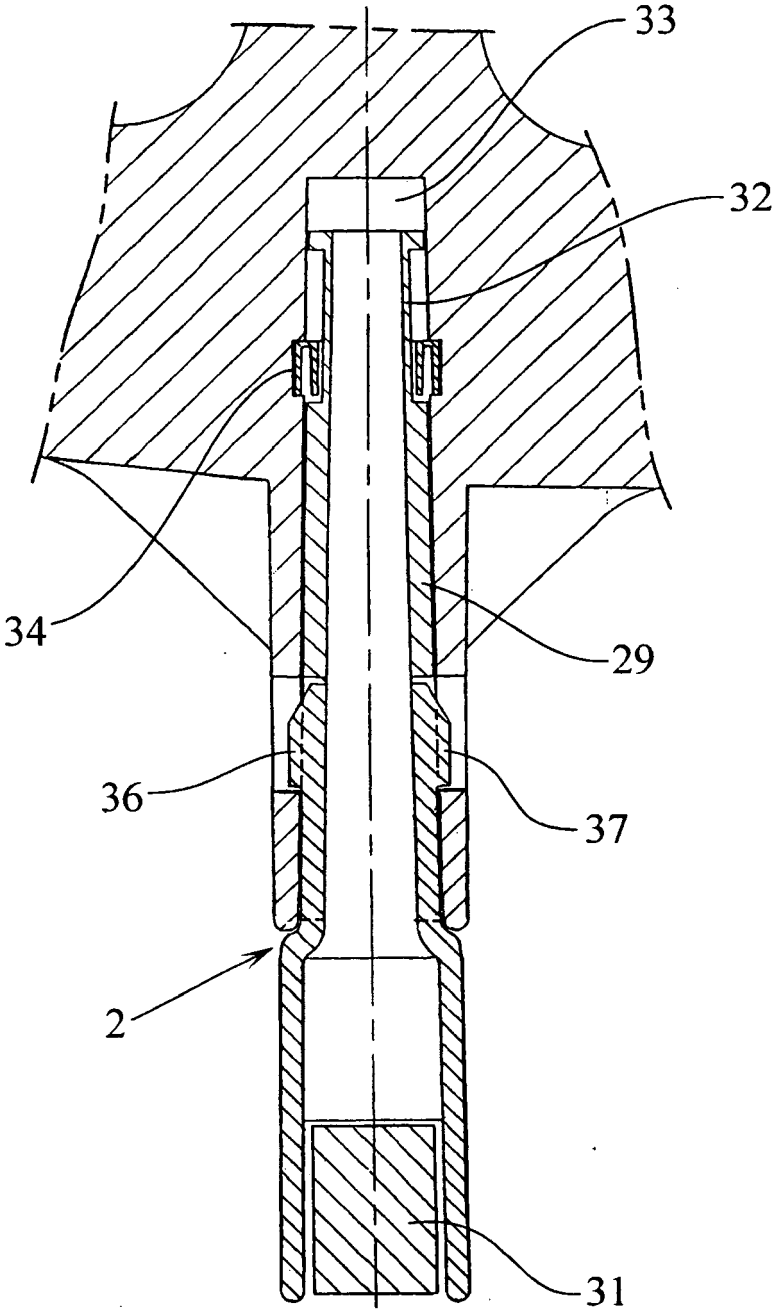

FIG. 7

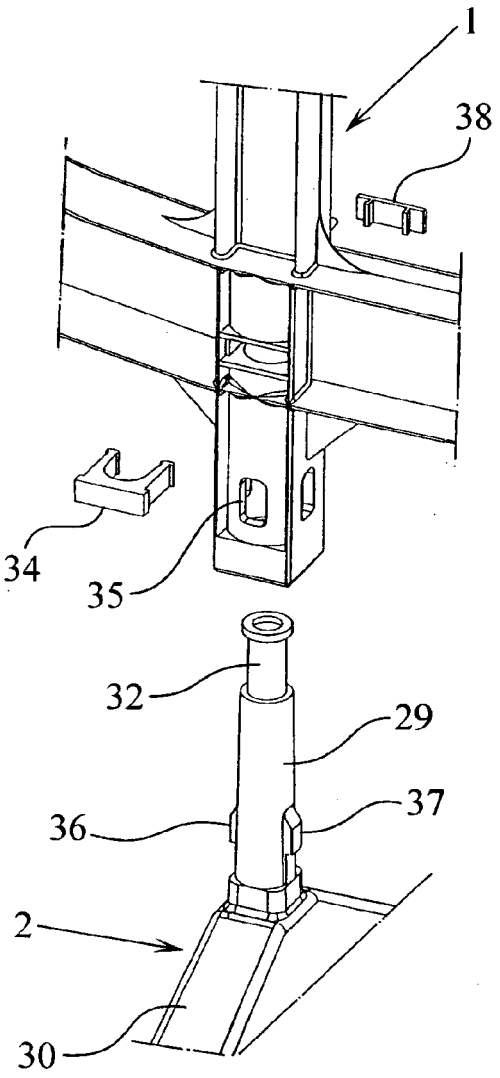

FIG. 8

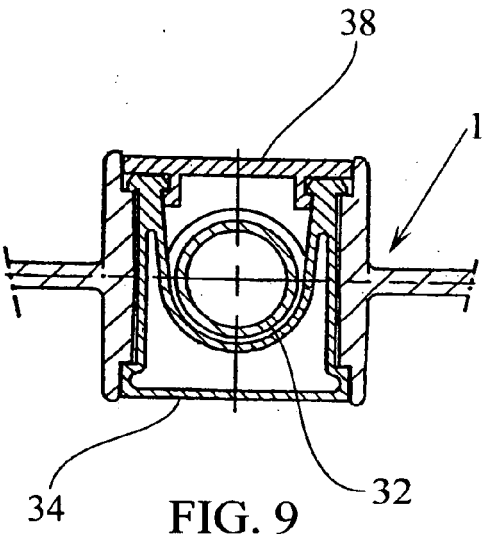

FIG. 9

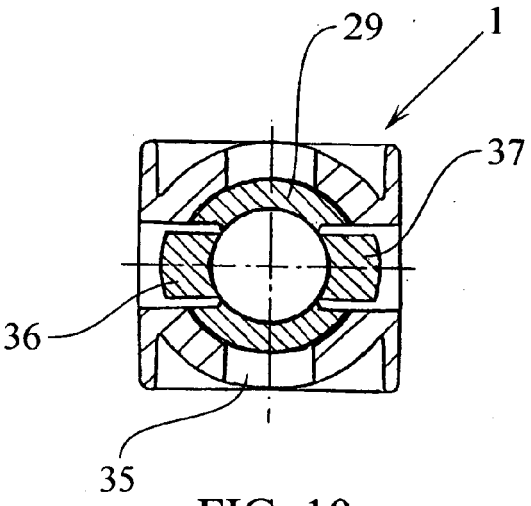

FIG. 10

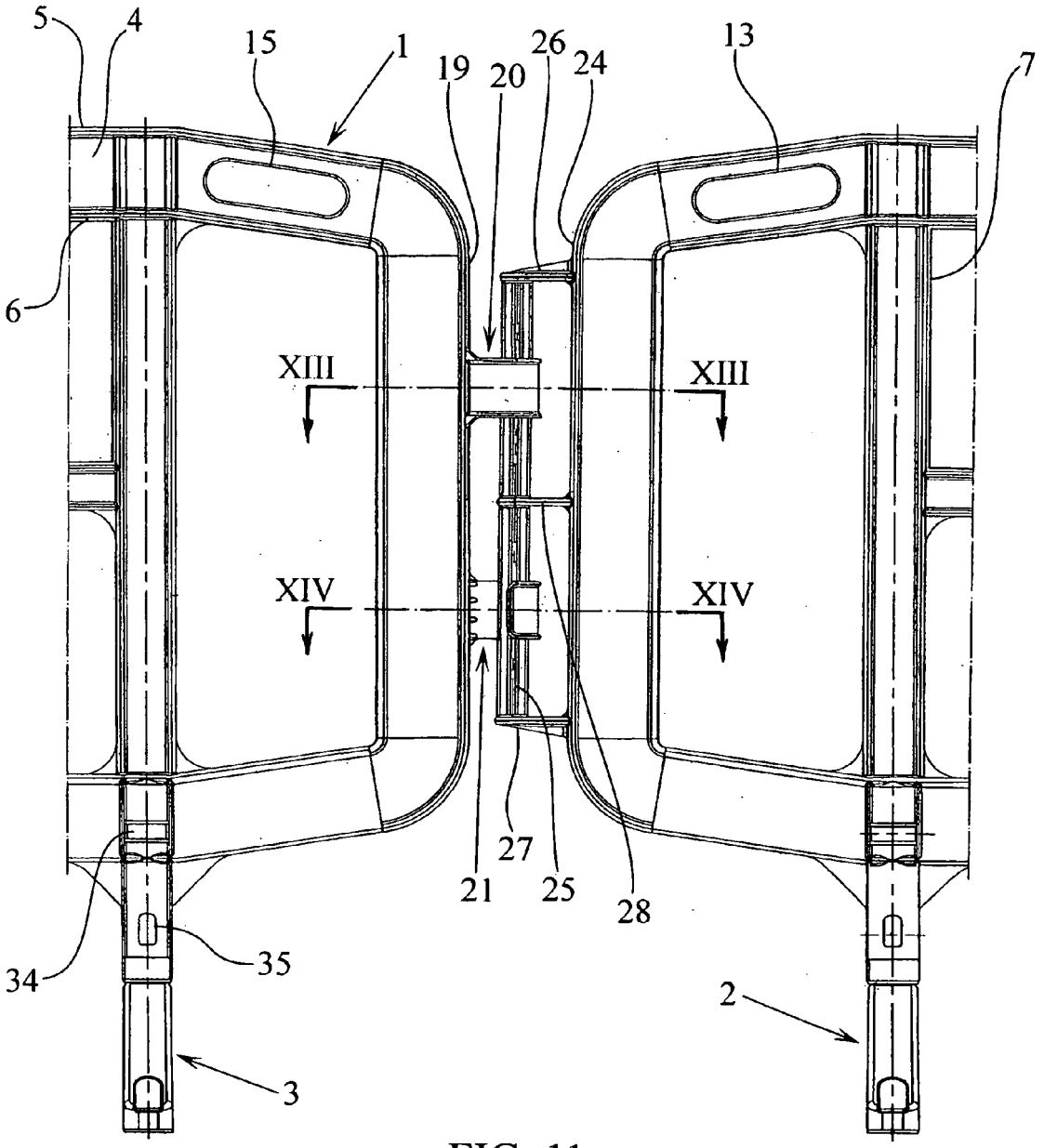

FIG. 11

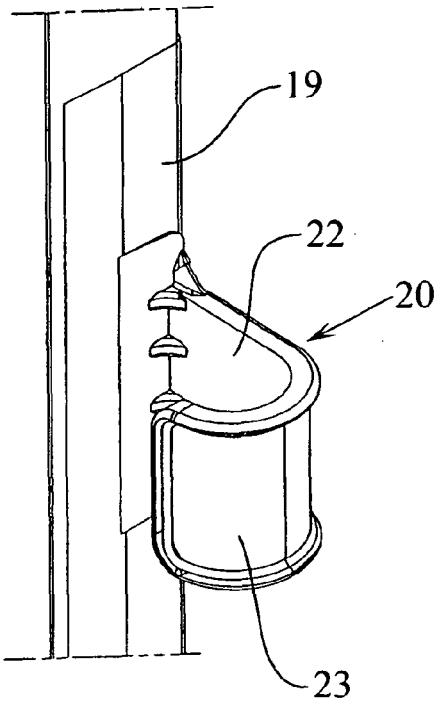

FIG. 12

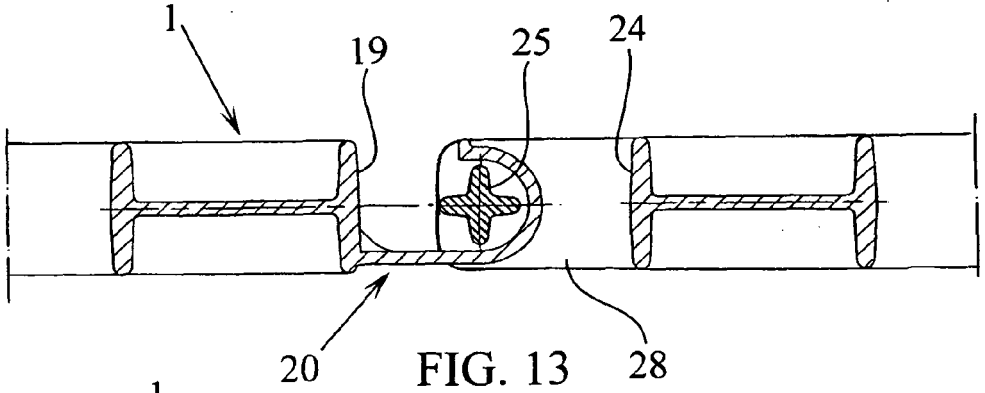

FIG. 13

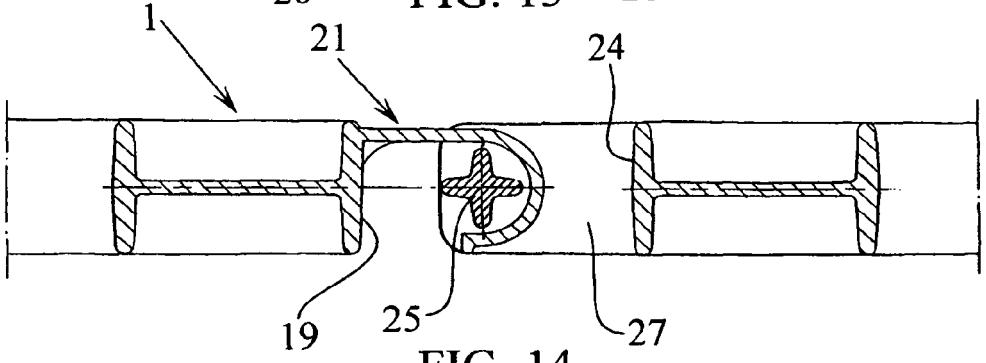

FIG. 14

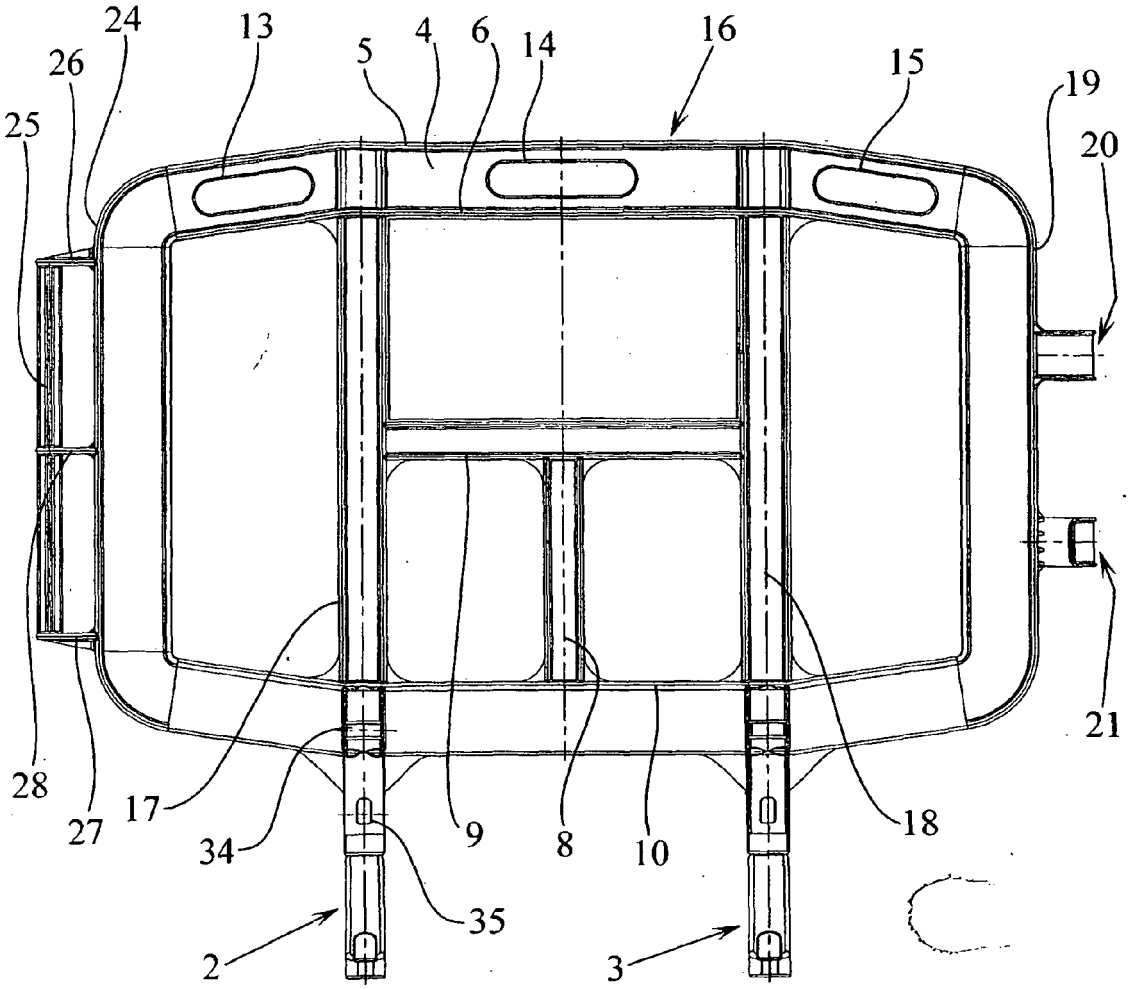

FIG. 15