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(54) **Base, to be used either in single units or in pairs, for tables or the like**

(57) Basement for tables or the like comprising a lobed stem (12) provided with first downwards turned recesses for housing inserted ends (14, 14a, 16, 16a, 18, 18a) of supporting tubular legs (20, 22, 24) and second upwards turned recesses for housing sleeves (26, 26a, 28, 28a, 30, 30a) serving to fasten a plate (28) supporting a table top, or the like.

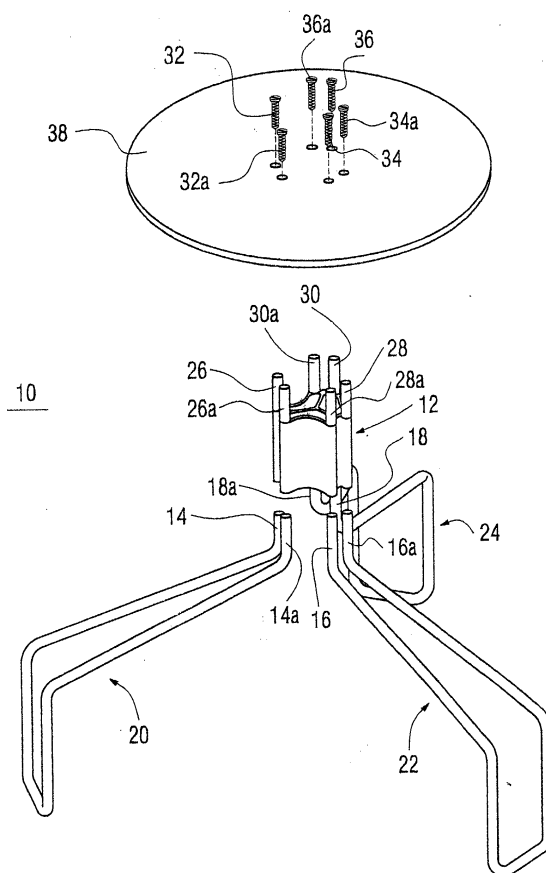


FIG. 1

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Description

[0001] The present invention relates to a basement to be used for support of tables, or the like. More specifically, the present invention relates a basement of particularly firm kind and comprised of a minimal number of modular members having particular use for supporting pieces of furniture, such as tables or the like.

[0002] At present exist very many kinds of tables essentially comprised in two classes:

- a) tables having a polycentric basement, i. e. with distinct legs simply descending from a table top to meet the supporting ground, being examples of this basement cluster of table legs, three or more in number, of the most common use;
- b) tables having a central basement, provided with a columnar stem, substantially arranged under the centre of a table top, to which assures support, and below provided with a plurality of legs radially and angularly symmetrically arranged around the stem itself, which assure a stable support of the stem on the ground, being three a preferred number of legs assuring a particularly stable support of the so-called "redundant" kind.

[0003] The present invention intends to be just an improvement to the central basements.

[0004] It has been realised that any solid, such as a pyramid having a polygonal regular base, has a great support stability on the ground.

[0005] Moreover, it has been realised that among the solid geometric figures the tetrahedron, which is a particularly regular solid figure having four faces consisting of four equilateral triangles, has a symmetry assuring a very high support stability, as any face can operate as a base.

[0006] Thus, it has been thought that, if for a central basement for a table is devised a shape like a pyramid having regular base, whose base rests on the ground and whose apex is provided with a support plate arranged under the centre of a table top, a stabile structure is obtained.

[0007] Preferably, if the basement can be inscribed in a pyramidal figure, provided with four apexes coinciding with the four apexes of a tetrahedron, a particular stability of the basement is obtained, in accordance with the principle of the building members, known as "tetrapod", used for the construction of artificial cliffs, which are always stable independently from the orientation having at the time of their laying.

[0008] To obtain a manufacture minimising the number of stored members, has been devised a basement according to the present invention consisting of a upright central stem provided with a bottom base and a top base, the bottom base housing some cavities into which can be inserted the ends of a plurality of so-called tubular legs, because they consist of a bent pipe, all

each other identical, being the cavities equal in number with respect to the ends of the tubular legs and the top base also housing some cavities equal in number with respect to the cavities of the bottom base to receive an equal number of inserted sleeves to be fastened under the support plate of a table top, or the like.

[0009] In a particular embodiment of the invention, the number of cavities in the bottom base of the stem is double than the number of tubular legs, because the cavities house the two ends of the same tubular legs.

[0010] In particular, the bottom base of the stem houses six cavities for receiving the ends of three tubular legs equi-angularly arranged (that is 120° staggered) around the stem.

[0011] Also in particular, the top base of the stem houses six inserted sleeves, arranged as three side-by-side arranged pairs also aligned with the ends of the three tubular legs, being the sleeves provided with fastening means to the support plate of the table top.

[0012] Preferably, the holes of the sleeves are threaded and the fastening means of the support plate are screws passing through the holes in the plate itself.

[0013] In an alternative embodiment, for supporting very extended table tops, a pair of basements is carried out, being the pair formed by two side-by-side arranged stems, anyone provided with bottom and top base, housing the bottom bases cavities for receiving the inserted ends of tubular support legs and the top bases cavities for receiving sleeves fastening a pair of plates co-operating to form a table top support, lacking anyone of the two side-by-side arranged stems of the pair of basements a tubular leg and the cavities housing the ends thereof, a portion housing the lacking cavities being replaced by an axial joint notch, connecting both bases, suited to house a rigid beam providing to connect the two stems of the basements.

[0014] In particular, the sleeves inserted in the top bases of the two stems are equal in number to the ends of the tubular legs to which they are aligned and carry fastening means crossing the support plates of the table top.

[0015] Preferably, the sleeves are provided with axial threaded holes and the fastening means are screws, passing through holes in the support plates of the table top, and engaged in the same threaded holes.

[0016] The features of the invention will be defined in the claims appended to the description. However, other features and advantages will result from the following detailed description of its embodiments, not to be considered as limiting the scope of the invention, provided with the enclosed drawings, wherein:

- Figure 1 is a perspective exploded view of a basement according to the present invention;
- Figure 2 is a perspective view of the same basement, as assembled;
- Figure 3 is a schematic view depicting how a basement according to the present invention can be in-

scribed in a tetrahedron; and

- Figure 4 is a perspective exploded view of a pair of basements, according to the present invention, connected by a rigid beam.

[0017] Looking at first at Figures 1 and 2, it is seen that a basement 10 according to the invention consists of a stem 12 which, in the present embodiment, is of triangular lobed shape. Such a stem 12 is a draw piece provided with cavities for housing in insertion, in a bottom base a plurality of upper ends 14, 14a, 16, 16a and 18, 18a of tubular support legs 20, 22 and 24 and, in a top base a plurality of sleeves 26, 26a, 28, 28a and 30, 30a which, by means a corresponding plurality of screws 32, 32a, 34, 34a and 36, 36a, fasten a plate 38 to the stem 12 to support a table top, or the like.

[0018] Looking at Figure 3, it is seen that a basement 10 can be inscribed in a tetrahedron and similarly operates. Actually, a tetrahedron TH has four apexes V_1 , V_2 , V_3 and V_4 , the apex V_1 falling at the centre of the cluster of sleeves 26, 26a, 28, 28a and 30, 30a, the apex V_2 falling at the centre of the foot of the leg 20, the apex V_3 falling at the centre of the foot of the leg 22 and the apex V_4 falling at the centre of the foot of the leg 24. Moreover, the centre of gravity C of the equilateral triangle having apexes V_2 , V_3 and V_4 is vertically aligned with the upper apex V_1 of the tetrahedron TH, assuring an outstanding stability of the basement 10.

[0019] As a variation, to support very extended table tops, it is possible to embody, as it is depicted in Figure 4, a pair 50 of basements provided with stems 52, 52a having fastened tubular support legs 60, 62 and 60a, 62a, respectively, and sleeves 66, 66', 68, 68' and 66a, 66a', 68a, 68a', respectively, to fasten two plates 70, 70a co-operating to form a table top support, or the like. The two stems 52 and 52a are provided with two joint notches 72, 72a into which can be inserted a rigid beam 74 connecting the two beams 52 and 52a, being the beam fastened to the notches 72, 72a by means of common well known means, such as screws, bolts, or the like (not shown).

[0020] The present invention can either be embodied exactly as depicted in the drawings, or logical variations to the shown embodiments can be expected.

[0021] For example, instead of three tubular legs 20, 22, 24, as depicted in the Figures 2 and 3, can be used a higher number, such as four, five or six, although this higher number is not particularly attractive, because just by three legs is obtained a structure of the kind called "redundant", assuring a particularly good support stability.

[0022] In a similar way, for a support of particularly extended tops, instead of the pair 50 of basements, depicted in the Figure 3, can be used two or more basements 10, of the kind depicted in the Figures 1 and 2, arranged under suitable locations of the same tops.

Claims

1. Central basement of a table **characterized by** a shape similar to a pyramid having regular base, whose base rests on the ground and whose apex is provided with a supporting plate under the centre of a table top for obtaining a stabile structure.
2. Basement, as in claim 1, of the kind to be inscribed in a pyramidal figure, provided with four apexes coinciding with the four apexes of a tetrahedron, to obtain a particular stability of the basement, according to the principle of the building members known as "tetrapods", which result always stable independently from the orientation having at the time of their laying.
3. Basement, as in claims 1 and 2, which, to obtain a manufacture minimising the number of stored members, is **characterized by** a upright central stem (12), provided with a bottom base and a top base, the bottom base housing some cavities into which can be inserted the ends (14, 14a, 16, 16a, 18, 18a) of a plurality of so-called tubular legs (20, 22, 24), because they consist of a bent pipe, all each other identical, being the cavities equal in number with respect to the ends (14, 14a, 16, 16a, 18, 18a) of the tubular legs (20, 22, 24) and the top base also housing some cavities equal in number with respect to the cavities of the bottom base to receive an equal number of inserted sleeves (26, 26a, 28, 28a, 30, 30a) to be fastened under the support plate (38) of a table top, or the like.
4. Basement, as in claim 3, **characterized in that** the number of cavities in the bottom base of the stem (12) is double than the number of tubular legs (20, 22, 24), because the cavities house the two ends (14, 14a, 16, 16a, 18, 18a) of the same tubular legs (20, 22, 24).
5. Basement, as in claim 4, **characterized in that** the bottom base of the stem (12) houses six cavities for receiving the ends (14, 14a, 16, 16a, 18, 18a) of three tubular legs (20, 22, 24) equi-angularly arranged (that is 120° staggered) around the stem (12).
6. Basement, as in claim 4, **characterized in that** the top base of the stem (12) houses six inserted sleeves (26, 26a, 28, 28a, 30, 30a), arranged as three side-by-side arranged pairs also aligned with the ends (14, 14a, 16, 16a, 18, 18a) of the three tubular legs (20, 22, 24), being the sleeves provided with fastening means to the support plate (38) of the table top.
7. Basement, as in claim 6, **characterized in that** the

holes of the sleeves (26, 26a, 28, 28a, 30, 30a) are threaded and the fastening means of the support plate are screws (32, 32a, 34, 34a, 36, 36a) passing through the holes in the plate (38).

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8. Pair of basements, for supporting very extended table tops, as in claims 1 and 2, **characterized by** comprising two side-by-side arranged stems (52, 52a), anyone provided with bottom and top base, housing the bottom bases cavities for receiving the inserted ends of tubular support legs (60, 62,; 60a, 62a) and the top bases cavities for receiving sleeves (66, 66', 68, 68'; 66a, 66a', 68a, 68a') fastening a pair of plates (70, 70a) co-operating to form a table top support, lacking anyone of the two side-by-side arranged stems (52, 52a) of the pair of basements a tubular leg and the cavities housing the ends thereof, the portion housing the lacking cavities being replaced by an axial joint notch (72, 72a), connecting both bases, suited to house a rigid beam (74) providing to connect the two stems (52, 52a) of the basements.
9. Pair of basements, as in claim 8, **characterized in that** the sleeves (66, 66'; 66a, 66a') inserted in the top bases of the two stems (52, 52a) are equal in number to the ends of the tubular legs (60, 62; 60a, 62a) to which they are aligned and carry fastening means crossing the support plates (70, 70a) of the table top.
10. Pair of basements, as in claim 9, **characterized in that** the sleeves (66, 66'; 66a, 66a') are provided with axial threaded holes and the fastening means are screws, passing through holes in the support plates (70, 70a) of the table top, and engaged in the same threaded holes.
11. Pair of basements, as in claims 8 and 9, **characterized in that** the beam (74) connecting the two stems (52, 52a) is fastened to the joint notches (72, 72a) by mechanical fastening means, such as screws, bolts or the like.

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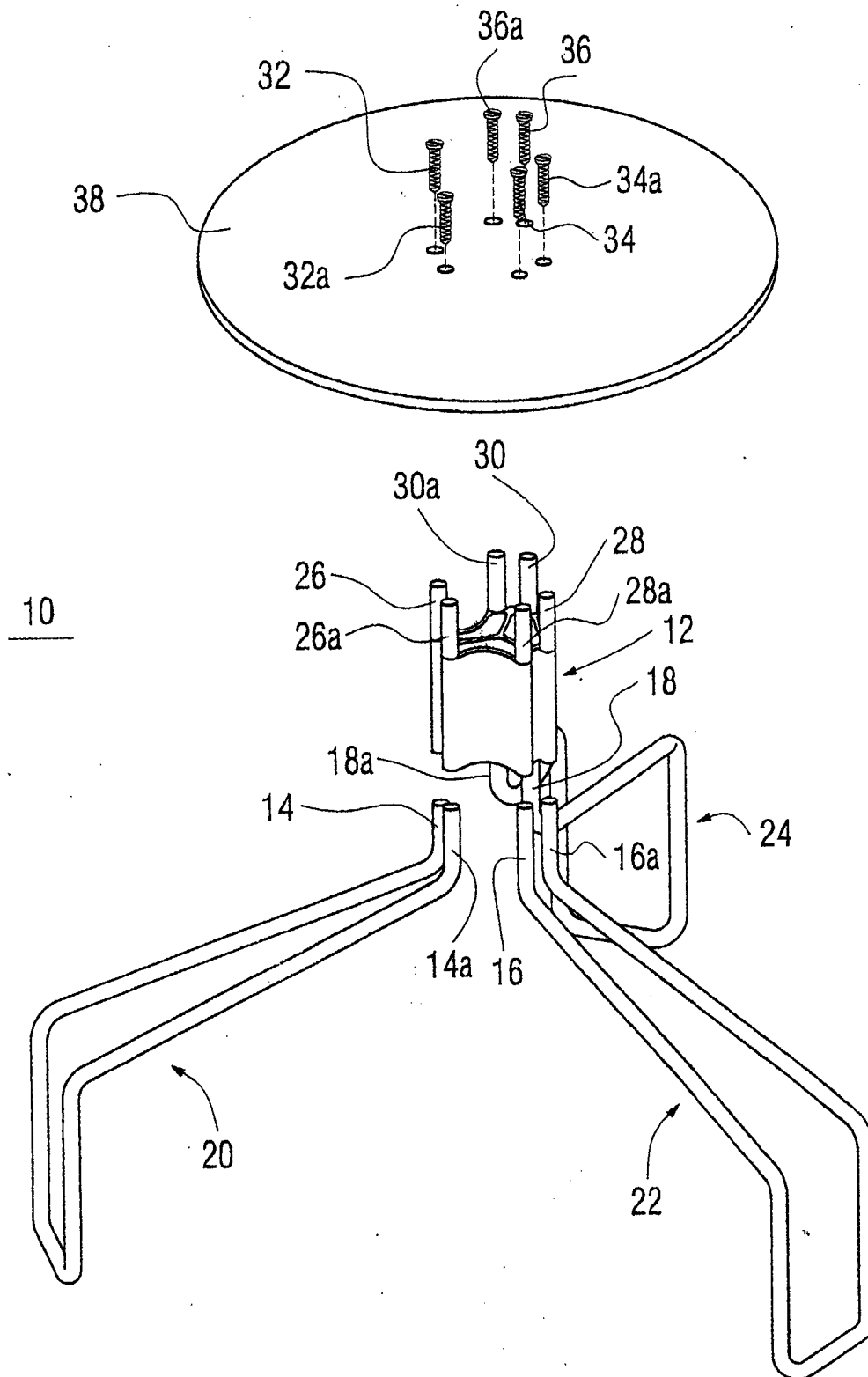


FIG. 1

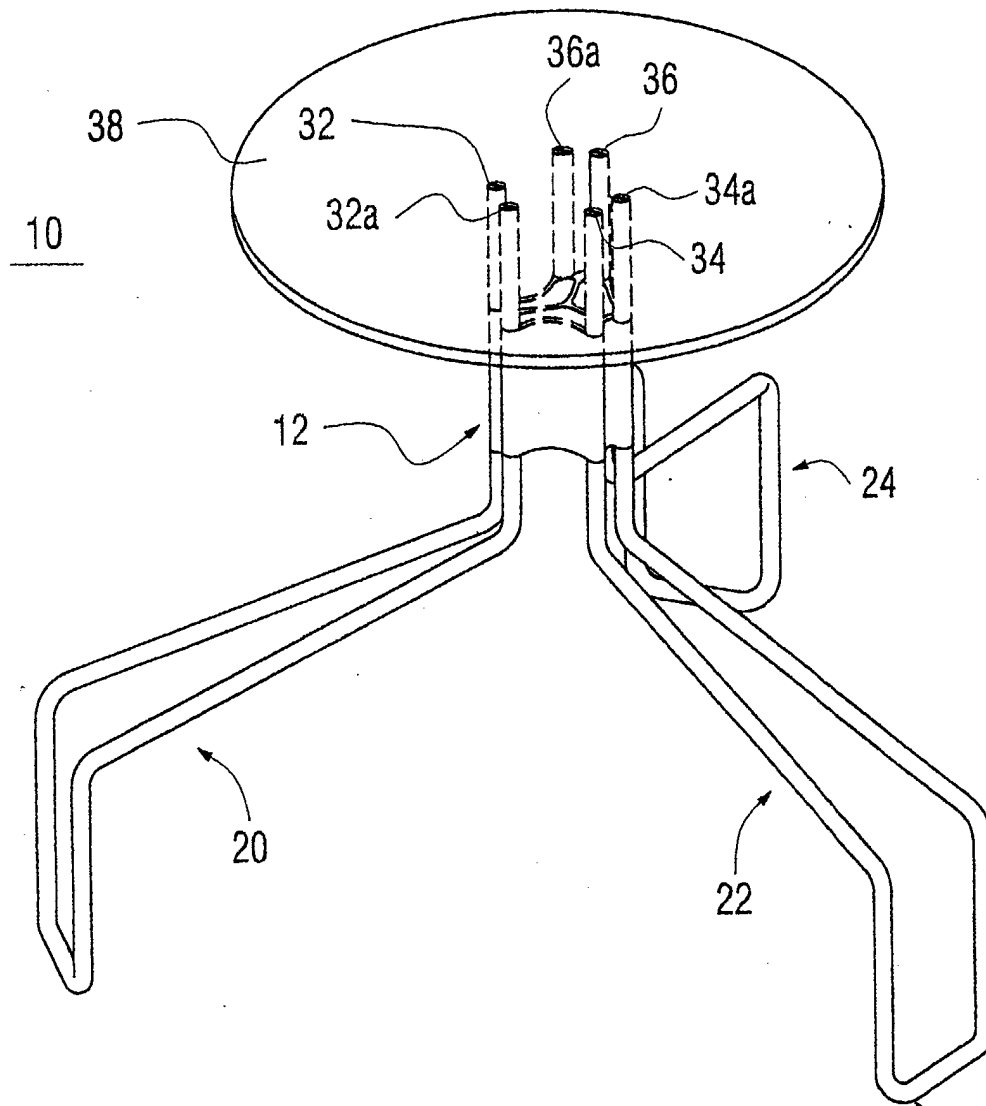


FIG. 2

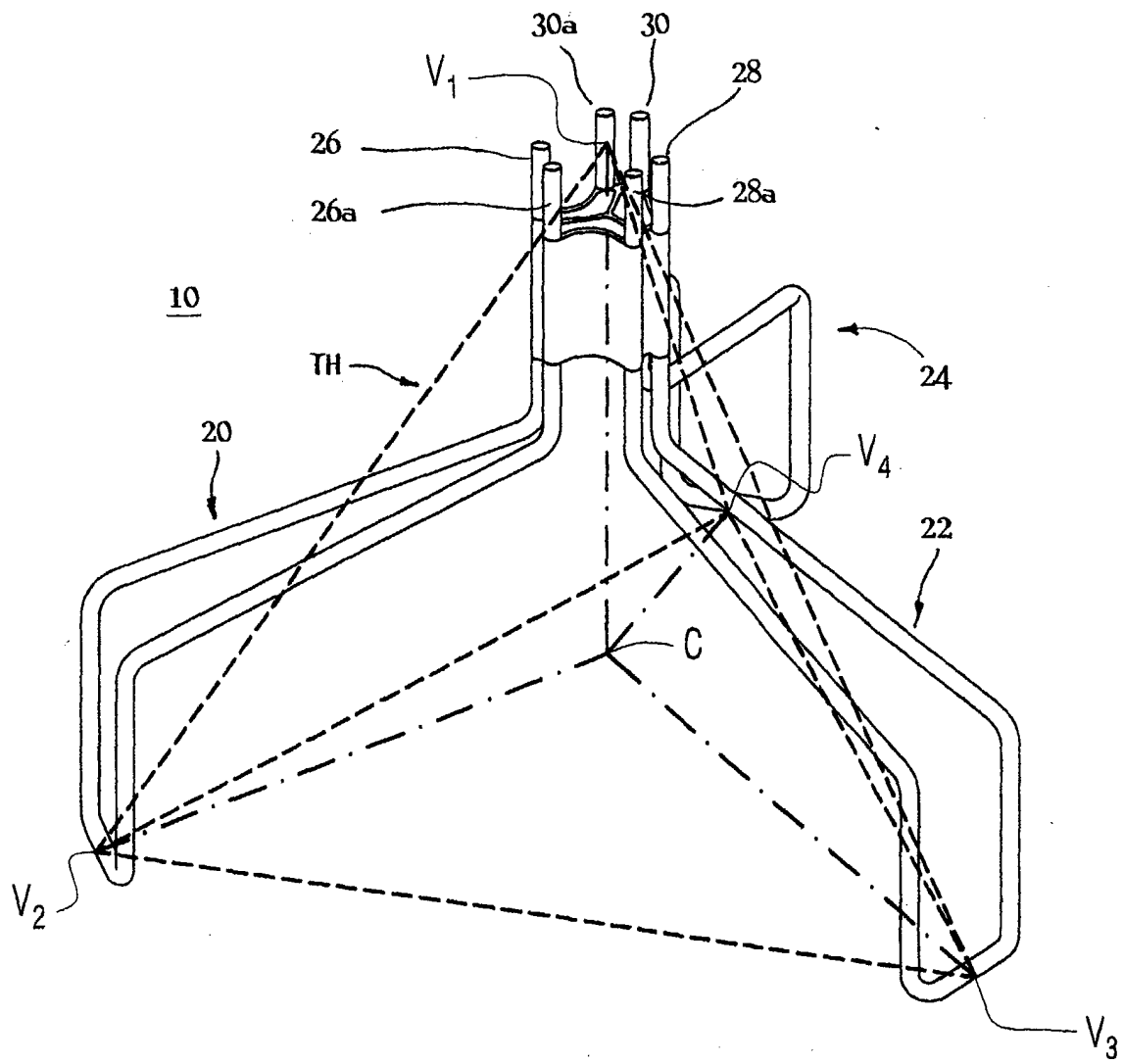


FIG. 3

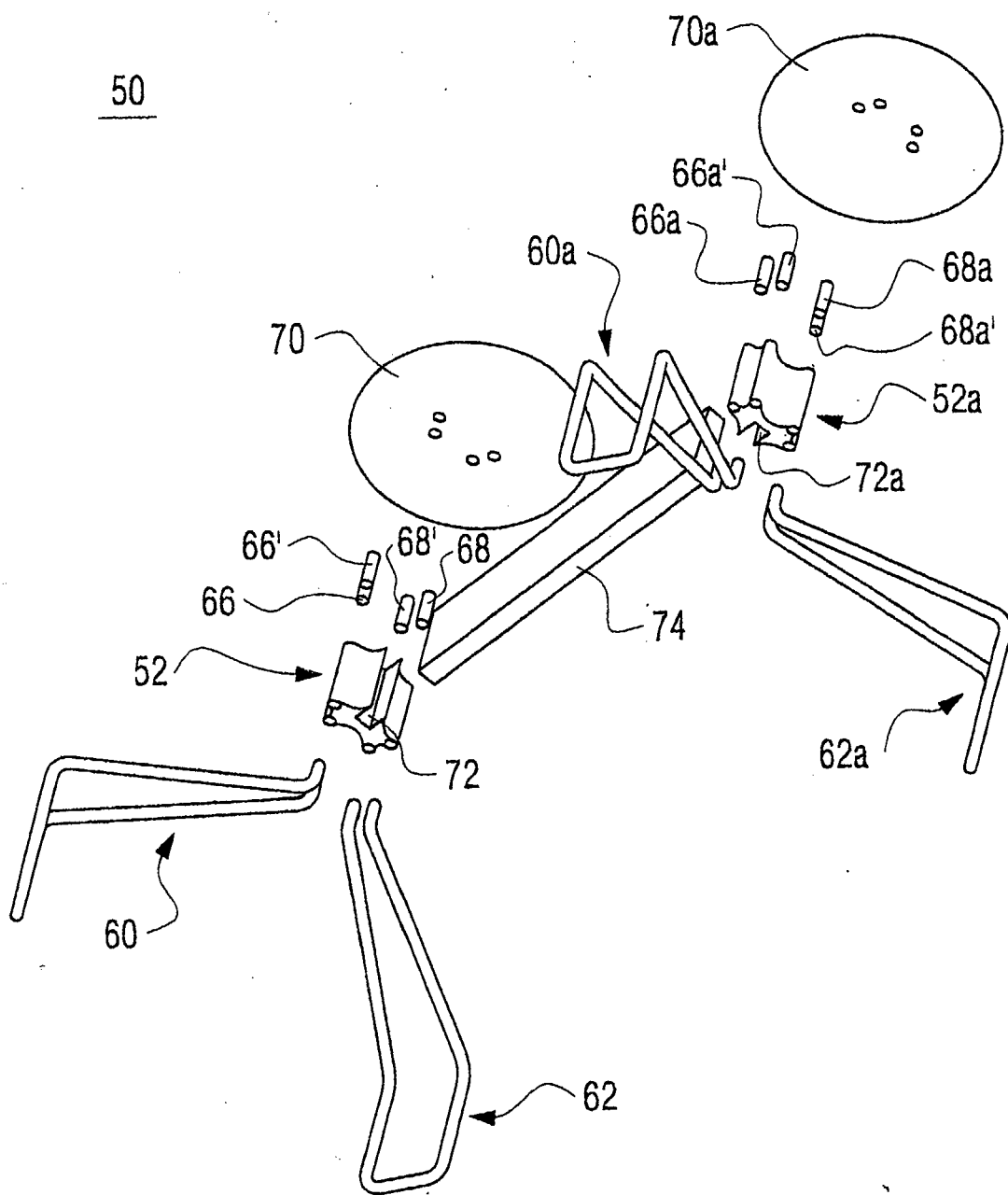


FIG. 4



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EUROPEAN SEARCH REPORT

Application Number
EP 03 07 5863

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 319 729 A (LO JAU-LIN) 16 March 1982 (1982-03-16) * the whole document *	1,2	A47B13/06
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A	DE 196 24 334 C (BUEGE GERD) 10 July 1997 (1997-07-10) * column 4, line 22 - column 5, line 22 * * figures 1,2 *	1,2	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A47B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 22 October 2003	Examiner Ottesen, R
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 03 07 5863

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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22-10-2003

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