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(72) Inventor: **VAL AUSEJO, Felipe**
E-20560 Onate (ES)

(71) Applicant: **ULMA C y E, S. COOP.**
20560 Onati (Guipuzcoa) (ES)

(74) Representative: **Carpintero Lopez, Francisco et al**
HERRERO & ASOCIADOS, S.L. Alcalá, 35
28014 Madrid (ES)

(54) **IMPROVED SUPPORT FOR MULTIDIRECTIONAL SCAFFOLDINGS**

(57) It comprises a part (1) attached on one end to a cross member or side member (3) which may be attached and secured to a strut (10) part of the three dimensional metal scaffold structure, anchored to a disc shaped part (12) connected to strut (10). The novelty consists in that support (1) is provided with an opening (4) whose top part (5) is provided with an anterior and

lower projection (8) which during preassembly is placed in one of the orifices provided to such end in disc shaped part (12), for insertion of corresponding final anchoring wedge (11), so that due to said projection (8) and recess (9) placed after said projection in top part (5), it is prevented that during preassembly support (1) can separate from disc-shaped part (12) to which it shall be finally anchored.

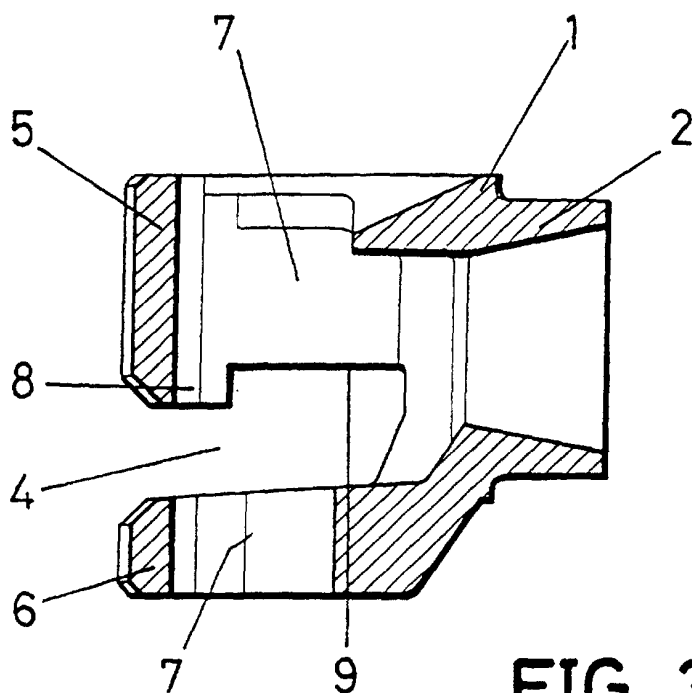
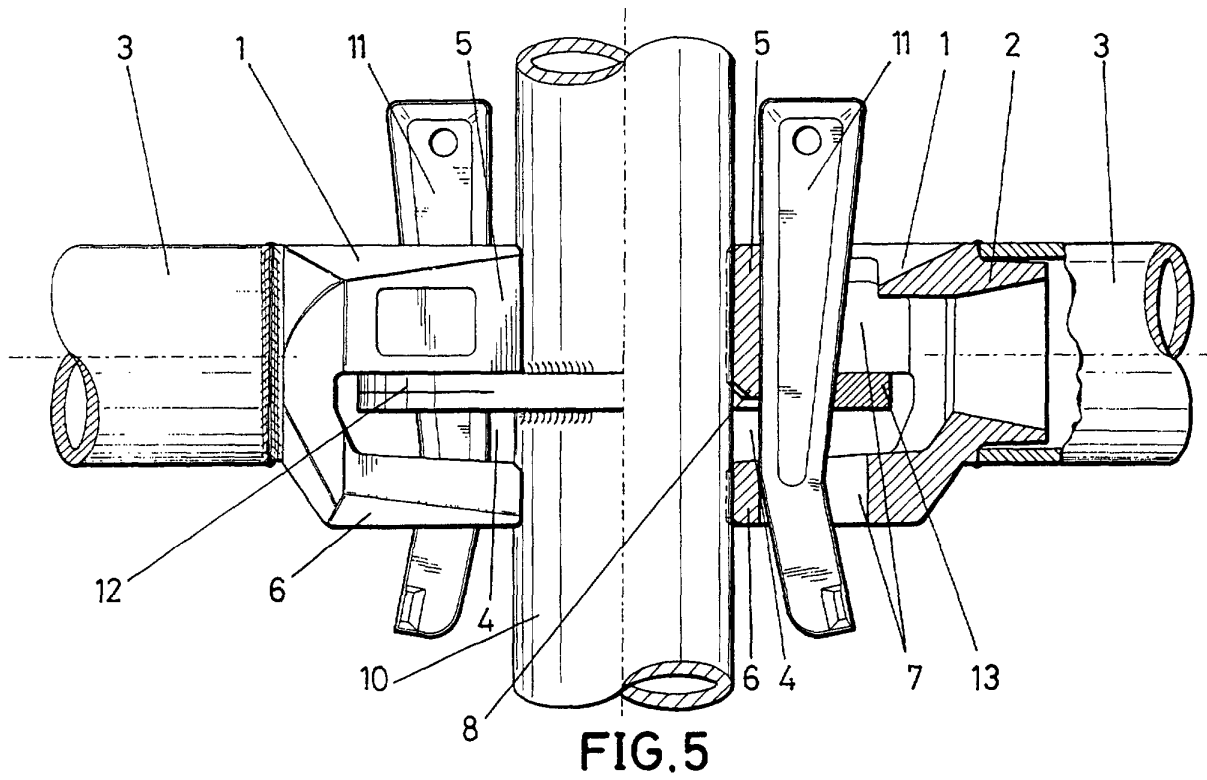


FIG. 3
A-B



Description

OBJECT OF THE INVENTION

[0001] The invention relates to a support for multidirectional scaffolds, and more specifically to the piece attached to the ends of cross members and side members which form the metallic frame of a scaffold, in order to anchor said side members and cross members to the corresponding parts suitably attached to the struts of such scaffold frame.

[0002] The object of the invention is to provide a support among those used in anchoring the ends of side and cross members of scaffolds to its struts, in order to allow preassembly without risk of misalignment of the head which forms this support with respect to the parts connected to the struts, thus providing the system with high rigidity of the three-dimensional frame structure which is the scaffold itself.

BACKGROUND OF THE INVENTION

[0003] Multidirectional scaffolds formed from a three-dimensional metal frame usually consist of a number of vertical struts with adjustable bases on the ground, which struts have at suitable intervals a number of discs attached to these struts which form the anchoring means for the side and cross members, as well as for the stays which form the frame and which together form the scaffold, so that anchoring the ends of said side and cross members to the disc-shaped parts attached to the struts is achieved in multiple manners.

[0004] Thus, in Spanish invention patent P9300941, of the same applicant, anchoring is based on the use of a part acting as a support attached to both ends of the cross or side member, which part is provided with a bottom tab-like projection which inserts in an orifice provided for this purpose in the disc-shaped part attached to the cross member, aiding in the final anchoring a wedge inserted through an orifice made for this purpose in the support part and naturally inserted through the orifice of the disc part in which the aforementioned tab was inserted.

[0005] A further type of support used based on the same principles is described in European Patent 0276487, which defines a front opening which apparently provides a greater rigidity and safety when constructing overhangings.

DESCRIPTION OF THE INVENTION

[0006] The support disclosed, based on the principle of forming a front head in the shape of a mouth, includes a number of novel properties and improvements which result in functional advantages and improved efficiency in final anchoring of the side and cross members to the struts of a three-dimensional scaffold.

[0007] More specifically, the support of the invention,

instead having a downwards oriented tab as in the support of Spanish invention patent P9300941 described in the previous section, and instead of having a practically symmetrical opening, both on the top and bottom as in European Patent 0276487, also described above, presents an opening in which the top part differs in width and shape from the bottom part, with the former having a small downwards oriented projection after which is defined a notch, while the lower part presents a support for the disc part, so that together the two parts define a clamp of said disc part on which the support is anchored, with the aid of the wedge, so that by virtue of the front and bottom projection of the support mouth the side or cross member mounted is secured to the disc part connected to the corresponding strut, aiding in this securing the pressure of said disc on the lower part of the two defined as a result of the opening provided in the support.

[0008] Thus said support provides the anchoring with all the advantages deriving from the support described in Spanish Patent P9300941 and in addition all of those provided in this type of supports with a mouth for clamping the anchoring disc.

[0009] In short, the support of the invention allows pre-assembly of side members and cross members without risk of misalignment of the head which is part of the support itself, with respect to the disc on which it is anchored, while by the lower part defined under the mouth which acts as a lower jaw, the unit rigidity is improved, i.e. the anchoring is rigidised, and thus so is the metal structure forming the scaffold.

DESCRIPTION OF THE DRAWINGS

[0010] Further advantages and characteristics of the invention will become clearer in view of the following description of a preferred embodiment, made with references to the accompanying drawings where for purposes of illustration only the following is shown:

Figure 1 shows a top plan view of the support in accordance with the object of the invention.

Figure 2 shows a side elevation view of the support of the previous figure.

Figure 3 shows a sectional view along the (A-B) line of figure 1.

Figure 4 shows a further sectional view, here along the (C-D) line of figure 1.

Figure 5 shows a view of the anchoring corresponding to two side members or cross members on a same disc part connected to the corresponding strut, anchoring which is performed by the support of the invention, now shown in a side elevation view and the other in a cross sectional view.

Figure 6 finally shows a plan view of the structure of the previous figure.

wedge (11).

PREFERRED EMBODIMENT OF THE INVENTION

[0011] The support of the invention, applicable to the anchoring of ends of side and cross members of a scaffold to a strut, comprises a main body (1) on one of whose ends is defined a segment (2) connected to the corresponding strut or cross member (3), as shown in figures 5 and 6, while the opposing part has an opening (4) with two clearly defined parts, a top part (5) and a lower one (6), with the former having a greater width or height, so that parts (5) and (6) are provided with a vertical opening (7) allowing to pass wedge (11) for final anchoring.

[0012] The novelty resides not only in front opening (4) made in support (1) but also in that corresponding to the anterior and lower area of part (5) is provided a projection (8) after which is placed a notch (9), all such that in applying the support to anchor a side or cross member (3) support (1) is mounted on the corresponding disc-shaped part (12) placed on the front opening (4) of support (1), by introducing it into the corresponding orifice (12') of disc-shaped part (12), support (1) is retained in position and thus so is the corresponding end of the cross or side member (3), thus obtaining a preassembly without risk of misalignment of the head which forms support (1) with respect to disc (12), finally inserting wedge (11) which provides the final anchoring, internally wedging on part (13) as clearly shown in the sectional enlarged view of figure 5.

Claims

1. Improved support for multidirectional scaffolds, applicable for attaching and anchoring the ends of side and cross members of a three dimensional metal structure forming a scaffold, with said support comprising a body (1) with an end (2) attached to the corresponding end of side or cross member (3), provided near the end opposite the attachment of said cross or side members with openings (7) meant for a wedge (11) by which final anchoring is performed, as it is passed through said openings and through one of orifices (12') which for this purpose is provided on a disc-shaped part (12) attached to corresponding strut (10) to which are secured or anchored said side or cross members (3), essentially **characterized in that** the anterior part of the body comprising support (1) is provided with an opening (4) defining two parts, a top one (5) and a bottom one (6), with the lower edge corresponding to the front area of top part (5) provided with a projection (8) which originates a rear recess (9) allowing pre-assembly and securing of support (1) on disc-shaped part (12), before inserting final anchoring

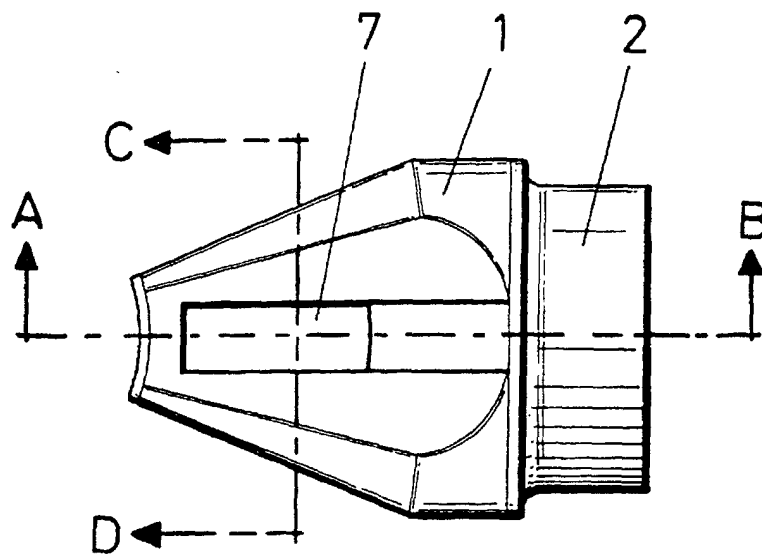


FIG. 1

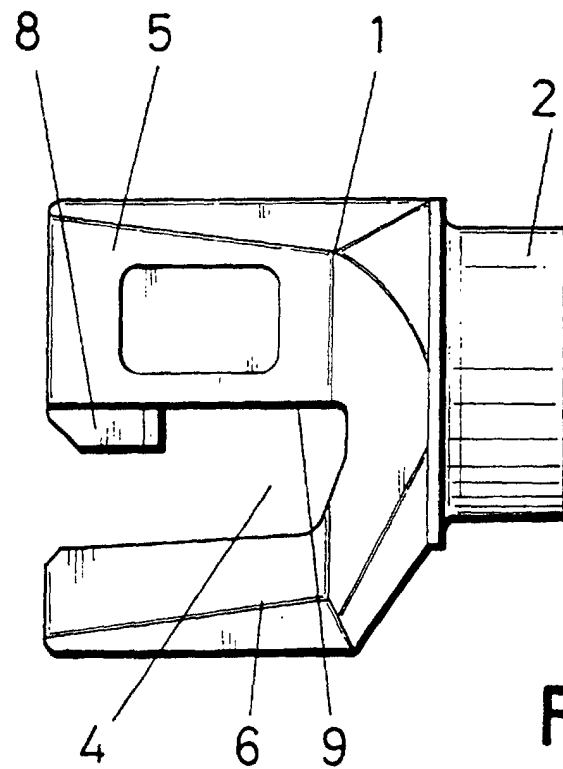


FIG. 2

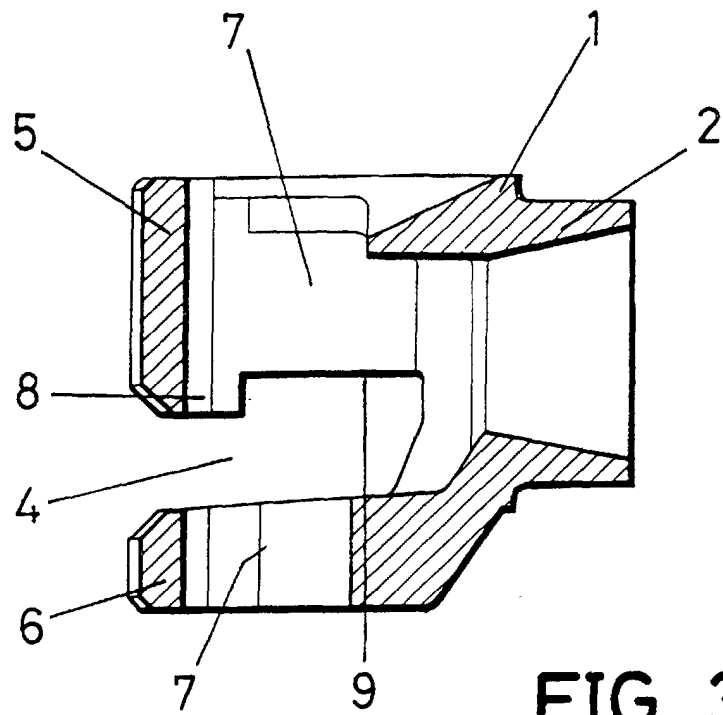


FIG. 3
A-B

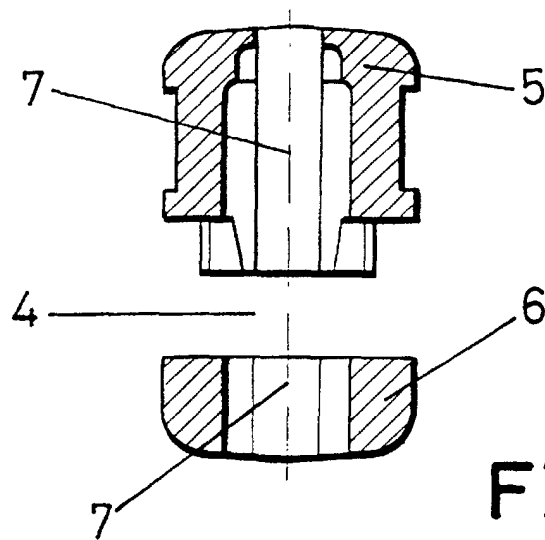
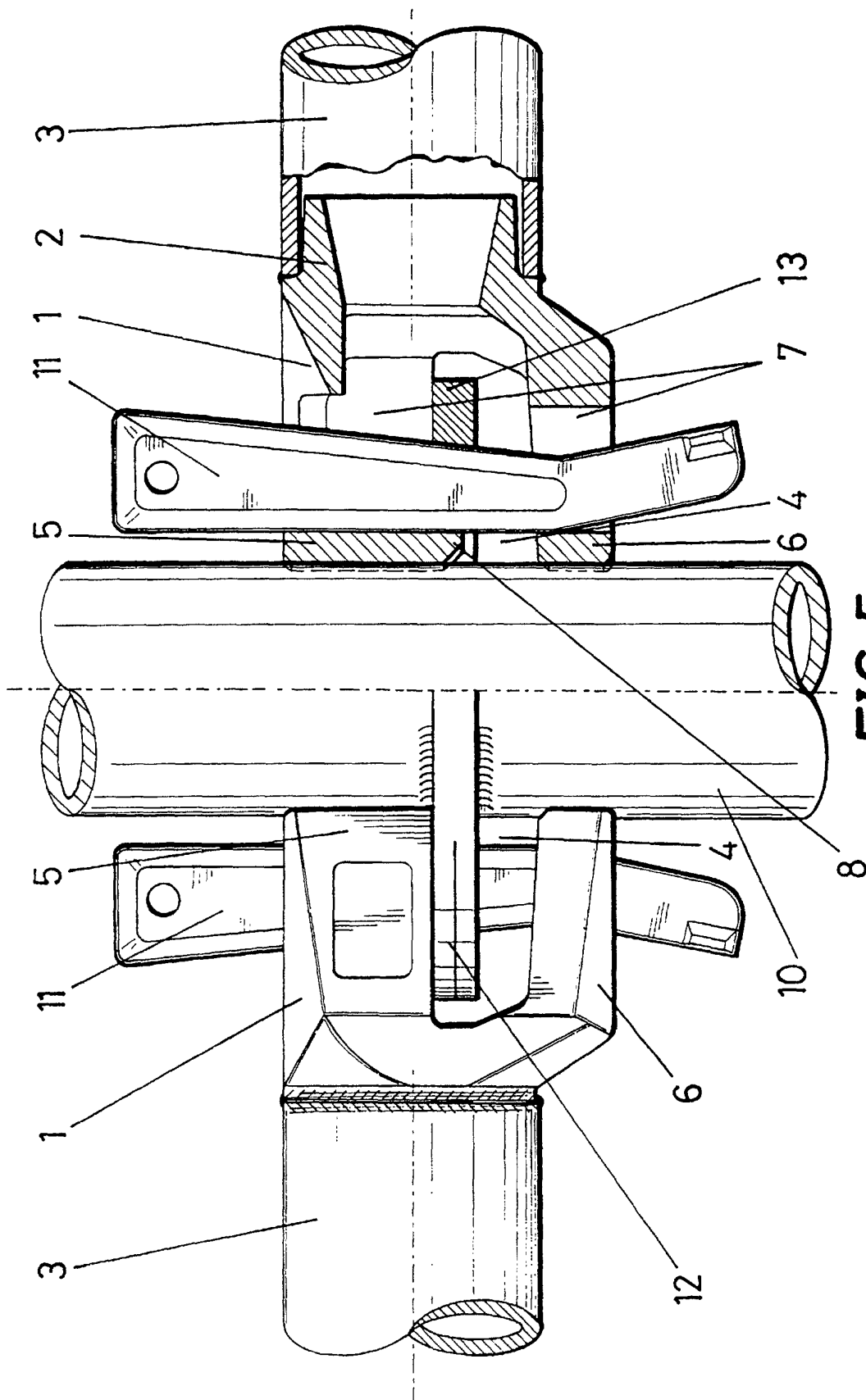


FIG. 4
C-D



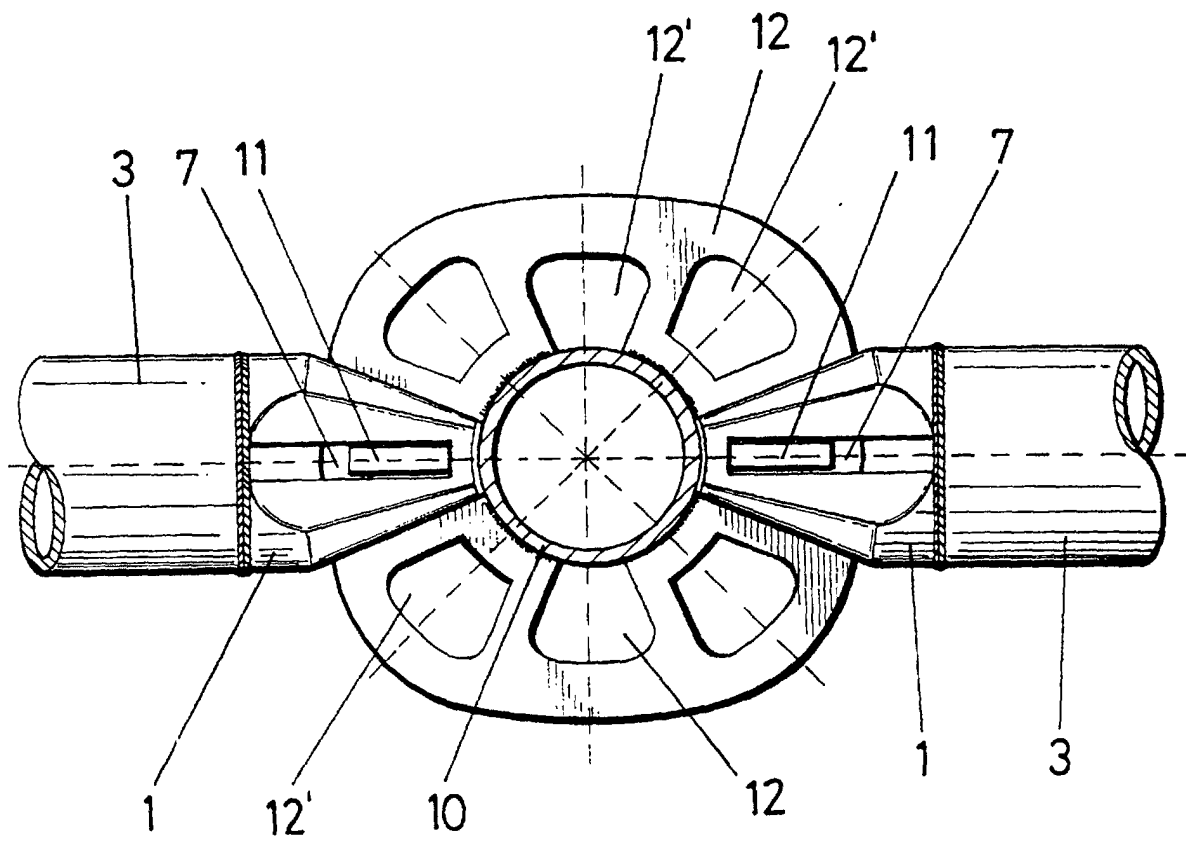


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES 99/00069

A. CLASSIFICATION OF SUBJECT MATTER ⁶ :		
IPC6: EO4G 7/30		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC6: EO4G 7/30, EC: EO4G 7/30+		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
WPI, EPODOC, PAJ, CIBEPAT		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4840513 A (HACKETT) 20 June 1989 (20.06.89) Column 4, line 52 - column 6, line 45, figures	1
Y	US 5605204 A (AUSEJO) 25 February 1997 (25.02.97) The whole document	1
Y	US 5207527 A (DUNCAN) 4 May 1993 (04.05.93) Figures	1
Y	US 4867274 A (LANGER) 19 September 1989 (19.09.89) Figures 2 and 3	1
Y	US 4348128 A (GOSTLING) 7 September 1982 (07.09.82) The whole document	1
A	FR 2527711 A (SELECT ETEM) 2 December 1983 (02.12.83)	1
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
<p>* Special categories of cited documents:</p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" 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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> <p>"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</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone</p> <p>"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</p> <p>"&" document member of the same patent family</p>		
Date of the actual completion of the international search 1 December 1999 (01.12.99)		Date of mailing of the international search report 15 December 1999 (15.12.99)
Name and mailing address of the ISA/ Facsimile No. S.P.T.O.		Authorized officer Telephone No.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/ES 99/00069

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