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(54) Back-support arrangement and furniture in connection herewith.

(57) A back-support arrangement (5) which can freely be placed on a sitting or lying surface (4), e.g. on a piece of furniture (2), comprises for example a triangular-shaped part with an underpart (6) which is arranged to be in contact with the surface (4), and having upwardly-extending side surfaces (12,13) of which the forwardly-facing surface (12) slopes backwards, and where the support surface (6) wholly or partly comprises a material with relatively great friction against the surface (4).

A cushion (8) is placed in front of the back-support arrangement (5), and the back of said cushion can be secured to the back-support arrangement, e.g. with a separable securing element such as a zip fastener or the like.

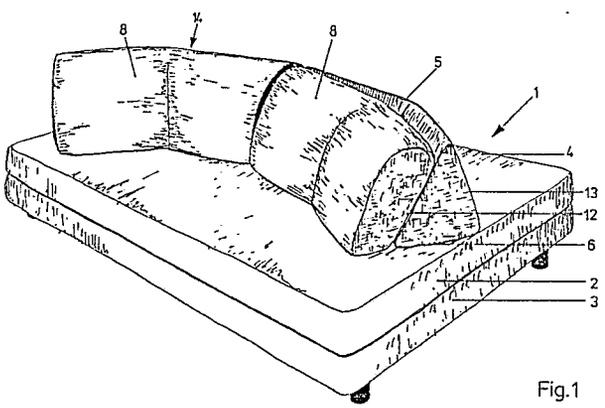

Fig.1

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Description

BACK-SUPPORT ARRANGEMENT AND FURNITURE IN CONNECTION HEREWITH.

The invention relates to a back-support arrangement for placing on a sitting or a lying surface, e.g. on a piece of furniture.

Many different forms of back-support arrangements are known for furniture intended for sitting or lying on, e.g. back cushions for beds or other substantially flat furniture for sitting or lying on. All of the known back-support arrangements require some form of securing element or bracing element, which in its most simple form can be comprised of the wall the furniture is placed up against. In other cases, hoops and fixed backplates and the like are used as mechanical support for a back-support arrangement which, for example, is an upholstered piece of foam rubber, an uphostered cushion or the like.

The object of the invention is to present a completely new type of back-support which is constituted in such a manner that it can be placed anywhere on a sitting or lying surface, and which remains where it is placed completely without the use of further bracing means, securing means or the like.

This is achieved by configuring the back-support arrangement according to the invention as characterized in claim 1. Regardless of where the back-support arrangement is disposed on the surface, it remains here, even though one or more persons use it as a backrest with the full weight of the upper body, the reason being that special shape of the back-support, including the backward slope of the forward-facing surface and the specially-shaped under side, which must be substantially plane so as to achieve the greatest possible contact with the sitting or lying surface, makes it "cling" to the under surface so that it does not slide.

The expression "forward-facing side" is used in the application to denote that side of the back-support arrangement which, during normal use, turns towards a user's back, i.e. the side against which the user leans.

For reasons of the inclined, backwardly-sloping shape of the back-support arrangement, the pressure applied by a person (or several persons) leaning up against it will be transferred downwards against the support surface, thus contributing towards an increase in the friction so that the back-support arrangement cannot slide on the sitting or lying surface.

By configuring the back-support arrangement according to the invention as characterized in claim 2, an increased sitting comfort is achieved while at the same time the anchoring of the cushion to the back-support arrangement contributes towards the pressure from a person leaning up against the cushion, and therewith against the back-support arrangement, being directed against the support surface. Moreover, the securing of the cushion ensures that it does not move in relation to the back-support arrangement.

By configuring the back-support arrangement according to the invention as characterized in claim 3, the friction surface is increased between the backrest, consisting of the back-support arrangement and the cushion, and the sitting or lying surface, which increases the possibilities of selection of the upholstery for the individual parts, thus enabling a very large number of different materials to be used, both for the support surface of the back-support arrangement and for the sitting or lying surface.

By configuring the back-support arrangement according to the invention as characterized in claim 4, it is ensured that it can neither tip backwards nor slide on the sitting or lying surface, but stands solidly on the surface and, in fact, more firmly the heavier it is leaned against.

By configuring the back-support arrangement according to the invention as characterized in claim 5, the possibility is provided for innumerable variants in the shape of the back-support element, both as regards the appearance and the sitting comfort as well as the size an so on. By configuring the back-support arrangement in this manner, an embodiment is achieved which "bites" even more firmly in the sitting or lying surface. The angle between the two elongated parts is preferably 140°-160°, but for certain applications this can be 90°, e.g. for use in a corner arrangement.

The back-support arrangement according to the invention is preferably configured as characterized in claim 6, whereby a particularly practical embodiment is achieved. This has proved to have a very great sitting comfort while at the same time remaining immovably firm on the underlayer when one or more persons lean up against the back-support arrangement.

The invention also relates to a piece of furniture as disclosed and characterized in claims 7-10, where the furniture has a sitting or lying surface which is substantially flat, and upon which one or more back-support arrangements of the kind disclosed in the claims 1-6 can be placed. The piece of furniture achieved hereby has innumerable applications. The furniture can, for example, have a relatively large sitting or lying surface, thus constituting a sofa arrangement for sitting on or a sofa arrangement for half sitting and lying on when, for example, one is watching TV or video. If several back-support arrangements are used on the same surface, these can be placed completely individually to suit the users' desires concerning sitting position etc. The furniture can also have a smaller surface and be arranged for only one back-support arrangement, and hereby constitute an individually adjustable easy-chair or couch. The freely movable back-support arrangements can be removed from the sitting or lying surface, without any form whatsoever of mechanical separation or the like of the parts, so that the furniture can be instantly changed from a sofa or the like for sitting on to a piece of furniture for lying on, e.g. a bed.

The back-support arrangement according to the in vention, with or without cushion, can also be used quite independently, e.g. by children and the young, placed directly on, for example, a floor surface in connection with play, TV-viewing and the like.

The invention will now be described in more detail with reference to the drawing, where

fig. 1 shows an embodiment of a piece of furniture according to the invention with two back-support arrangements, seen in perspective,

fig. 2 shows a backrest in a first embodiment seen at an angle from the rear,

fig. 3 shows a backrest in a second embodiment seen at an angle from the rear, and

fig. 4 shows a vertical, plane cross-section of the backrest according to the invention.

In fig. 1 of the drawing is shown a piece of furniture 1 for lying or sitting on, consisting of a plane upper part 2 and an under part 3 which, for example as shown, can constitute a piece of furniture on four legs. On the substantially plane upper surface 4 of the furniture there are placed two back-support arrangements 5, each with a cushion 8 disposed in front of it, and thus the back-support arrangement 5 together with the cushion constitute a backrest 14 which is shown in more detail in figs. 2 and 4 of the drawing.

Each back-support arrangement 5 comprises an up holstered wedge 7, for example with triangular cross-sectional profile, and which can be produced or upholstered with any kind of material whatsoever. In the embodiment shown, the material used is polyurethane foam rubber, so-called hard cold-foam. The foam rubber wedges 7 have a substantially plane support surface 6, arranged to rest on the surface 4, and two upwardly-extending side surfaces 12 and 13, in that the surface 12 inclines rearwards to such a degree that the load from a sitting person results in a substantially downwardly-directed load, so that the friction between the support surface 6 of the back-support arrangement 5 and the surface 4 is increased. It is important that the surfaces 4 and 6 are in close contact with each other, i.e. that the surface 6 is relatively plane. The back-support arrangements 5 can be composed of two wedges as shown in fig. 3, joined along the breakline 9 so that the backrest acquires the shown angle characteristic which both increases the sitting comfort and the friction against the surface 4, but can also be configured in a completely rectilinear manner as shown in fig. 2. Each foam wedge includes a support surface 6 arranged to rest on the surface 4, and two upwardly-extending, inwardly-sloping side surfaces 12 and 13. The shape that the rear side shall have, i.e. the surface 13, is independent of the construction of the slope of the forwardly-facing side 12 and the under side 6. In this regard, one is thus freely disposed, which provides the possibility of different detail configurations, e.g. a straight, vertical back. However, the shape shown with triangular cross-sectional profile is material saving.

Naturally, the back-support arrangement 5 is upholstered with a suitable material, which can include fabric, leather or synthetic materials. However, the support surface 6 must always be upholstered with a material which provides great friction against the surface 4. Such a material can be leather, artificial leather, fabric, i.e. in many cases that material with which the side surfaces 12 and 13 are covered. The support surface 6 can also be upholstered or covered with special friction-providing kinds of plastic or rubber, all depending on the material with which the surface 4 has been made or upholstered.

In front of the back-support arrangement (see fig. 1), a cushion 8 is placed. This can be, for example, an ordinary back-cushion stuffed with feathers or any kind of foam filling. The cushion comprises that part of the backrest 14 which a person will normally lean against.

The back of the cushion 8 is preferably secured to the back-support element 5, see especially fig. 4, in such a manner that the cushion always stands up against the back-support arrangement and cannot slide on same. The connection can be established by means of a lengthwise zip fastener, snap fastener, Velcro locks, or the like, or can be of a permanent execution by the sewing together of material or leather upholstery. The joining together is shown executed along the lowermost edge of the back-support arrangement 5 and along the whole length of the back of the cushion, but naturally there is nothing to prevent the assembly being executed at other places in the sur face where the cushion 8 touches the side surface 12.

To increase the friction between the backrest and the surface 4, the under side 10 of the cushion 8 can be provided with a friction-providing layer or materials such as described above with regard to the support surface 6, if the cushion upholstery in itself does not extend sufficient friction.

The height h of the back-support arrangement, see fig. 4, should be less than the sum of the depths p + b for the cushion 8 and the bottom surfaces of the back-support arrangement 5. It is thus ensured that sufficient friction is always achieved, and it is avoided that the backrest can tip backwards.

Experiments have shown that if the surface 4 is of a relatively smooth leather, and if the support surface 6 is covered with a non-skid layer of friction -providing material, e.g. polyurethane or rubber-covered material, and if the cushion 8 is upholstered with relatively smooth leather, e.g. the same leather as that with which the surface 4 is covered, then the backrest 14, i.e. the back-support arrangement 5 with cushion 8, will remain standing firmly on the surface.

The embodiments shown in the drawing and described above are only examples of how the invention can be configured in practice. It will be obvious to those familiar with the art that many other forms of furniture and backrests are possible within the framework of the invention, without deviating from the basic idea, namely the friction-providing surfaces 4 and 6 which are in close contact with each other and the inclined side surface 12.

Claims

1. Back-support arrangement (5) for placing on a sitting or lying surface (4), **characterized** in that it comprises an under part (6) arranged to be in contact with the surface (4), and from the under part upwardly-extending side surfaces (12,13), where the forwardly-facing side surface (12) slopes backwards, in that the under side of the support surface (6) is completely or partly composed of a material with relatively great friction against the sitting of lying surface (4), and that the space defined by the under part and the side surfaces is filled out with upholstery material (7), for example foam rubber.

2. Back-support arrangement according to claim 1, **characterized** in that a cushion (8) is disposed up against the forwardly-facing side surface (12) and is secured (11) to the side surface to form a backrest (14) together with the back-support arrangement (5).

3. Back-support arrangement according to claim 2, **characterized** in that the underside (10) of the cushion wholly or partly comprises a material with relatively great friction, for example the same material as the underside of the under part (6).

4. Back-support arrangement according to claim 2, **characterized** in that its height (h) does not exceed the depth (p + b) of the backrest (14) at the sitting or lying surface.

5. Back-support arrangement according to any of the claims 1-4, **characterized** in that it is comprised of at least two elongated parts which form an angle with each other (fig. 3).

6. Back-support arrangement according to any of the claims 1-5, **characterized** in that it is fashioned from polyurethane foam rubber and with the same cross-sectional profile, e.g. triangular cross-sectional profile (fig. 4) throughout the whole of its length, after which it is upholstered, and in that a cushion is disposed on the forwardly-facing side, said cushion substantially covering the assembled forwardly-facing side (12), and in that the back of the cushion's covering and the front of the back-support arrangement's covering are held together by a preferably separable assembly element (11).

7. Piece of furniture with a substantially plane sitting or lying surface (4), **characterized** in that freely on the surface there is placed at least one back-support arrangement which comprises a substantially plane under part (6) arranged to be in contact with the surface (4) and having upwardly-extending side surfaces (12,13), where the forwardly-facing side surface (12) slopes backwards, and in that the underside of the support surface (6) wholly or partly comprises a material with relatively great friction against the sitting or lying surface, and in that the space defined by the under part and the side surfaces is filled out with upholstery material (7), for example foam rubber.

8. Piece of furniture according to claim 7, **characterized** in that a cushion (8) is placed up against the forwardly-facing side surface (12), and in that the underside (10) of the cushion is wholly or partly comprised of a material with relatively great friction, e.g. the same material as the underside of the under part (6), and in that the back-support arrangement (5), together with the cushion (8), forms a backrest, and in that the cushion is secured to the side surface (12), preferably with a separable assembly element (11).

9. Piece of furniture according to claim 8, **characterized** in that the height (h) of the back-support arrangement does not exceed the depth (p + b) of the backrest (14) at the sitting or lying surface.

10. Piece of furniture according to claim 9, **characterized** in that the back-support arrangement is formed by two, joined-together parts of foam rubber, e.g. hard polyurethane foam, said parts forming an angle with each other and having the same cross-sectional profile, e.g. triangular cross-sectional profile along the whole of its length, after which it is upholstered, and in that a cushion is disposed on the forwardly-facing side, said cushion substantially covering the assembled forwardly-facing side surface (12), and in that the back of the cushion's covering and the front of the back-support arrangement's covering are held together by a preferably separable assembly element (11).

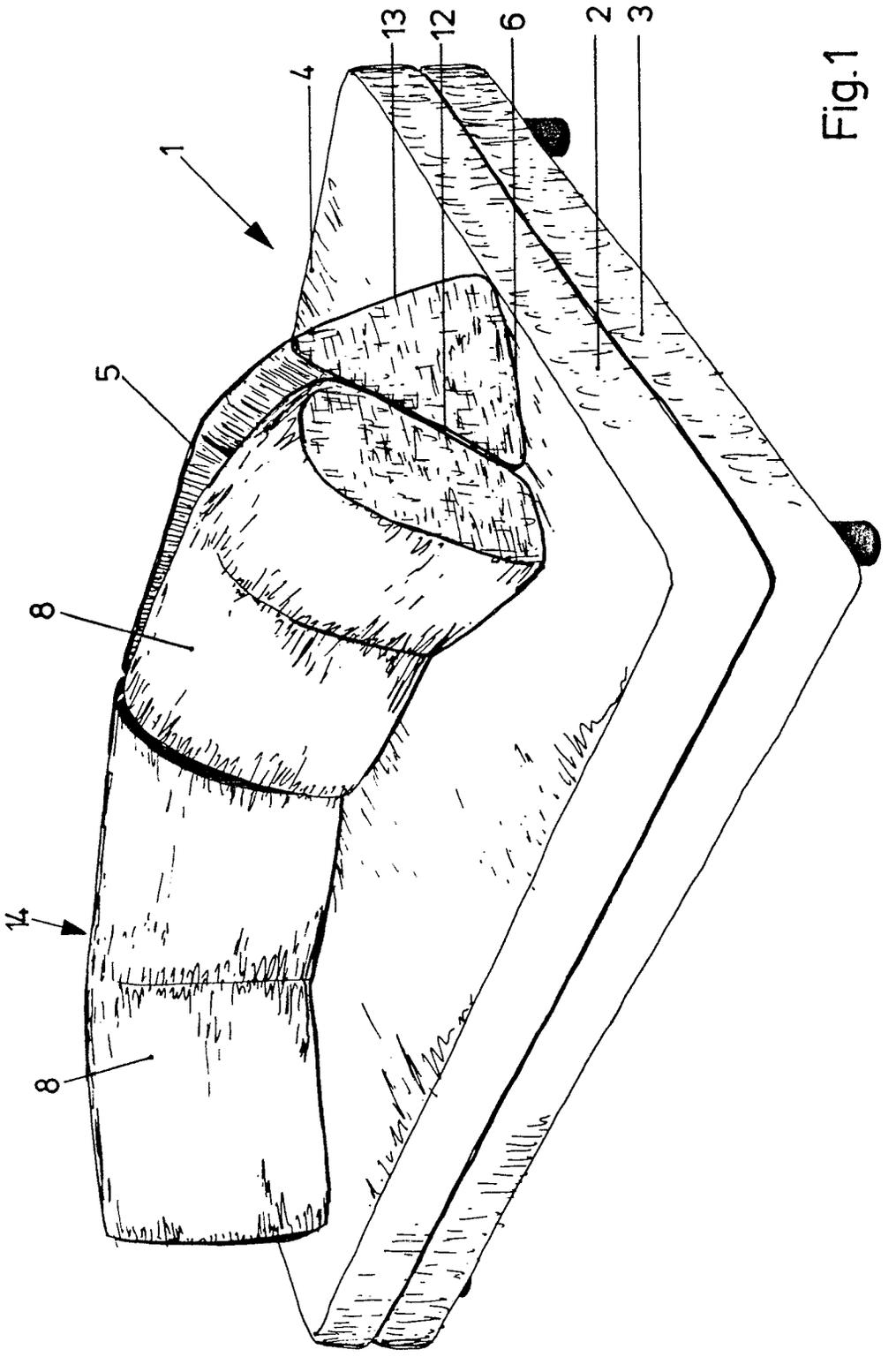

Fig.1

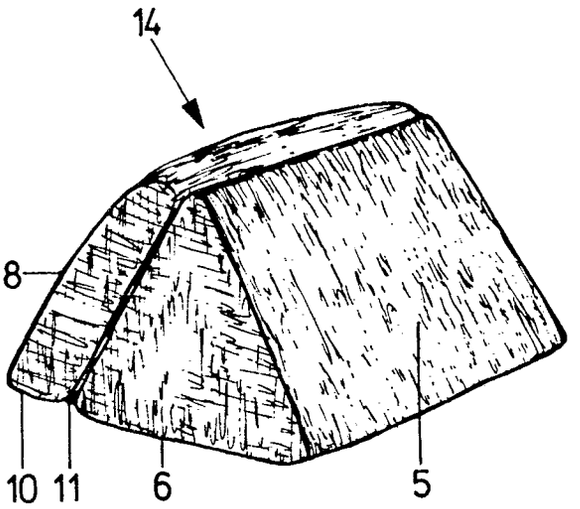

Fig.2

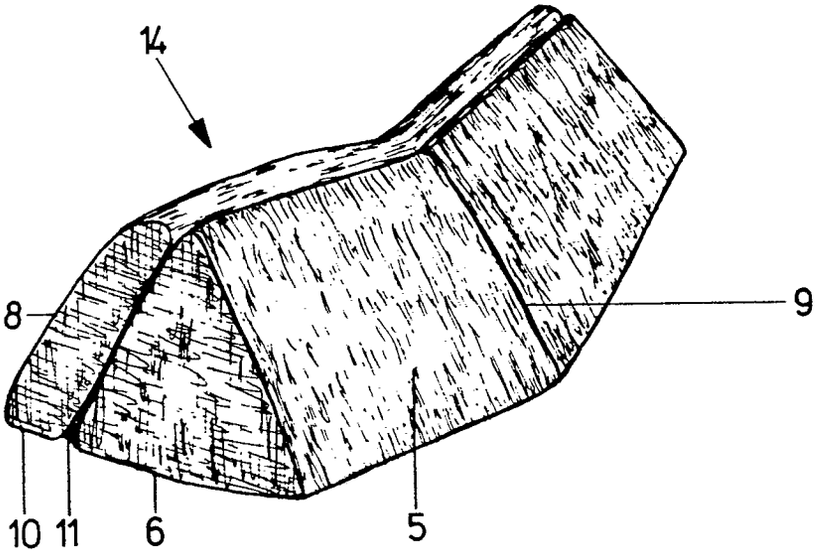

Fig.3

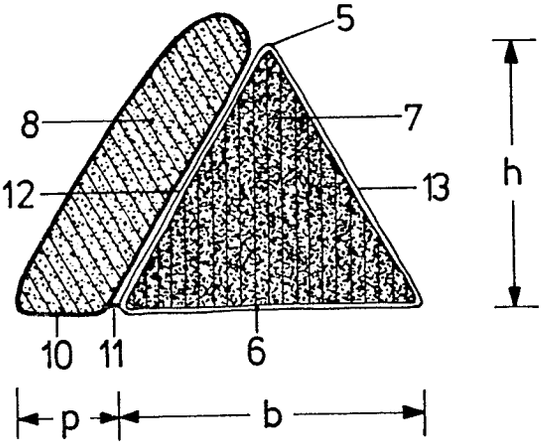

Fig.4

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EUROPEAN SEARCH REPORT

Application Number

EP 89 85 0128

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.4)
X	US-A-3 003 815 (ZINN) * Column 2, line 18 - column 3, line 54; column 4, line 57 - column 5, line 3; figures 1,2,4 *	1	A 47 C 7/42
A	---	6,7	
A	DE-A-2 212 332 (FISCHER) * Claim 1; figures *	1,2,5,6,7,8	
A	---		TECHNICAL FIELDS SEARCHED (Int. Cl.4)
A	US-A-4 197 603 (GREENHAWK) -----		

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	14-07-1989	VANDEVONDELE J.P.H.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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