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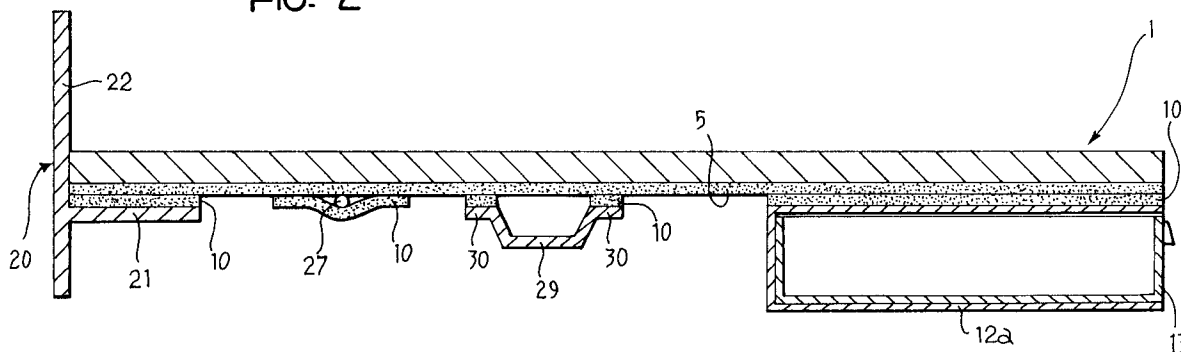
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(54) **A table, particularly for sectional furniture systems for offices, and an element of a furniture structure for such systems.**

(57) A table, particularly for sectional office furniture systems, comprises a structure including a worktop (3, 3a) and at least one element connecting with the worktop (3, 3a). Anchoring means are provided for the structure and the element associated with the

worktop (3, 3a), comprising a rapid-connection system of the microconnector type (5, 10) which includes a first component (5) fixed to the structure and a second component (10) fixed to the element associated with the worktop (3, 3a).

FIG. 2**EP 0 613 638 A1**

The present invention relates to a table, particularly for sectional office furniture systems.

Recently office furniture systems have been developed which enable the various modular elements to be assembled in arrangements which are personalised to the requirements of the final purchaser. In particular, by a combination of a relatively small number of basic modules it is possible to obtain different arrangements which range from individual operating stations - adapted for the execution solely of personal processing - to more complex furnishing arrangements including, for example, a zone for connections, a zone for carrying out personal processing, a zone arranged for working with a personal computer, etc.

In furniture systems of the type specified above there is often a need to attach to the worktop accessories such as nests of drawers and/or additional shelves which are normally located beneath the worktop, or items of various types which are usually arranged on top of the worksurface and thus render part of it unavailable for other uses, while it is also necessary to fix the legs, or support pillars, to the worktop.

In such sectional furniture systems it is essential to ensure the maximum possible flexibility in the connection of the legs and accessories to the worktop to avoid restricting the final purchaser excessively since he should be free to choose the arrangement of the support elements for the worktop and the accessories according to his preferences and so as to utilise the space available in the most rational manner; moreover, the connection system must be simple to enable the user himself to modify the arrangements at will.

In order to satisfy these requirements, the present invention provides a table, comprising a structure including a worktop and at least one element associated with the worktop by anchoring means, characterised in that the anchoring means comprise a rapid connection system of the microconnector type including a first component attached to the structure and a second component fixed to the element associated with the work surface.

In the description which follows and in the appended claims the term "connection system of the microconnector type" is intended to mean a rapid press-fit connection system which employ mechanical anchoring between a plurality of mutually cooperating microconnectors provided on two facing surfaces of the components of the connection system. Examples of such microconnector devices are the so-called VELCRO (registered Trade Mark) closures or "hook and loop" closures.

Preferably the first component of the microconnector system extends over substantially the entire under surface of the worktop. This preferred char-

acteristic enables, inter alia, ducting for cables and electrical conductors beneath the worktop to be provided simply and quickly, and even without the need to provide ducting elements for this purpose; the electrical conductors may therefore be attached directly to the under surface of the worktop by strips of the second component of the microconnector connection system.

The invention also enables apparatus or devices in common use in an office, such as for example the base of a lamp or the central unit of a personal computer, to be fixed beneath the worktop so as to avoid unnecessary bulk on the upper surface of the worktop.

Another subject of the present invention is an element of a furniture structure, particularly of an office table, intended to be attached to at least one other element of the furniture structure by anchoring means, characterised in that the anchoring means comprise a microconnector connection system including first and second components adapted to engage each other reciprocally, in which the first component is attached to the said element and the second component is fixed to the said other element so that the said element can be anchored to the said other element.

Further characteristics and advantages of the invention will become apparent during the detailed description which follows given with reference to the appended drawings, provided purely by way of non-limitative example, in which:

Figure 1 is a perspective view of a worktop according to the present invention,
Figure 2 is a side-elevational view sectioned along the line II-II of Figure 1,
Figure 3 is a view similar to Figure 2, on an enlarged scale, showing a detail of Figure 1 sectioned along the line III-III,
Figures 4, 6 and 5, 7 are two side elevational views and two perspective views respectively illustrating schematically the possible connection of further accessories to the worktop, and
Figures 8 and 9 are sectioned side-elevational views on an enlarged scale of anchoring means used for realising the subject of the invention.

With reference initially to Figures 1, 2 and 3, a table forming part of a sectional office furniture system is generally indicated 1. The table 1 includes a worktop 3 to the under surface of which is attached a sheet 5 constituted by a first component of a microconnector rapid connection system. The sheet 5 preferably extends over the entire under surface of the worktop 3 and is attached thereto by any known fixing system such as, for example, a layer of glue interposed between the worktop 3 and the sheet 5 or by microwelding.

Below the top 3 are legs 7 each of which has an upper base 8 to the top of which is fixed a piece

10 of the second component of the rapid-connection microconnector system. Thus, to connect a leg 7 to the worktop 3, it suffices to place the respective base 8 in correspondence with that region of the underside of the table to which it is to be attached and to press the base 8 so that the piece 10 adheres face to face with the sheet 5.

Accessories of various types, of which several examples are given in the description below, may be located beneath the worktop 3 in an entirely similar manner.

A drawer housing 12 for holding a plurality of drawers 13 is attached beneath the worktop 3 by another piece 10 so that the housing 12 may be press fitted to a region of the sheet 5; similarly a housing 12a for a single draw 13 or a shelf structure (not illustrated in the drawings) may be attached to the top 3.

In a similar manner, a lamp 15 with a base 16 having a piece 10 of the second component of the microconnector system on its upper face, facing the sheet 5, is fixed to the worktop 3. Thus the space which the base 16 would occupy were it located on top of the worktop 3 remains free, thus making more working space available. Naturally the lamp 15 may be disconnected simply and quickly from a region of the sheet 5 to which it is attached for connection to another region of the sheet 5 according to the requirements of the user.

By virtue of the invention it is also possible to connect one or more supplementary worktops 3a quickly to the worktop 3 with the use of one or more connecting elements 18 each constituted by a flat element 19 carrying another piece 10 on one face. In this case the element 19 is located so that the respective layer 10 is anchored partly to the sheet 5 fixed to the underside of the worktop 3 and partly fixed to the sheet 5 fixed to the underside of the supplementary worktop 3a.

A partition 20 may also be attached to the worktop 3, the partition comprising a flat wall 22 adapted to be arranged perpendicular to the worktop 3 at one edge thereof and a flange 21 extending perpendicular to the wall 22 and having a piece 10 of the second component of the microconnector connection system on one of its surfaces the piece 10 being intended to be press-fitted to a region of the sheet 5.

It is also possible to connect cabling 27 of various types to the underside of the worktop 3 by interposing them between the sheet 5 and an elongate piece 10 of the second component or by using ducting elements 29 constituted by half-shells of rigid material having longitudinal edges 30 to which pieces 10 of the second component are fixed to support one or more cables 27 beneath the worktop 3.

A central unit 23 of a personal computer may also be located beneath the worktop 3 by means of support bands 25 provided at least at their ends with respective pieces 10 of the second component and intended to be press-fitted to the sheet 5 so as to free that part of the upper surface of the worktop 3 which would conventionally accommodate such a unit.

Figures 4 to 7 illustrate various types of accessories with different functions and flat elongate shapes which can be attached to the worktop 3.

In a first case (Figure 4) a partitioning element 20a is disposed perpendicular to the worktop 3 and above it. The element 20a, which carries a piece 5 of the first component on its side face is attached to the worktop 3 by means of an auxiliary L-section support 31a having pieces 10 of the second component on two adjacent faces of its two limbs. One of these limbs is intended to be disposed perpendicular to the worktop 3 so that the respective piece 10 is face to face with the piece 5 fixed to the element 20a while the other limb is located parallel to and beneath the worktop 3 so that it can be anchored to the piece 5 thereof.

In a variant illustrated in Figure 5, the partitioning element 20a has two pieces 5 of the first component fixed to its respective opposite faces 21a. In this case a pair of auxiliary L-section supports 31b is used whose walls are in the shape of quadrants and each of which carries a piece 10 of the second component. The anchoring of the element 20a to the worktop 3 is thus effected by disposing the piece 10 of one of the walls of each support 31b face to face with the sheet 5 of the worktop 3 and the piece 10 fixed to the other wall of each element 20a face to face with the piece 5 fixed to one of the faces 21a. The element 20a may in this case take up different angular positions relative to the worktop 3.

Figure 6 shows a further variant in which the partition element 20a is located beneath the worktop 3 and perpendicular thereto and is provided with a piece 10 of the second component on its longitudinal edge and with pieces 5 of the first component attached to its opposite faces 21a. The piece 10 fixed to the element 20a is fixed directly to the sheet 5 of the worktop 3 while the pieces 5 fixed to the faces 21a are anchored to respective pieces 10 each of which is attached to one of the walls of the supports 31b, the other wall of the supports 31b resting on the top of the worktop 3.

In a further variant illustrated in Figure 7, a pair of partition elements 20b is attached, one below and one above the worktop 3, both elements having a central elongate part 21c and respective quadrant-shape end flanges 21b perpendicular to the part 21c. The flanges 21b carry respective pieces 5 of the first component on their outer

faces. Support members 31c of substantially flat semi-circular shape carrying a piece 10 of the second component on one face are then located face to face with the flanges 21b so as to couple therewith. In this case the element 20b to be located beneath the worktop 3 will also be provided with a piece 10 for anchoring to the sheet 5 of the worktop 3.

With reference to Figures 3, 8 and 9, several types of microconnector rapid connection systems, which are particularly useful for forming high-strength connections, are illustrated in greater detail. These systems are, for example, those sold commercially under the marks DUAL LOCK and SCOTCHMATE registered by 3M.

Figure 3 illustrates such a system in which the first component 5 and the second component 10 both have respective microconnectors 5a and 10a of mushroom shape.

Figures 8 and 9 illustrate respective rapid connection system in which the sheet 5 of the first component is, in both cases, a combination of nylon filaments 5b finely woven and arranged to form a plurality of loops while the second component is formed by a piece 10 having mushroom-shaped microconnectors 10a or hooked microconnectors 10b. Naturally microconnector systems of types different from those illustrated, and possibly ones still in the design and experimental phase and therefore not a present available on the market, may also be used.

Naturally, the principle of the invention remaining the same, the forms of embodiment and details of construction may be varied widely without thereby departing from the scope of the present invention; for example, the worktop 3 could be a worktop forming part of a suspended furniture element intended to be cantilevered in known manner from a vertical wall.

Claims

1. A table, particularly for sectional office systems, comprising a structure including a worktop (3, 3a) and at least one element associated with the worktop (3, 3a) by anchoring means, characterised in that the anchoring means comprise a rapid-connection system of the microconnector type including a first component (5) attached to the structure and a second component (10) fixed to the element associated with the worktop (3, 3a).
2. A table according to Claim 1, characterised in that the first component (5) of the microconnector connection system extends over substantially the entire lower surface of the worktop (3, 3a).

3. A table according to Claim 1 or Claim 2, characterised in that the element associated with the worktop (3, 3a) is a support element (7) for the worktop (3, 3a).
4. A table according to Claim 1 or Claim 2, characterised in that the element associated with the worktop (3, 3a) is a support structure (12, 12a) for at least one drawer (13).
5. A table according to Claim 1 or Claim 2, characterised in that the element associated with the worktop (3, 3a) is a connecting element (18) for connecting a plurality of adjacent worktops (3, 3a).
6. A table according to Claim 1 or Claim 2, characterised in that the element associated with the worktop (3, 3a) is a central unit (23) of a processor.
7. A table according to Claim 1 or Claim 2, characterised in that the element associated with the worktop (3, 3a) is a support element for electrical cables (27).
8. A table according to Claim 1, characterised in that it further includes an auxiliary support element (31a, 31b, 31c) having a wall perpendicular to the worktop (3, 3a), to which one of the said components (5, 10) is fixed, the other component (10, 5) being fixed to the element associated with the worktop (3, 3a).
9. An element of a furniture structure, particularly a table for an office, intended to be attached to at least one other element of the furniture structure by anchoring means, characterised in that the anchoring means include a connection system of the microconnector type including first and second components adapted to engage each other reciprocally, in which the first component is fixed to the said element and the second component is fixed to the said other element so that the said element can be anchored to the said other element.

FIG. 1

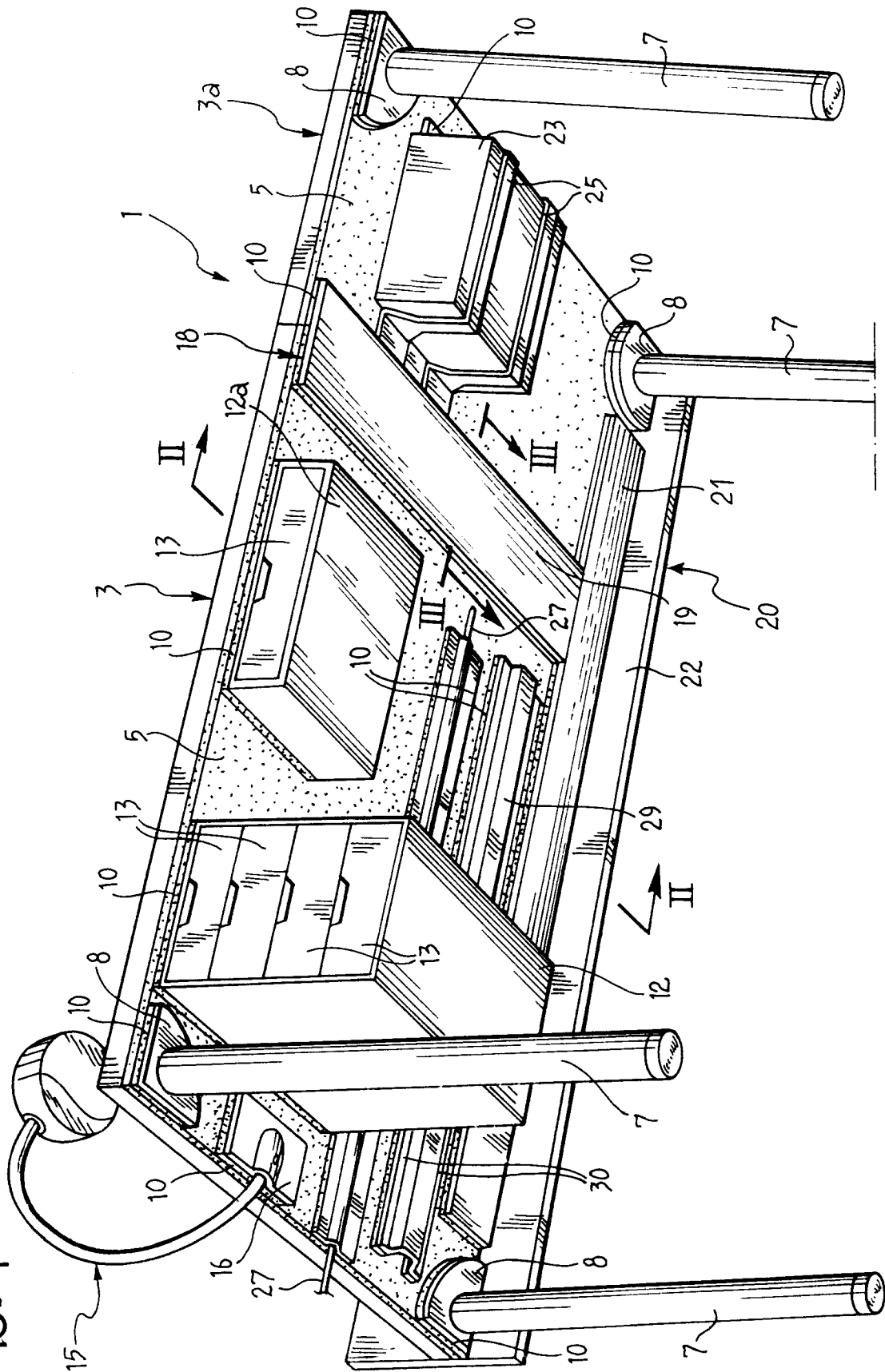


FIG. 2

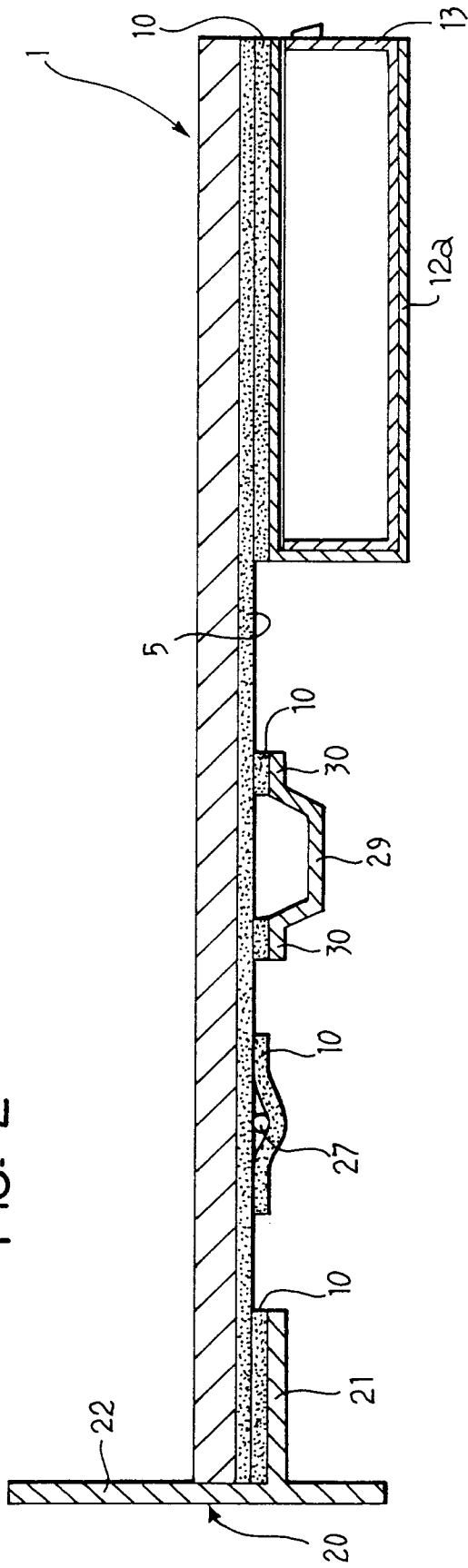
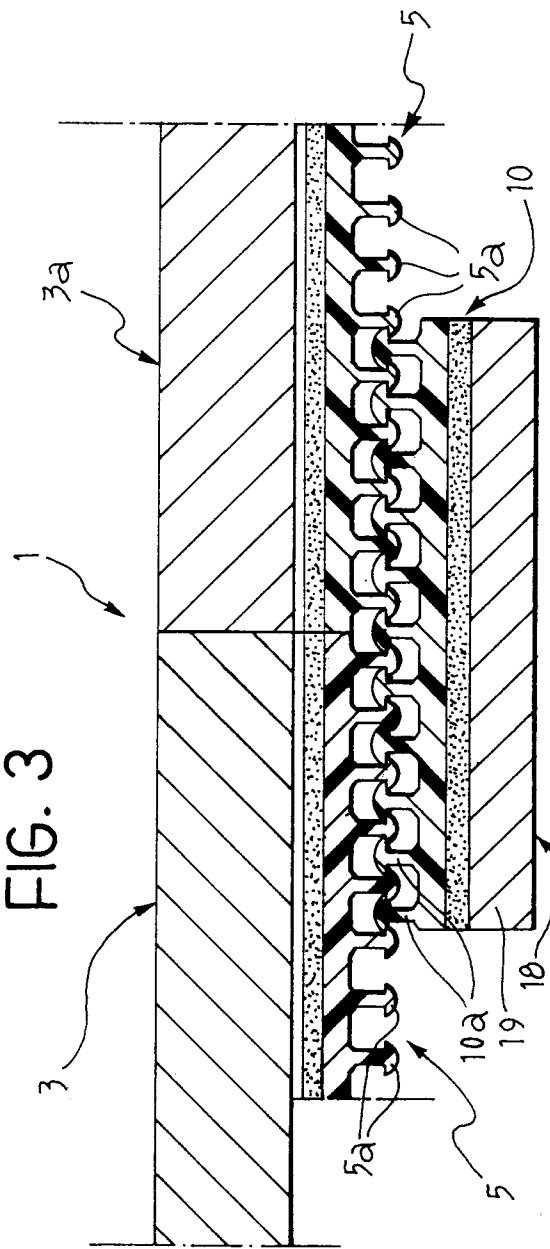


FIG. 3



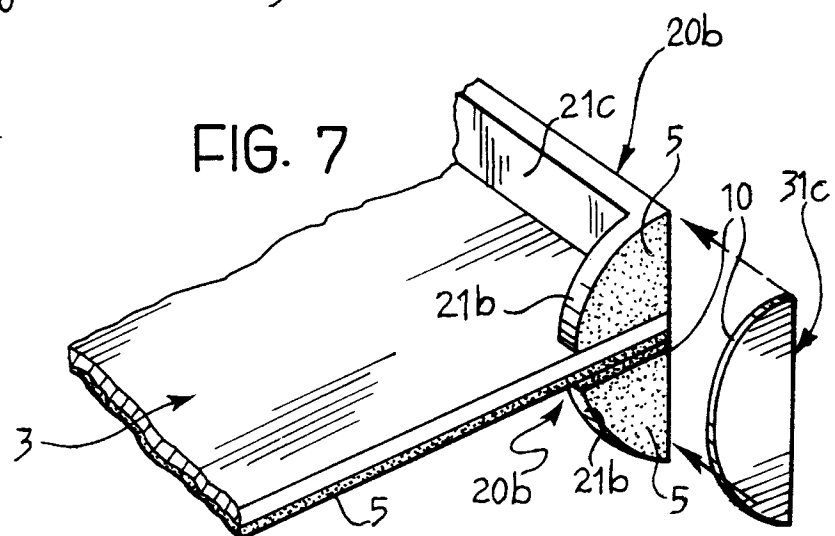
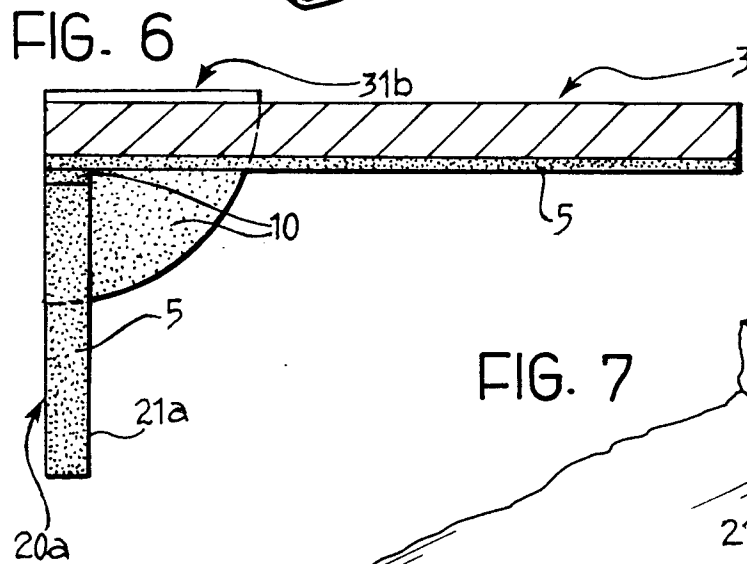
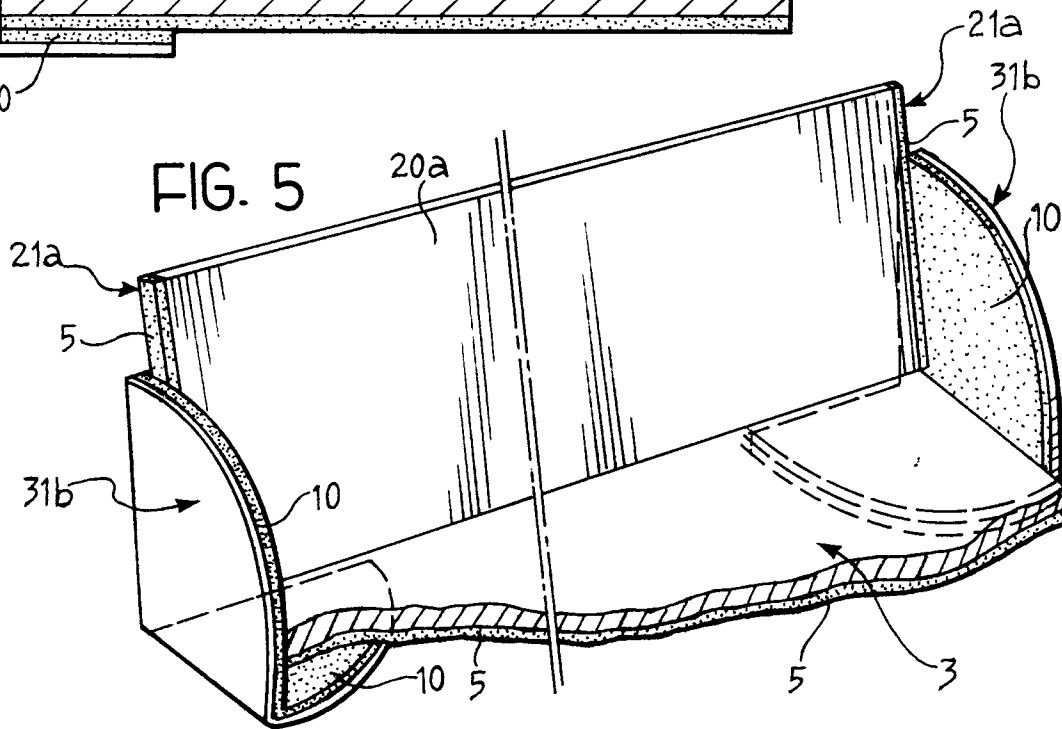
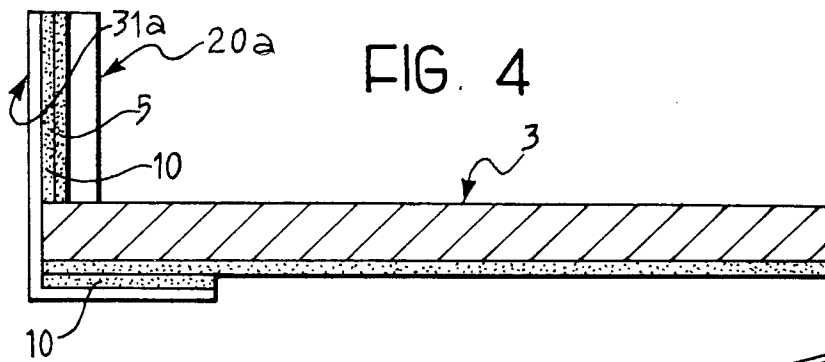


FIG. 8

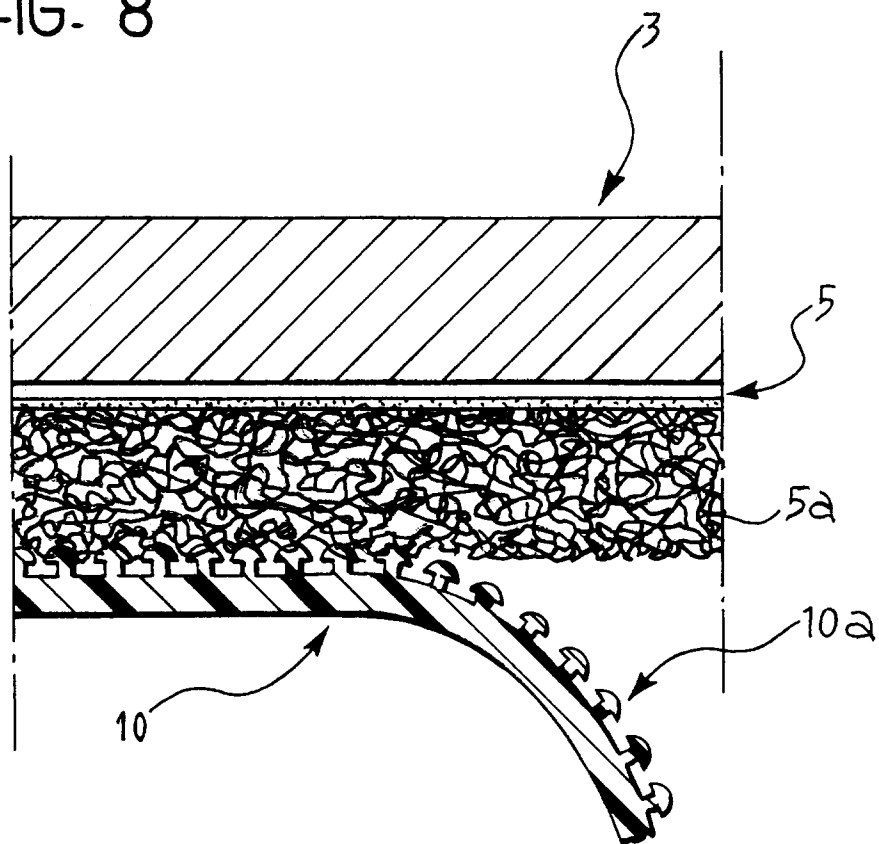
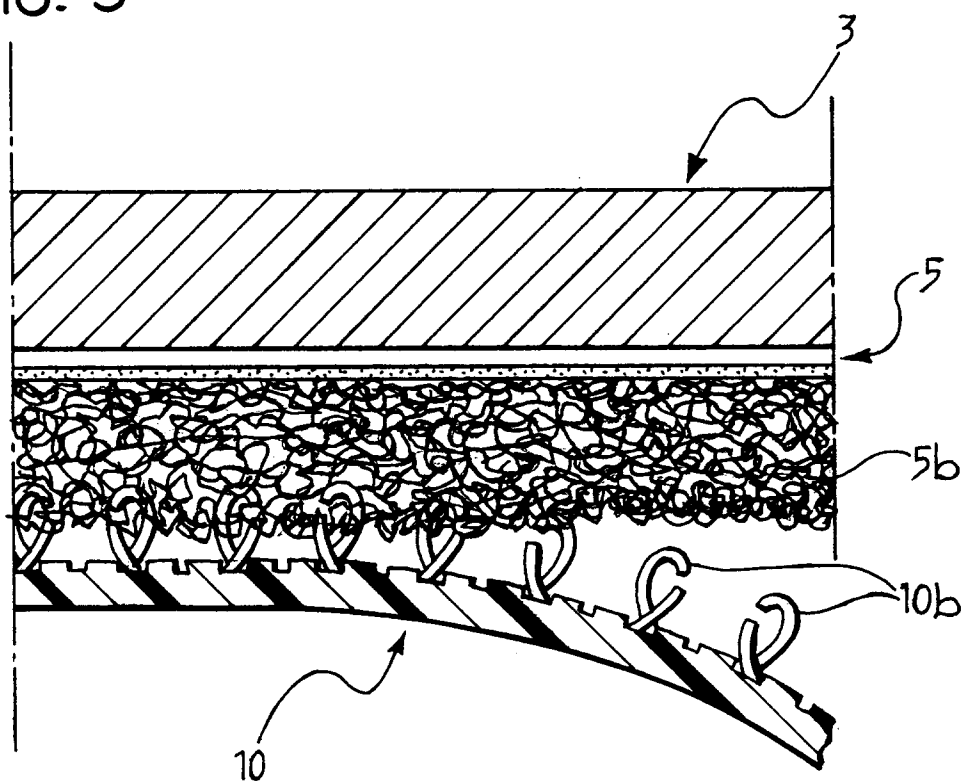


FIG. 9





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EUROPEAN SEARCH REPORT

Application Number
EP 94 10 3035

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.5)
P,X	EP-A-0 531 794 (STEINHILBER) * the whole document * ---	1-3,9	A47B13/00
X	WO-A-81 02248 (EHRlich) * the whole document * ---	1,3	
X A	US-A-4 966 421 (MENGEI) * the whole document * ---	1,5 2	
X	DE-B-12 59 528 (COMPAGNIE DU RONEO) * figure 6 * ---	1,3	
A	DE-A-39 11 017 (ENSSLIN GMBH U CO LABORSYSTEME KG) * the whole document * ---	1,5,7	
A	GB-A-2 178 651 (TOOLROOM SERVICES (PROPRIETARY) LIMITED) * abstract * ---	1	
A	US-A-3 971 608 (GANS) * the whole document * -----	1,4	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.5) A47B F16B
Place of search THE HAGUE		Date of completion of the search 23 June 1994	Examiner Noesen, R
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document			