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Il est certifié qu'un brevet
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(54) **COLLAPSIBLE TABLE**

KLAPPTISCH

TABLE PLIANTE

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Description

[0001] The present invention relates to a collapsible table, in particular to a collapsible table to be mounted to a wall.

[0002] For some time the need has been felt to manufacture tables, particularly tables to be mounted to a wall, having the feature of being both compact when not in use and highly functional during use. As can be very easily understood, this requirement becomes essential whenever it is desired to set up such type of table in particularly small spaces, or when it is necessary to have remarkably well-organised spaces, such as for example in holiday bungalows, caravans or campers.

[0003] Various types of collapsible tables are known in the art, all, however, being annoyingly bulky in their typical closed position.

[0004] US 5.322.022 for example relates to a collapsible table, whose one side is mounted to a wall and whose other side is equipped with foldaway legs. Furthermore, elements are provided to ease leg folding and successive table reversal, in order to bring said table in a vertical position, as well as tightening members to lock the table legs.

[0005] However, this construction is very complicated and in any case does not solve in a satisfactory way the requirement of compacting all table components in a very tight space, since even when folded said table takes up remarkable space close to the wall where it is mounted.

[0006] Moreover, GB2354435 claims a table comprising a light metal frame and folding legs which is bonded to a laminate top in such a way as to give a "wipe clean" surface and where the folding legs would be spring loaded to lock them in the "open" position and magnetically held in position in the "folded up" position, and where all pivot points would be bushed with wear resistant lines. In this case, too, construction is extremely complex and provides the use of magnets attached to the legs and of keeper pads bonded to the underside of the table top, as well as of a torsion spring.

[0007] Finally, WO0143588 concerns a table with a table top and fold-in or fold-out table legs which are retained on the table top by means of a hinge fitting, wherein the hinge fitting has a first hinge part fixed on the table top and a second hinge part fixed on one end of the table leg. The two hinge parts are hinged to one another so as to carry out the folding movement. Furthermore, a locking device is provided for locking the table leg in the folded-out state, whereby the locking device is constructed in the form of a locking sleeve which is formed by an end region of the table leg and is held so as to slide relative to the hinge fitting between a released position and a locked position. Particularly, the locking sleeve can be latched in the locked position by twisting in the manner of a bayonet catch.

[0008] As can be easily noticed, however, this type of table - in addition to having a complex construction - has again a remarkable and troublesome bulk, and does not

provide wall-anchoring in any way.

[0009] An object of the present invention is to provide a wall-mounted collapsible table which is functional, practical to use, safe in its operation and having minimum bulk when closed.

[0010] Such object is achieved through a collapsible table having the features detailed in claim 1).

[0011] The invention further provides locking members as defined in claim 5).

[0012] Further features and advantages of the present invention will in any case be more evident from the following detailed description of a preferred embodiment, merely given by way of a non-limiting example and illustrated in the accompanying drawings, wherein:

fig. 1 is a side elevation view, partly in section, of the table according to the invention in its working position;

fig. 2 is a view as in fig. 1 with the table in its rest position;

fig. 3 is a cross-section view, in a highly enlarged scale compared to reality, of the collapsible table according to the invention in its closed position;

fig. 4 is a side elevation view of three different positions of the table according to the invention during opening or closing operations;

fig. 5a is a cross-section view of a locking mechanism according to the invention in a joined position, whereas

fig. 5b shows the same mechanism in its released position.

[0013] The table consists of a resting surface 1 in whose thickness at least a cavity 2 is obtained, wherein a pin 3 is housed, wherefrom a support means 4 departs, here consisting of a pair of toggle-hinged rods. The table structure is completed by a post 5 for wall mounting; at the upper end of post 5, resting surface 1 is connected through a pin 6, while at the lower end a pin 7 supports toggle rod 4.

[0014] A locking member 8 is arranged along toggle rod 4 and serves to keep said rod in a secure and stable position when resting surface 1 is in its working position.

[0015] Preferably, cavity 2 in surface 1 is marked off by an Q-shaped metal profile 9, having the triple function of a box housing the whole support structure, of strengthening the table in its part weakened by cavity 2, of protecting the - generally wooden - surfaces of such cavity, and of completing the support structure.

[0016] When it is in a rest position (fig. 2), the table according to the invention takes up minimum space, due to the sole thickness of resting surface 1, all the components described so far, including post 5, being contained one within the other and within cavity 2 formed in the thickness of the table surface.

[0017] In particular, as can be understood from the section of fig. 3, the collapsible table according to the invention, when it is in its closed position has the following

members within profile 9 marking off cavity 2 on resting surface 1: a toggle rod 4, divided into its upper portion 4a and its lower portion 4b, locking member 8 and post 5. As a matter of fact, the particular construction of the invention allows to contain within the table thickness all the components making up the table.

[0018] From fig. 3 the particular configuration of the toggle rods can be derived. As can be noticed, in fact, upper rod 4a has a tubular profile, in particular a rectangular tube, whereas lower rod 4b has a channel profile. Thereby, as is well-shown, upon closing the table, the lower rod houses within itself the upper rod, thereby achieving remarkable bulk reduction.

[0019] The movement to close and open the resting surface is performed according to known techniques, as illustrated in fig. 4.

[0020] In a particular embodiment, shown in figs. 5a, 5b, locking member 8 consists of a pawl-and-ratchet system. More particularly, the free end of lower portion 4b of toggle rod 4 comprises a pawl 10, ending in a bevelled portion 11; on the opposite side, the free end of the upper portion 4a of the toggle rod has a ratchet 12, sliding within it against the action of a biasing spring 13, and in turn equipped with a bevelled surface 14, apt to cooperate with bevel 11. The upper portion 4a of toggle rod 4 further has a window 15 to allow passage of pawl 10 as better described herebelow.

[0021] When the table is taken down from the rest position, diagrammatically shown in figs. 2 and 3, to the open position of fig. 1, toggle rod 4 extends in the way diagrammatically shown in fig. 4. At the end of this travel, pawl 10 enters through opening 15 and snap-locks on ratchet 12. The suitable bevelled profile 11, 14, of both these components facilitates easy and quick insertion of pawl 10 into the cavity formed under bevelled portion 14 (fig. 5a).

[0022] When closing of the table is desired, it is sufficient to move ratchet 12 into a disengagement position (fig. 5b) - by manually acting on push-button 16 which is integral with ratchet 12, against the action of biasing spring 13 - so as to free the locking and to allow the mutual movement of the two portions 4a and 4b of toggle rod 4, and to consequently arrange the table for its rest position.

[0023] As can be easily understood, the intended object has thus been achieved of a wall-mounted collapsible table, which is functional, practical to use, and whose bulk in its rest condition is minimal.

[0024] It is intended, however, that the invention is not limited to a preferred embodiment thereof, shown in the drawings, but that several variants are possible, all within the reach of a person skilled in the field, without departing from the scope of protection defined in the following claims.

Claims

1. A wall-mounted collapsible table consisting of a resting surface (1) hinged on one side at (6) to a post (5) for attachment to a wall, and of at least one support member (4), pivoted respectively to the resting surface at (3) and to the post at (7) and which has members (8) locking said table in its open position, **characterised in that** in the lower surface of the table at least one cavity (2) is formed, apt to house said support member (4) folded on itself, said cavity (2) being delimited by a strengthening and protecting Ω -shaped metal profile (9).
2. The table as in claim 1), **characterised in that** said support member (4) consists of a pair of toggle-hinged rods and **in that** said rods, in the folded table portion, are housed within said cavity (2).
3. The table as in claim 2), **characterised in that** at least one of said toggle rods has a channel profile, within which the other toggle rod is housed, in the folded table position.
4. The table as in claim 1), **characterised in that** said locking members (8) consist of a pawl (10) and ratchet (12) snap system, associated with said toggle rod.
5. The table as in claim 4), **characterised in that** said pawl (10) is attached to the end of a first one of said toggle rods and said ratchet (12) is associated with the other rod and slides along the axis of the latter.
6. The table as in claim 4) or 5), **characterised in that** said pawl (10) is attached to said first rod, having a channel profile, and said ratchet (12) slides within the other rod, having a quadrangular-tube profile.

Patentansprüche

1. An der Wand angebrachter, zusammenklappbarer Tisch, der aus einer Auflagefläche (1) besteht, die an einer Seite bei (6) an einer Stütze (5) zur Befestigung an der Wand schwenkbar aufgehängt ist, und aus zumindest einem Stützelement (4), das schwenkbar bei (3) an der Auflagefläche und bei (7) an der Stütze angelenkt ist und das Elemente (8) aufweist, die den genannten Tisch in seiner offenen Position verriegeln, **dadurch gekennzeichnet, dass** in der unteren Oberfläche des Tisches zumindest ein Aufnahmeraum (2) ausgebildet ist, der geeignet ist, das genannte Stützelement (4) aufzunehmen, das in sich geklappt ist, wobei der genannte Aufnahmeraum (2) durch ein verstärkendes und schützendes Omega-förmiges Metallprofil (9) begrenzt ist.

2. Tisch nach Anspruch 1, **dadurch gekennzeichnet, dass** das genannte Stützelement (4) aus einem Paar kniehebelartig angelenkter Stangen besteht, wobei die genannten Stangen in der gefalteten Position des Tisches innerhalb des Aufnahme­raums (2) aufgenommen sind. 5
3. Tisch nach Anspruch 2, **dadurch gekennzeichnet, dass** zumindest eine der genannten Kniehebelstangen ein Kanalprofil aufweist, innerhalb dessen die andere Kniehebelstange aufgenommen ist, in der gefalteten Position des Tisches. 10
4. Tisch nach Anspruch 1, **dadurch gekennzeichnet, dass** die genannten Verriegelungsteile (8) aus einem Rastsystem mit einer Klaue (10) und einer Sperrklinke (12) bestehen, die der genannten Kniehebelstange zugeordnet sind. 15
5. Tisch nach Anspruch 4, **dadurch gekennzeichnet, dass** die genannte Klaue (10) am Ende einer ersten der genannten Kniehebelstangen befestigt ist, wobei die genannte Sperrklinke (12) der anderen Stange zugeordnet ist und entlang der Achse dieser letztgenannten verschieblich ist. 20
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6. Tisch nach Anspruch 4 oder 5, **dadurch gekennzeichnet, dass** die genannte Klaue (10) an der ersten Stange befestigt ist, die ein Kanalprofil aufweist, und dass die genannte Sperrklinke (12) innerhalb der anderen Stange verschieblich ist, die ein viereckiges Rohrprofil aufweist. 30

Revendications

1. Table pliante montée sur mur consistant en une surface d'appui (1) articulée sur un côté en (6) sur un montant (5) pour fixation à un mur, et en au moins un élément de support (4), pivotant respectivement sur la surface d'appui en (3) et sur le montant en (7) et qui comporte des éléments (8) verrouillant ladite table dans sa position ouverte, **caractérisée en ce que** dans la surface inférieure de la table est ménagée au moins une cavité (2), apte à loger ledit élément de support (4) replié sur lui-même, ladite cavité (2) étant délimitée par un profilé en métal en forme de Q, de renfort et de protection (9). 40
45
2. Table selon la revendication 1, **caractérisée en ce que** ledit élément de support (4) consiste en une paire de tiges articulées sur genouillère et **en ce que** lesdites tiges, dans la partie de table pliée, sont logées au sein de ladite cavité (2). 50
55
3. Table selon la revendication 2, **caractérisée en ce qu'**au moins l'une desdites tiges à genouillère a un profil en U, au sein duquel est logée l'autre tige à

genouillère, dans la position de table pliée.

4. Table selon la revendication 1, **caractérisée en ce que** lesdits éléments de verrouillage (8) consistent en un système d'encliquetage à cliquet (10) et rochet (12), associé auxdites tiges à genouillère.
5. Table selon la revendication 4, **caractérisée en ce que** ledit cliquet (10) est fixé à l'extrémité d'une première desdites tiges à genouillère et ledit rochet (12) est associé à l'autre tige et glisse le long de l'axe de cette dernière.
6. Table selon la revendication 4 ou 5, **caractérisée en ce que** ledit cliquet (10) est fixé à ladite première tige, ayant un profil en U, et ledit rochet (12) glisse au sein de l'autre tige, ayant un profil de tube quadrangulaire.

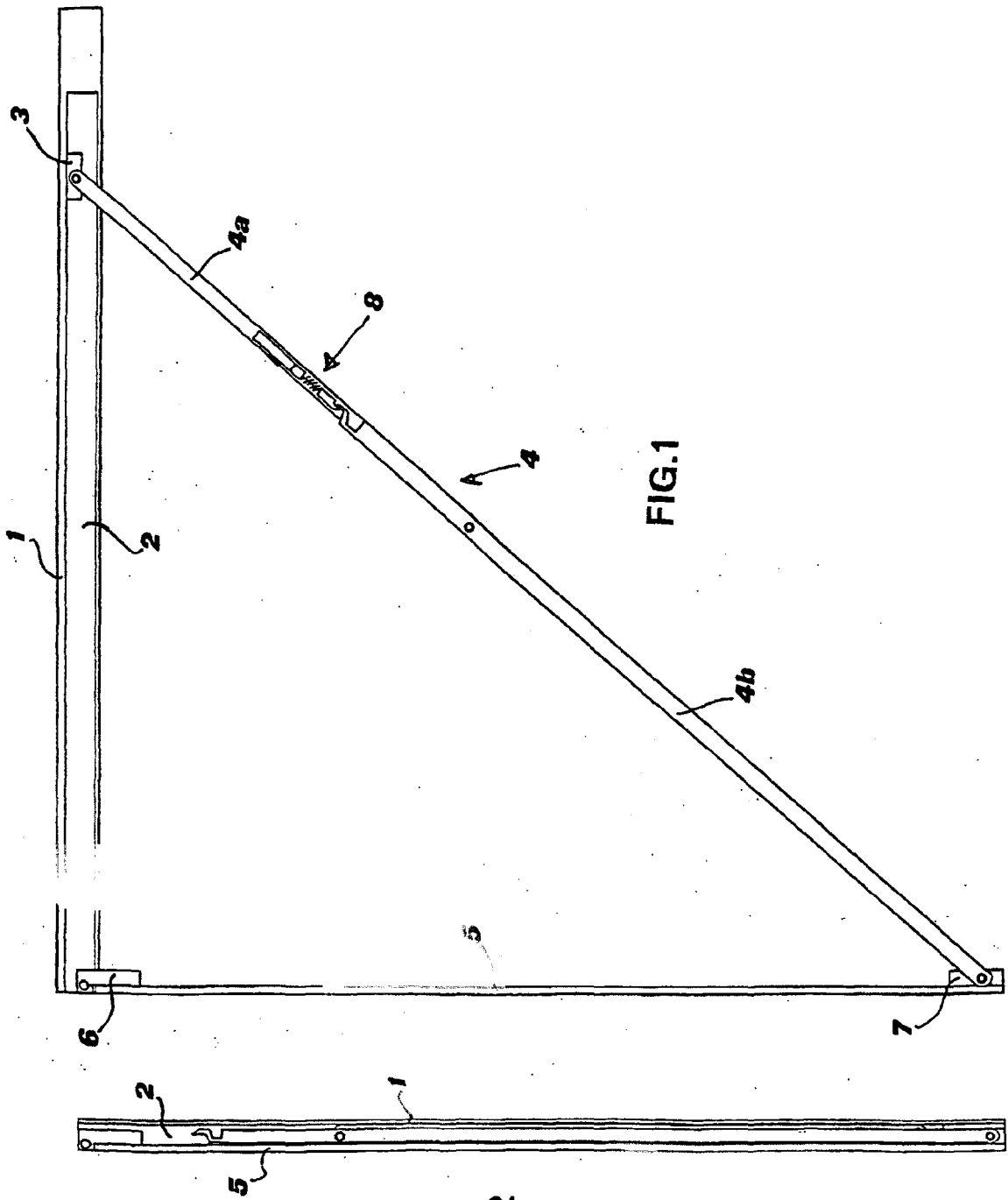


FIG.1

FIG.2

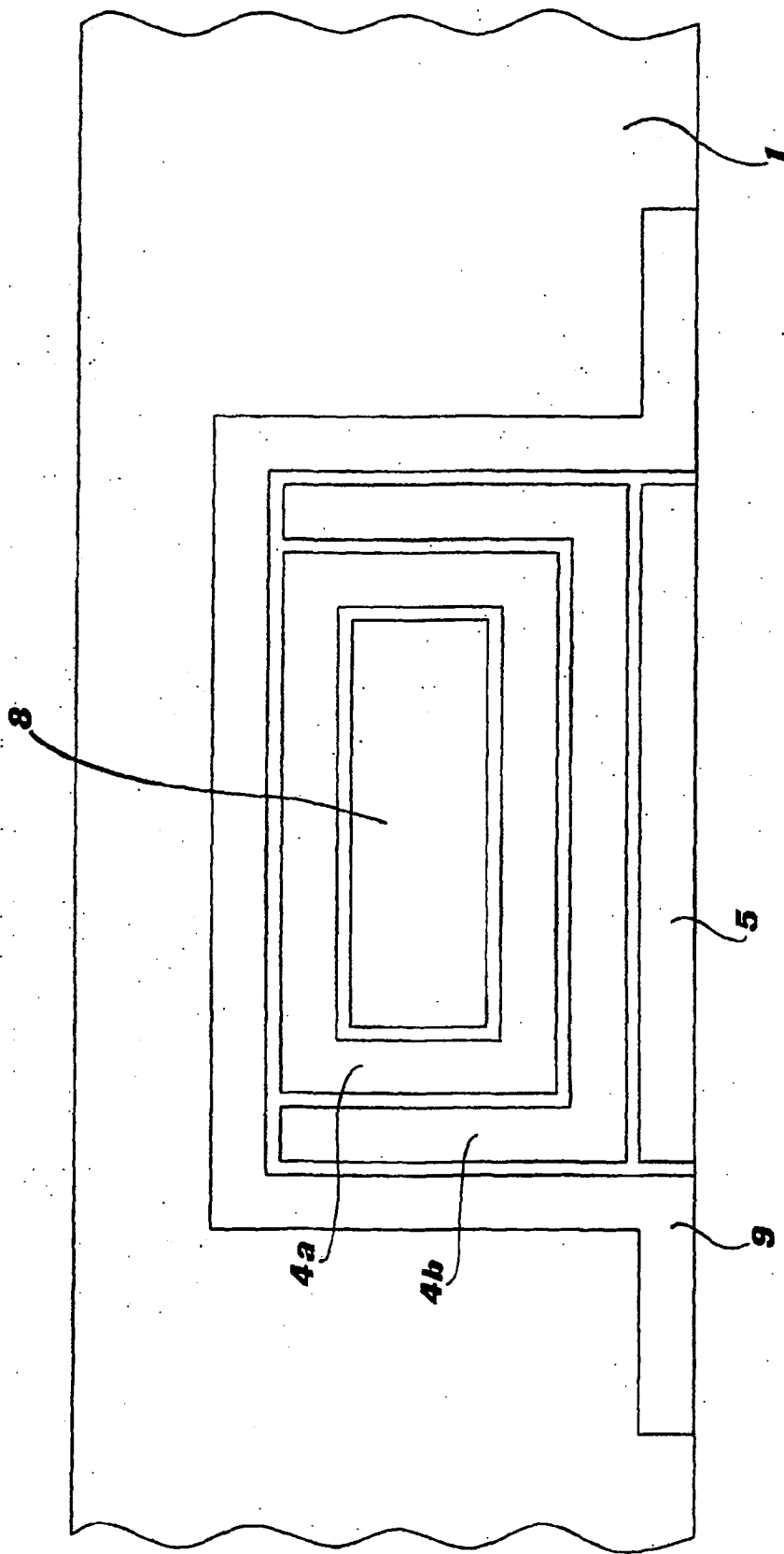
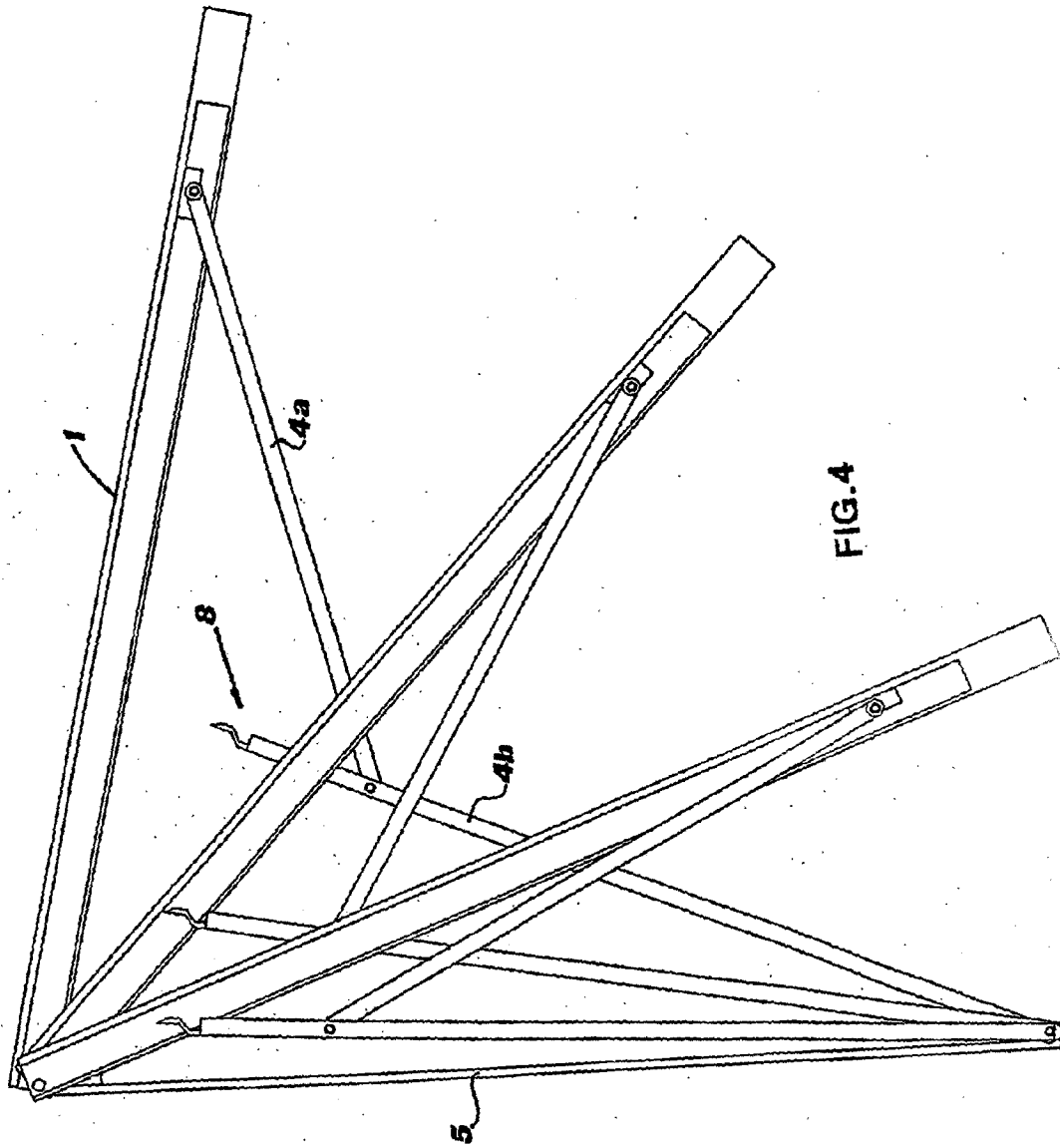
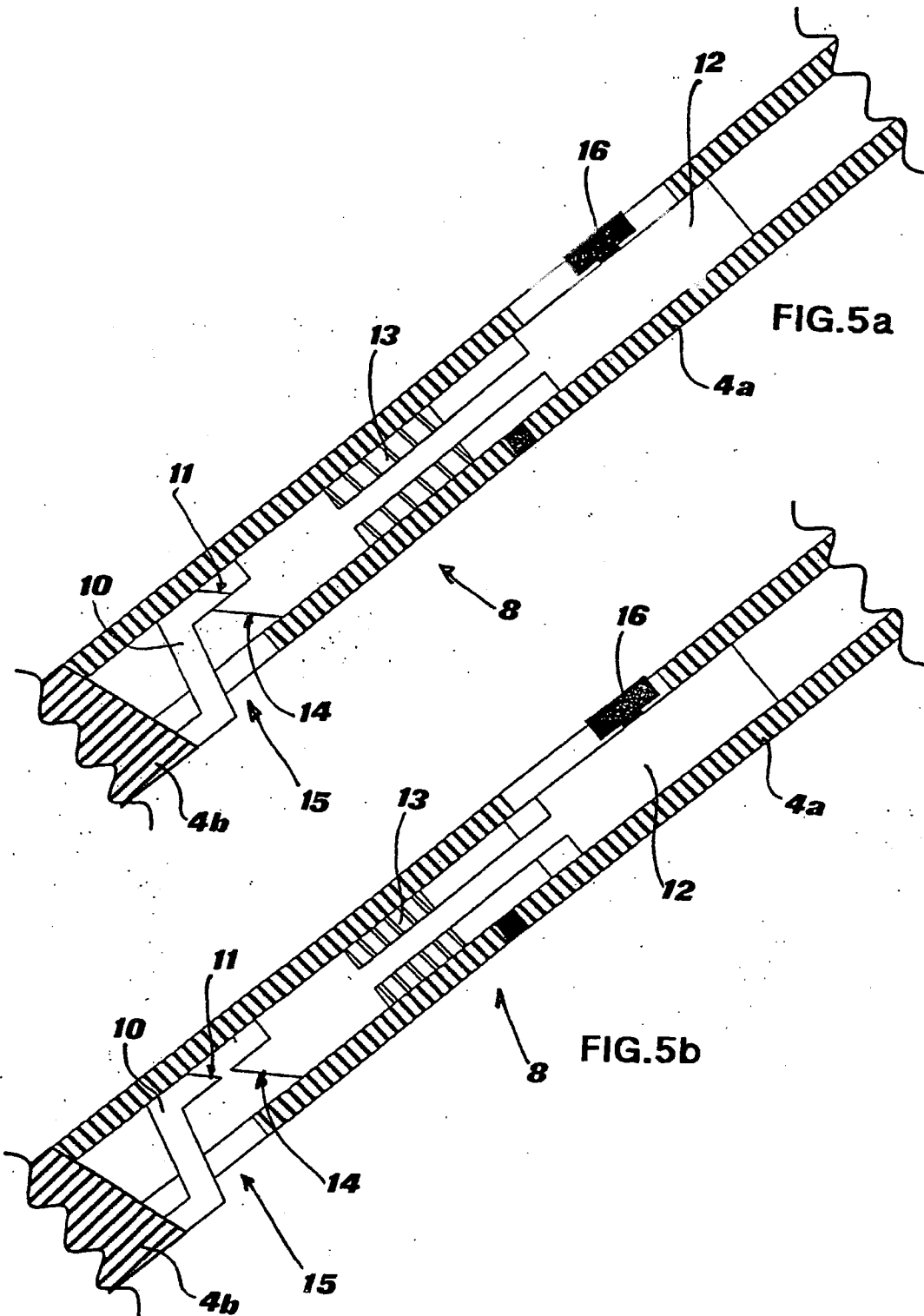


FIG.3





REFERENCES CITED IN THE DESCRIPTION

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