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(54) AN IMPROVED COVERING ELEMENT

(57) Cover element (1) for furniture or the like, preferably of the plinth type to be associated by means of a hooking element (22) to a support foot (20) of a piece of furniture (21) for the front cover of said foot (20) , characterized in that it comprises a section bar (2) which extends longitudinally along an X axis and which comprises two walls (4, 6) which are mutually facing and spaced along a Z axis, perpendicular to the X axis, and which are connected between them by bridges (8) so as to delimit at least two cavities (10) superimposed on each other along a Y axis which is perpendicular to the X and Z axes, and characterized by the fact that:
- said section bar (2) is made, at least in part or preferably entirely, of a material comprising polyolefin,
- said two walls (4, 6) and said bridges (8) have a thickness of less than 1.5 mm.

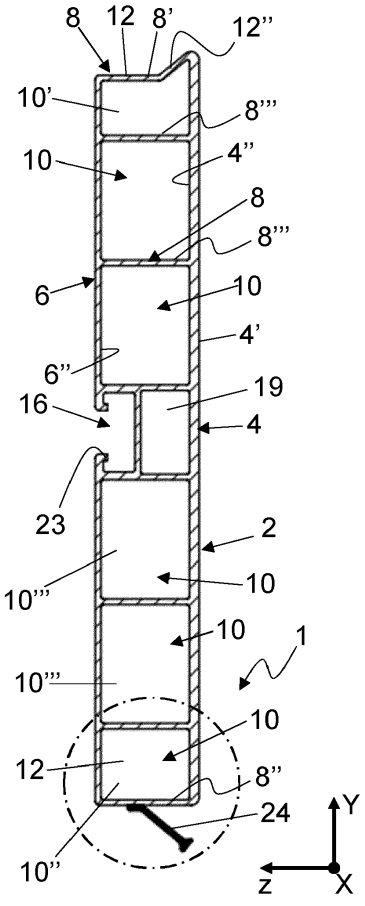

FIG. 1

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Description

FIELD OF THE TECHNIQUE

[0001] The present invention relates to a covering element for furniture or the like, preferably of the plinth type, to be used for the front covering of furniture or the like. Preferably, said covering element can be installed substantially horizontally at floor level, but it could also be installed vertically and / or between two pieces of furniture or in a central area of the same piece of furniture.

BACKGROUND OF THE INVENTION

[0002] It is known that many types of furniture, such as the modules of modular kitchens, are frontally buffered, at floor level, by plinths in extruded plastic or wood or metal based material (generally aluminum). In particular, these plinths are hooked from the front to the support feet of the piece of furniture while their visible surface is suitably treated and coated in such a way as to be aesthetically pleasing.

[0003] To date, bases are generally made of plastic by extrusion, in order to contain costs and production times while guaranteeing the creation of a quality product, especially if combined with a coating in more valuable material. In particular, polymers such as PolyVinyl-Chloride (PVC), polyamide (PA), both pure, i.e. as homo-polymers, and in combination, and therefore as co-polymers, or co-polymers such as Acrylonitrile Butadiene Styrene (ABS) are currently used for the realization of plastic bases. However, bases made of these materials are expensive and, above all, they are complicated to recycle.

[0004] Furthermore, traditional bases are not optimal as there are localized shrinkages in the areas of the bridges or joints of the raw material and which, in the presence of certain conditions, can also be particularly evident and thus compromise the quality of the hooves themselves.

[0005] EP1362530 shows a plinth consisting of a profile that develops longitudinally along the X axis and comprising two walls which are mutually facing and spaced along a Z axis, perpendicular to the X axis, and which are connected together by bridges so as to delimit at least two cavities superimposed on each other along a Y axis which is perpendicular to the X and Z axes.

AIMS OF THE INVENTION

[0006] The purpose of the invention is to propose a covering element for a piece of furniture or the like which allows to overcome, at least in part, the drawbacks of known solutions.

[0007] Another object of the invention is to propose a covering element which is highly eco-compatible.

[0008] Another object of the invention is to propose a covering element of limited weight. Another object of the invention is to propose a cover element of low cost.

[0009] Another object of the invention is to propose a covering element which allows to obtain an overall pleasant aesthetic effect and which provides the observer with the sensation of being in front of a high quality product, both from an aesthetic and functional point of view.

[0010] Another object of the invention is to propose a covering element which allows a simple, easy, quick and precise assembly and junction to a piece of furniture, without the need to carry out continuous corrections.

[0011] Another object of the invention is to propose a covering element that can be made, at least partially, with recycled materials.

[0012] Another object of the invention is to propose a covering element which has an alternative characterization, both in constructive and functional terms, with respect to the traditional ones.

[0013] Another object of the invention is to propose a covering element which can be obtained in a simple and rapid way.

[0014] Another object of the invention is to propose a covering element that can be mass-produced and quickly and efficiently.

[0015] Another object of the invention is to propose a covering element which is mostly or completely recyclable.

[0016] Another object of the invention is to propose a covering element which guarantees high mechanical properties, in particular in terms of rigidity.

[0017] Another object of the invention is to propose a covering element that can be made in different formats, thus allowing its use in different furniture.

[0018] Another object of the invention is to propose a covering element that can have a high longitudinal development, even of 4-5 meters, and this without excessively bending.

[0019] Another object of the invention is to propose a covering element that allows to limit the accumulation of dust and / or dirt under the piece of furniture to which it is associated.

[0020] Another object of the invention is to propose a covering element that has high standards, both functional and aesthetic, and at the same time of accessible cost, thus allowing the possibility of its diffusion on a large scale.

SUMMARY OF THE INVENTION

[0021] All these objects, considered both individually and in any combination thereof, as well as others that will result from the following description, are achieved, according to the invention, with a covering element with the characteristics indicated in claim 1.

DETAILED DESCRIPTION OF THE FIGURES

[0022] The present invention is further clarified hereinafter in some of its preferred embodiments reported for purely illustrative and non-limiting purposes with reference to the attached drawings, in which:

Figure 1 shows in cross section a covering element according to the invention in a first embodiment,

Figure 2 shows the element of fig. 1 in cross section associated with a support foot of a piece of furniture,

Figure 3 shows an enlarged detail of figure 1,

Figure 4 shows in cross section a covering element according to the invention in a second embodiment,

Figure 5 shows the element of fig. 4 in cross section associated with a support foot of a piece of furniture,

Figure 6 shows in cross section a covering element according to the invention in a third embodiment,

Figure 7 shows the element of fig. 6 in cross section associated with a support foot of a piece of furniture.

DETAILED DESCRIPTION OF THE INVENTION AND OF SOME OF ITS PREFERRED EMBODIMENTS

[0023] As can be seen from the figures, the covering element 1 according to the invention comprises a section bar 2 which is made of polymeric material. Conveniently, the section bar 2 is internally hollow.

[0024] The covering element 1 is suitable to be used for the front covering of areas surrounding a piece of furniture, or of parts of furniture or spaces between pieces of furniture.

[0025] Preferably, the covering element 1 is of the plinth type and is suitable for being installed substantially horizontally at floor level. Conveniently, the covering element 1 could also be installed vertically, for example to cover a space between two pieces of furniture.

[0026] The section bar 2 has an elongated development along a longitudinal development direction X and has a transverse section (see Figures 1, 4 and 6) comprising two walls, respectively 4 and 6 facing each other and mutually spaced along a direction Z corresponding to the thickness of the section bar 2. In particular, a front wall 4 is provided, configured to be, in use conditions, facing outwards, and a rear wall 6 configured to be, in use conditions, facing the inside of the mobile. Preferably, the two walls 4 and 6 are parallel to each other.

[0027] Conveniently, the cross section of the section bar 2 remains substantially the same in terms of shape and dimensions along the entire longitudinal extension X of the section itself.

[0028] Conveniently, the front wall 4 comprises a front face 4' which, in conditions of use, is intended to be visible, and a second face 4" which faces inwards and faces a corresponding internal face 6" of the rear wall 6.

[0029] Conveniently, the development of each wall 4 and 6 along a direction Y, which is perpendicular to the directions X and Z, is greater - preferably much greater - than the distance that the two walls 4 and 6 have along direction Z.

[0030] The two walls 4 and 6 are joined together by at least a bridge 8 which departs from the corresponding internal faces 4" and 6" and mutually facing each other of said two walls. Conveniently, the bridges 8 define connecting sections, preferably straight and with development parallel to the Z direction, between the walls 4 and 6. Conveniently the two walls 4, 6 can be connected to each other by a plurality of bridges 8 spaced apart along the Y direction, in order to ensure stability and strength to the section bar 2.

[0031] Conveniently, a first bridge 8' is provided which connects the two walls 4 and 6 together at respective first ends of the walls themselves.

[0032] Conveniently, the front wall 4 can have a greater development along the Y axis than the rear wall 6. Preferably, for this purpose, the first bridge 8' can comprise a first section 12' parallel to the axis Z and a second section 12" which is angled with respect to the Z axis, or possibly even stepped.

[0033] Preferably, the second section 12" defines a protrusion which is configured to cooperate, in particular by abutting, with the upper flanged edge of a foot 20 so as to be flush with the lower surface of the cabinet 21.

[0034] Conveniently, it is also a second bridge 8" is provided which connects the two walls 4 and 6 to each other at respective second ends of the walls themselves.

[0035] Preferably, said first bridge 8' and said second bridge 8" have a continuous development, ie without interruptions or openings.

[0036] Conveniently, a plurality of intermediate bridges 8‴ are provided which connect the two walls 4 and 6 together in correspondence with intermediate zones (along the extension Y) of said walls.

[0037] The section bar 2 comprises at least two cavities 10, and preferably a plurality of cavities 10, each of which is closed and laterally delimited by the walls 4 and 6 and by two respective bridges 8.

[0038] Preferably, two extremal cavities 10' and 10" can be provided and at least two intermediate cavities 10‴. More in detail, a first extremal cavity 10' is provided which is defined between the two walls 4 and 6 and between the first bridge 8' and an intermediate bridge 8‴, and a second extremal cavity 10" which is defined between the two walls 4 and 6 and between the second bridge 8" and an intermediate bridge 8‴. Conveniently, each intermediate cavity 10'" is defined between the two walls 4 and 6 and between two distinct and facing intermediate bridges 8‴. Preferably, all the cavities 10 of the section have the same development along the Z axis.

[0039] The section bar 2 comprises at least one groove 16 which, preferably, is defined along the entire longitudinal development of the section bar itself along the X axis. Preferably, the section bar 2 comprises a single and only groove 16. Conveniently, the groove 16 is defined so as to be open at the rear wall 6. In particular, the groove 16 defines a longitudinal channel for insertion and engagement, preferably of shape, of a shaped male

member of a traditional element 22 for attachment to a support foot 20 of a piece of furniture 21.

[0040] Preferably, the groove 16 is defined substantially in the center of the extension of the rear wall 6 along the Y axis.

[0041] Preferably, the groove 16 has a development along the Y axis of about 4-15 mm.

[0042] Preferably, the groove 16 comprises counter-shaped edges 23 which delimit the connection opening of the groove with the outside.

[0043] In particular, the engagement of the hooking element 22 of the foot 20 within the groove 16 takes place according to traditional methods by inserting inside the channel of the groove 16 a protrusion 18, shaped like a hammer, of said hooking element so that the part outermost of said protrusion is initially parallel to the direction of development of the groove. Subsequently, the hooking element 22 is made to rotate by about 90° - in particular it is made to rotate by about 90° around the axis of development of the neck of the protrusion - so that the hammer-like undercut portions of the protrusion abut on the corresponding counter-shaped edges 23 of the groove, thus preventing / blocking the extraction of the hooking element 22 from the covering element 1.

[0044] Advantageously, once the covering element 1 is associated with the foot 20 by means of the hooking element 22 , at least one area of the rear wall 4 - preferably the two extreme areas of the rear wall itself - comes into contact with / rests on the foot 20.

[0045] Conveniently, a further internal cavity 19 is also provided in correspondence with the groove 16, which thus completes the thickness of the section bar 2 along the Z axis. In particular, said further internal cavity 19 is defined and delimited between two intermediate bridges 8‴ and by a small internal wall which delimits the groove 16 and the front wall 4. Conveniently, the development of the internal cavity 19 and of the groove 16 along the axis Z corresponds to the development of each cavity 10 along the axis Z itself.

[0046] Conveniently, the cross section of the cavities 10 - possibly with the exception of the first extremal cavity 10' - is substantially rectangular, preferably rectangular with rounded corners, and this in order to ensure greater ease of processing of the section bar 2 and a better redistribution of the forces within the profile itself.

[0047] Conveniently, the cavities 10 are configured so that the ratio between the development along the Z axis and the development along the Y axis varies between 0.7 and 1.5.

[0048] Preferably, the intermediate cavities 10'" have cross sections with the same shape and the same dimensions, both along the Y axis and along the Z axis. Conveniently, the extremal cavities 10' and 10" can have a cross section with development along the Y axis which is lower than that of the 10" intermediate cavities.

[0049] Preferably, the section bar 2 is configured in such a way as to have at least two cavities 10 which are superimposed on each other along the direction of development Y of the section.

[0050] Preferably, the section bar 2 is configured so that the groove 16 is positioned between two cavities 10, in particular between two intermediate cavities 10‴.

[0051] Preferably, the section bar 2 is configured so that the number of cavities 10, superimposed on each other along the Y axis, defined in correspondence with one side of the groove 16, is equal to the number of cavities 10, superimposed on each other along the Y axis, defined at the other side of the groove 16.

[0052] Preferably, the section bar 2 is configured so as to have at least two cavities 10, superimposed on each other along the Y axis, defined at one side of the groove 16 and at least two cavities 10, superimposed on each other along the Y axis, defined at the other side of the groove 16.

[0053] More in detail, in a possible embodiment (see fig. 1), the section bar 2 comprises three cavities 10 superimposed along the Y axis, of which two intermediate cavities 10‴ and the first extremal cavity 10', defined at one side of the groove 16 and three other cavities 10, overlapping each other along the Y axis, of which two intermediate cavities 10‴ and the second extremal cavity 10", which are positioned at the other side of the groove 16.

[0054] More in detail, in a possible embodiment (cf. fig. 4), the section bar 2 comprises four cavities 10 superimposed along the Y axis, of which three intermediate cavities 10‴ and the first extremal cavity 10', defined at one side of the groove 16 and four other cavities 10, between them superimposed along the Y axis, of which three intermediate cavities 10‴ and the second extremal cavity 10", which are positioned at the other side of the groove 16.

[0055] More in detail, in a possible embodiment (see fig. 6), the section bar 2 comprises five cavities 10 superimposed along the Y axis, of which four intermediate cavities 10‴ and the first extremal cavity 10', defined at one side of the groove 16 and five others cavities 10, superimposed on each other along the Y axis, of which four intermediate cavities 10‴ and the second extremal cavity 10", which are positioned at the other side of the groove 16.

[0056] The walls 4 and 6 and also all bridges 8 have a thickness of less than about 1.5 mm. Preferably, the walls 4 and 6 and the bridges 8 have a thickness of between 0.5 - 1.2 mm.

[0057] Conveniently, the front wall 6 has a thickness S1 greater than the thickness S2 of the bridges 8, and in particular it can have a thickness of about 0.8 - 1.2 mm, while the bridges 8 can have a thickness of about 0.6 - 1mm. Preferably, the front wall 6 has a greater thickness than the rear wall 4, however the walls 4 and 6 could have a thickness substantially equal to each other. Preferably, all the bridges 8 can have a thickness substantially equal to each other.

[0058] Conveniently, the thickness S of the section bar 2 (ie the development along the axis Z) can be about 10

- 15 mm, preferably it is about 12-13 mm.

[0059] Conveniently, the section bar 2 can have a length, ie development along the X axis, which can be about 2 meters and even reach 4 or 5 meters.

[0060] Conveniently, the section bar 2 can have a development along the Y axis which is approximately 50 - 200 mm.

[0061] Conveniently, the section bar 2 can be made by extrusion. Conveniently, the section bar 2 is configured so that the bridges 8 are connected to both walls 4 and 6 already during the extrusion.

[0062] The section bar 2 is made at least in part with a recycled polymeric material.

[0063] The section bar 2 can be made of a material based on at least one poly-olefin, and preferably a homopolymer of a poly-olefin. Preferably, the section bar 2 is made entirely and only of poly-olefins. Preferably, the section bar 2 can be made entirely and only of a polymeric compound based on poly-propylene. Preferably, the section bar 2 can be made by extrusion in a polymeric compound based on poly-propylene with a mineral part, for example talc, which acts as a nucleating and stabilizing agent during the extrusion process. Advantageously, at least 35-50% by weight of the polymeric compound based on polypropylene is obtained from regenerated / recycled material.

[0064] Preferably, the polypropylene can be isotactic, and in particular it can not be syndiotactic and / or atactic polypropylene. Advantageously, the section bar 2 can be made of a material based on a homo-polymer, preferably of polypropylene. Conveniently, the material - and in particular the polypropylene - with which the section bar 2 is made can be composed in part of recycled material, and preferably it can comprise at least 30% of recycled material, and more preferably it can comprise between 35 and 50% by weight of recycled material.

[0065] Conveniently, the section bar 2 can be made of a material containing suitable fillers configured to guarantee the material itself the desired mechanical properties both during the production process of the section bar 2 and during its use. For example, the material may comprise talc, and preferably a percentage of talc comprised substantially between 30 and 40% by weight.

[0066] Advantageously, the covering element 1 can also comprise an appendage 24 which, in one of its parts, is associated - preferably is fixed - to the section bar 2. Conveniently, the appendix 24 is configured to come into contact with the floor on which the piece of furniture is supported, or with another structure or part (including the piece of furniture itself or another piece of furniture). Conveniently, the appendix 24 acts as a seal. Conveniently, the appendix 24 covers the whole, or in any case most of, the longitudinal extension of the section bar 2.

[0067] Advantageously, the appendix 24 can be associated in a stable and permanent manner with the section bar 2. Preferably, the appendage 24 is glued to the section bar 2 by / during the co-extrusion process carried out to make the covering element 1, thus obtaining an excellent mechanical seal.

[0068] Preferably, the appendix 24 comprises a first portion 24' which is fixed to the section bar 2 and, in particular, is fixed to the external surface of the second bridge 8", and a second portion 24" which is inclined with respect to said first portion 24' so that its termination, possibly shaped, comes into contact with the floor, or with other structure.

[0069] Conveniently, the appendix 24 is made of a soft and flexible material or in any case of a less rigid material than that with which the section bar 2 is made.

[0070] Conveniently, the appendix 24 can be made of a thermoplastic material, preferably a copolymer. Preferably, the appendix 24 can be made of a Styrene-Ethylene-Butylene-Styrene (SEBS) copolymer. Preferably, the material for making the appendix 24 can have a hardness lower than 80 Shore A, and preferably equal to about 70 Shore A.

[0071] Conveniently, the appendix 24 can be made by extrusion.

[0072] In a preferred embodiment, the covering element 1 can be made by extrusion and, in particular, the section bar 2 and the appendix 24 can be co-extruded in order to make the covering element 1.

[0073] Conveniently, the external face, intended to be visible, of the section bar 2 can be suitably treated or coated so as to customize or improve the aesthetic effect of the covering element 1, once installed / assembled.

[0074] Conveniently, the covering element 1 can have an overall development (i.e. given by the section bar 2 only or by the assembly of the section bar 2 with the appendix 24 applied) along the Y axis of about 50 - 200 mm, for example of 100 mm, 120 mm and 150 mm.

[0075] Conveniently, the covering element 1 - both in the case in which it consists of the section bar 2 only and in the case in which it comprises the section bar 2 and the appendix 24 - is highly recyclable, and in particular the section bar 2 can be ground (possibly also with the appendix 24) to obtain other polymeric material to be used for the realization of other covering elements or for other purposes.

[0076] As is clear from the above, the covering element according to the invention is particularly advantageous in that:

- it is mainly made of polyolefins and other easily recyclable materials, which make it a 100% recyclable product,
- it does not contain dangerous substances and is physiologically harmless,
- it can be obtained with a process that does not involve the use of chemical solvents harmful to operators or users, also avoiding aerosol emissions into the atmosphere,
- has a high toughness and is hardly chipping,
- it can also have a particularly high longitudinal development, reaching for example up to 4-5 meters, while still maintaining an appropriate mechanical ri-

gidity, as well as a low cost and weight.

[0077] Unlike the solution of EP1362530, the covering element according to the invention comprises a section which is made, at least in part or preferably entirely, of a material comprising polyolefin, and in which said two walls and said bridges have a thickness of less than 1.5 mm. This is particularly advantageous since it allows to have a covering element which is recyclable and, at the same time, of low weight and cost.

[0078] The present invention has been illustrated in some of its preferred embodiments, but it is understood that executive variations may be made in practice, without however departing from the scope of protection of the present patent for industrial invention.

Claims

1. Cover element (1) for furniture or the like, preferably of the plinth type to be associated by means of a hooking element (22) to a support foot (20) of a piece of furniture (21) for the front cover of said foot (20) , **characterized in that** it comprises a section bar (2) which extends longitudinally along an X axis and which comprises two walls (4, 6) which are mutually facing and spaced along a Z axis, perpendicular to the X axis, and which are connected between them by bridges (8) so as to delimit at least two cavities (10) superimposed on each other along a Y axis which is perpendicular to the X and Z axes, and **characterized by** the fact that:

   - said section bar (2) is made, at least in part or preferably entirely, of a material comprising polyolefin,
   - said two walls (4, 6) and said bridges (8) have a thickness of less than 1.5 mm.

2. Cover element according to claim 1, **characterized in that** said polyolefin comprises a polymeric compound based on polypropylene.

3. Cover element according to the preceding claim, **characterized in that** said polymeric compound based on polypropylene contains recycled material, preferably contains about 35-50% of recycled material.

4. Covering element according to one or more of the preceding claims **characterized in that** the material of which said section bar (2) is made also comprises mineral parts, and preferably talc.

5. Improved covering element according to one or more of the preceding claims **characterized in that** all the cavities (10) of the section have the same development along the Z axis.

6. Improved roofing element according to one or more of the preceding claims, **characterized in that** the thickness (S1) of one (4) of said two walls, preferably the one which in use is intended to have an exposed face (4'), is greater with respect to the thickness (S2) of said bridges (8).

7. Improved covering element according to one or more of the preceding claims **characterized in that** the section bar (2) has a development along the Y axis of about 50-200 mm and / or has a development along the Z axis of about 10 - 15 mm,

8. Improved covering element according to one or more of the preceding claims **characterized in that** the cavities (10) have a cross section that is substantially rectangular, preferably rectangular with rounded corners, and **in that** the cavities (10) are configured so that the ratio between the development of the cavity (10) along the Z axis and the development of the cavity (10) along the Y axis, it varies between 0.7 and 1.5.

9. Covering element according to one or more of the preceding claims **characterized in that** said section bar (2) comprises a groove (16) which is open in correspondence with the wall (6) which in use is not intended to be visible, said groove (16) defining a channel for the insertion and engagement of a hooking element (22) to a support foot (20) of a piece of furniture (21).

10. Covering element according to one or more of the preceding claims **characterized by** the fact that said section bar (2) is obtained by extrusion and by the fact that said bridges (8) are connected to both of said walls (4, 6) already during the extrusion of said section bar (2).

11. Covering element according to one or more of the preceding claims **characterized in that** the section bar (2) is configured so that the number of cavities (10), overlapping each other along the Y axis, defined at one side of the groove (16) is equal to the number of cavities (10), superimposed on each other along the Y axis, defined at the other side of the groove (16).

12. Cover element according to one or more of the preceding claims **characterized in that** it also comprises an appendix (24) which is made of a co-polymer, and preferably of a Styrene-Ethylene-Butylene-Styrene (SEBS) co-polymer, which it extends longitudinally along the X axis and is associated with said section bar (2) in correspondence with a bridge (8") which connects the ends of said two walls (4, 6) together.

13. Covering element according to the previous claim **characterized in that** said section bar (2) and said appendix (24) are obtained by co-extrusion.

14. Cover element according to one or more of the preceding claims **characterized by** the fact that said profile includes:

- a first bridge (8') which connects the two walls (4, 6) together at the first ends of the walls themselves,
- a second bridge (8") which connects the two walls (4, 6) to each other at the second ends of the walls themselves,

and by the fact that said first bridge (8') and said second bridge (8") have a continuous development that is free of interruptions or openings.

15. Covering element according to one or more of the preceding claims **characterized in that** the front wall (4) extends along the Y axis greater than the rear wall (6) and the first bridge (8') which connects respective first ends of said walls (4, 6) comprises a portion (12") which is angled with respect to the Z axis, or possibly also a step, to thus define a protrusion which is configured to cooperate, in particular by abutting, with the upper flanged edge of a foot (20) so as to be flush with the lower surface of the cabinet (21).

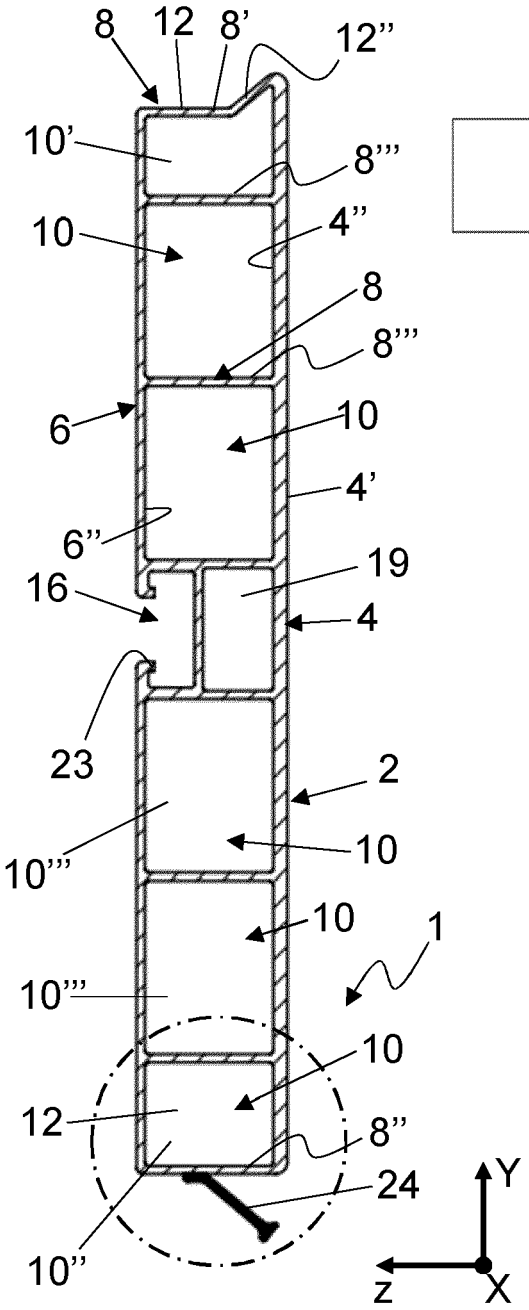

FIG. 1

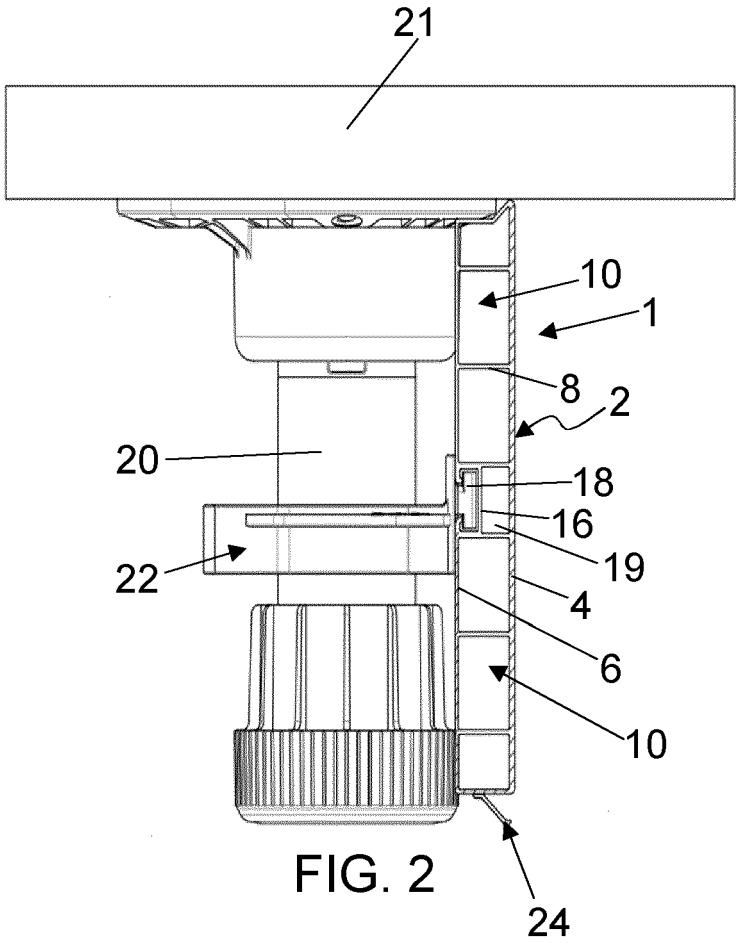

FIG. 2

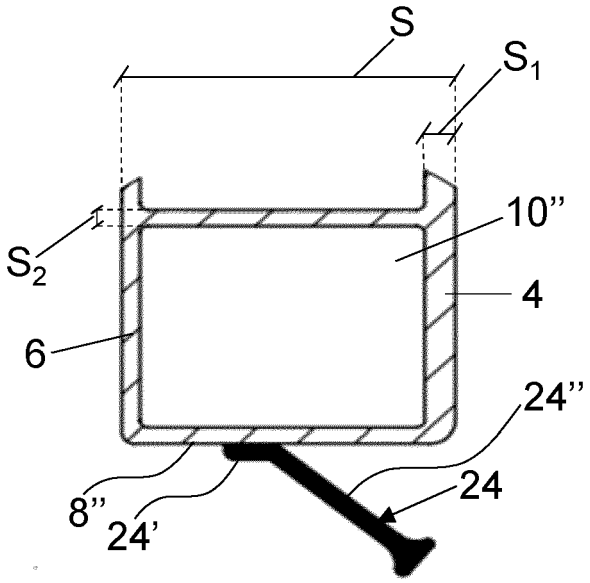

FIG. 3

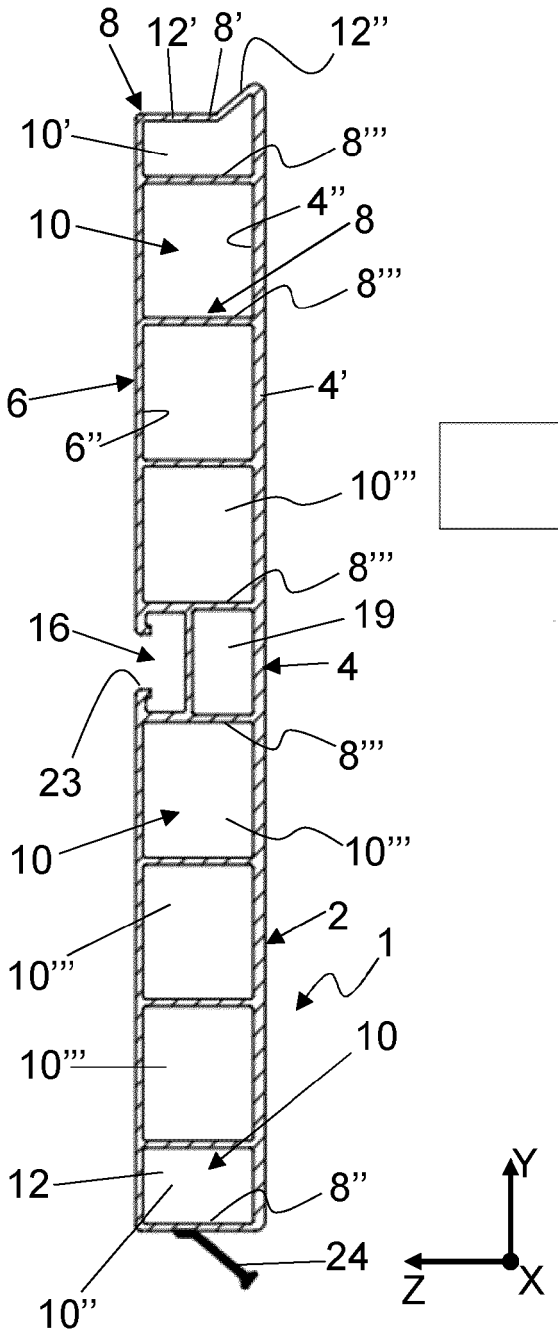
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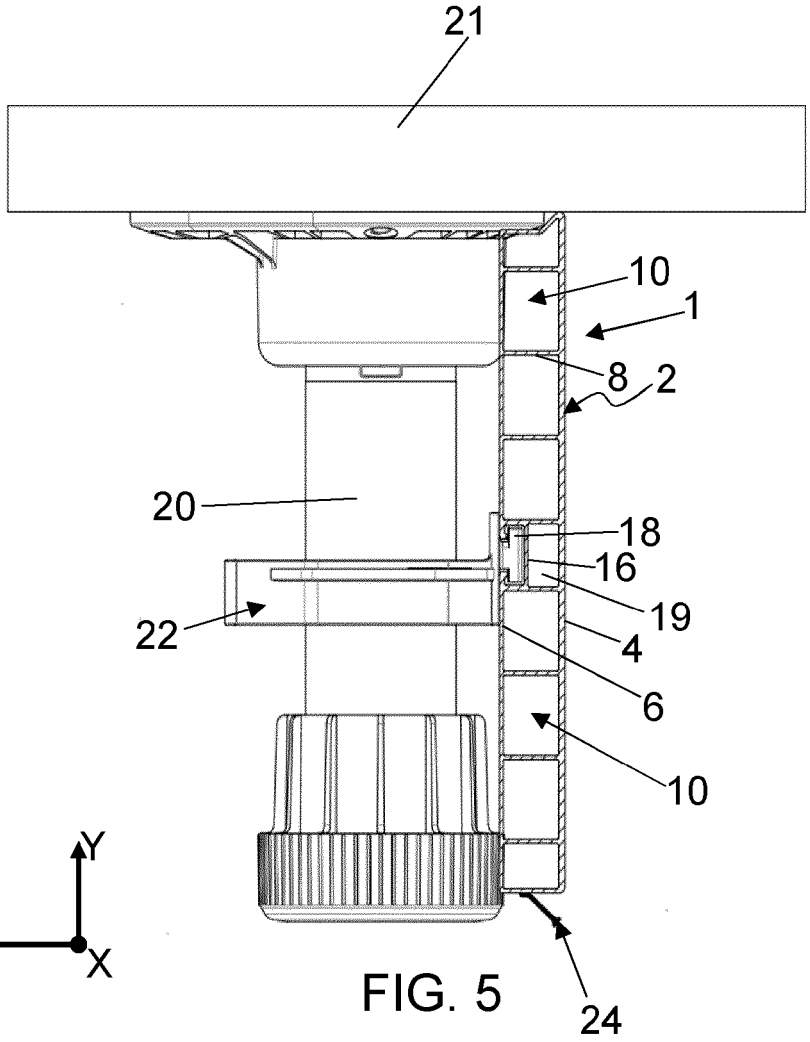
FIG. 4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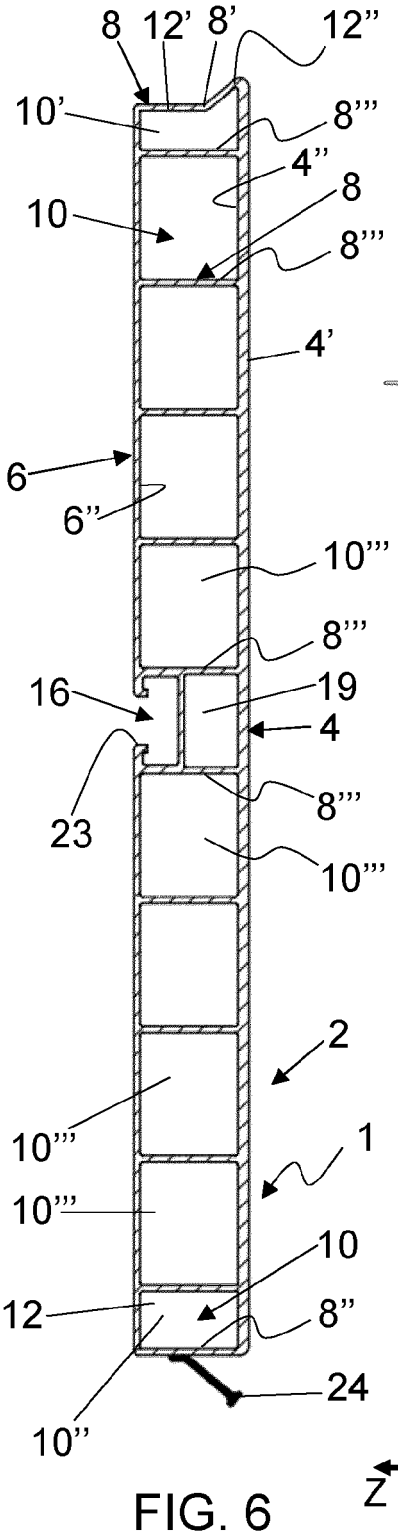
24

FIG. 5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8'
12''
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16
19
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10
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Y
Z
X

FIG. 6

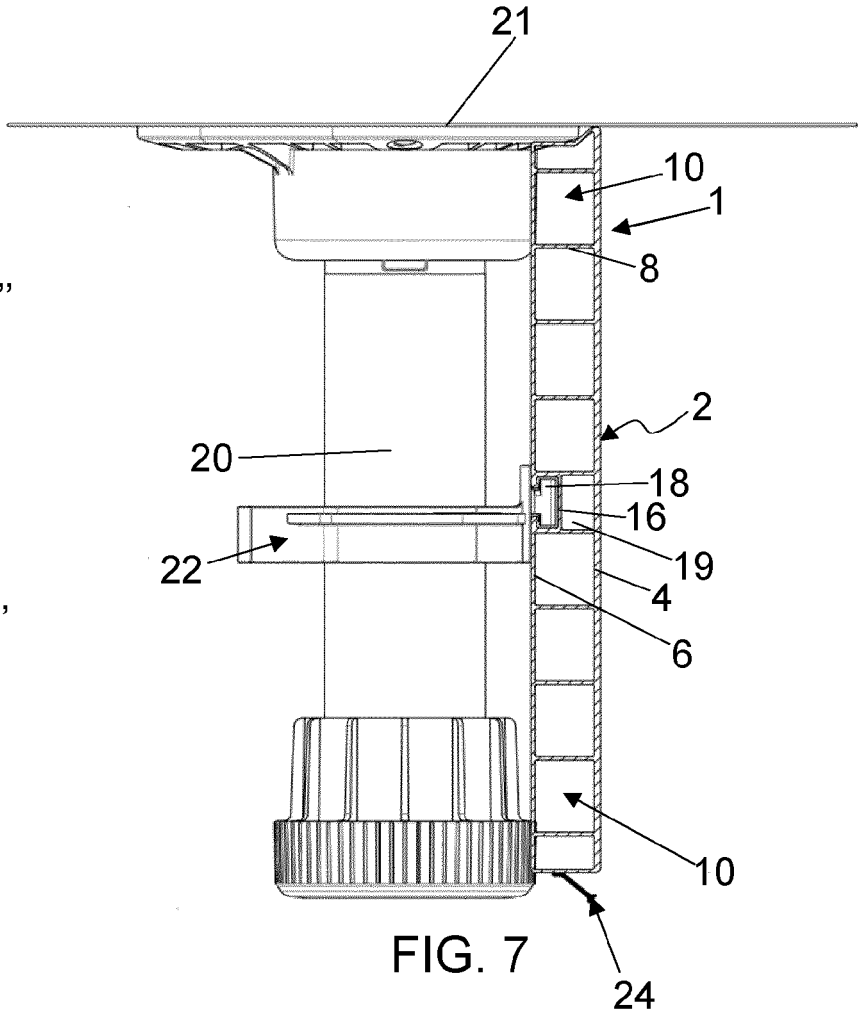
21
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FIG. 7

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EUROPEAN SEARCH REPORT

Application Number
EP 22 20 0258

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			A47B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	25 January 2023	Kohler, Pierre

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