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(71) Applicant: **CAIMI EXPORT S.p.A.**
I-22060 Novedrate (Como) (IT)

(72) Inventor: **Caimi, Giuseppe**
c/o Caimi Export S.p.A.
22060 Novedrate (Como) (IT)

(74) Representative: **Cicogna, Franco**
Ufficio Internazionale Brevetti
Dott.Prof. Franco Cicogna
Via Visconti di Modrone, 14/A
20122 Milano (IT)

(54) Improved modular-element drawer

(57) The present invention relates to a modular-element drawer (1), the main feature of which is that the drawer comprises sidewalls (2) and a back-wall (3), made of extruded aluminium section members, which are mutually coupled by rear angle joints (20).

On the front of the section members of the sidewalls (2) are coupled brackets (30) for connecting a front element.

A bottom (14) is moreover provided which is supported at the bottom edge of the section members (2,3).

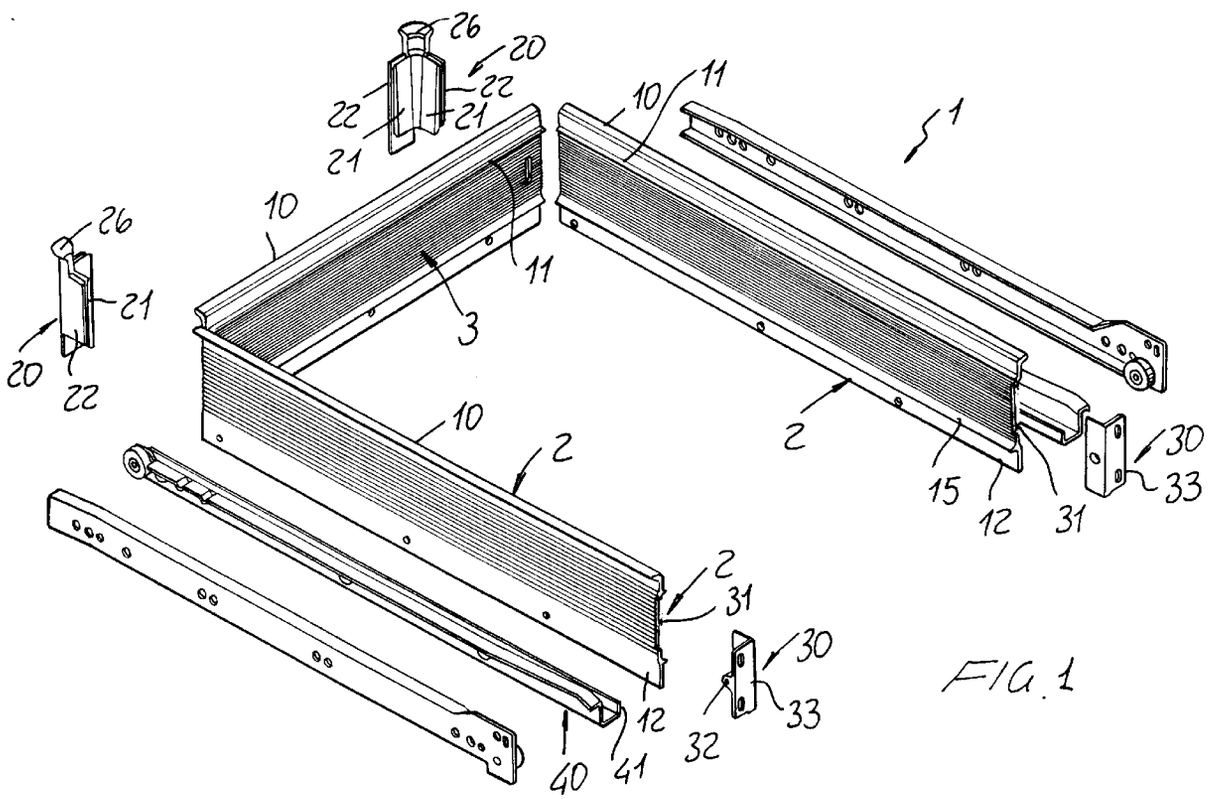

FIG. 1

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Description

BACKGROUND OF THE INVENTION

The present invention relates to a modular-element drawer.

As is known the drawers which are conventionally used in furniture pieces and the like, and, in particular, in kitchen furniture pieces, are conventionally constituted by a framework, generally made of a bent sheet metal material, which defines the sidewalls and back-wall of the drawer and which are coupled to a bottom element and a front element.

With the disclosed prior arrangements, it is necessary to assemble a lot of component elements which must be reunited for defining the drawer.

Another drawback of prior drawer constructions is that the component elements thereof have a comparatively poor aesthetical finishing degree, thereby it is necessary to perform further finishing operating steps.

SUMMARY OF THE INVENTION

Accordingly, the aim of the present invention is to solve the above mentioned problems, by providing a modular-element drawer construction which can be made by a single simplified constructional elements, allowing to make both the back-wall and the sidewalls of the drawer.

Within the scope of the above mentioned aim, a main object of the present invention is to provide such a drawer construction which can be easily and quickly assembled without the need of performing complex assembling operations.

Another object of the present invention is to provide such a drawer construction which, owing to its specifically designed features, is very reliable and safe in operation.

Yet another object of the present invention is to provide such a drawer construction which can be easily made by using easily available elements and materials and which, moreover, is very competitive from a mere economic standpoint.

According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a modular-element drawer, characterized in that said drawer comprises sidewalls and a back-wall made of extruded aluminium section members, which are mutually coupled by rear angle joints, on the front of the sidewall section members being moreover provided brackets for coupling a front element, a bottom element being moreover provided which is supported at the bottom edge portions of said section members.

BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a preferred, though not exclusive, embodiment of a modular-element drawer construction, which is illustrated, by way of an indicative, but not limitative, example, in the accompanying drawings, where:

Figure 1 is a schematic exploded perspective view illustrating the drawer construction according to the present invention;

Figure 2 illustrates a drawer construction according to the invention in an assembled condition;

Figure 3 is a cross sectional view illustrating the section member forming the sidewalls and the back-wall of the subject drawer construction;

Figure 4 illustrates, on an enlarged scale, a detail of the top end portion of a section member;

Figure 5 illustrates, on an enlarged scale, a detail of a bottom end portion of a section member;

Figures 6 and 7 are respectively a side view and a front view illustrating the rear angle joints;

Figure 8 is a cross-sectional view illustrating an angle joint as applied between the back-wall and a sidewall;

Figure 9 is an exploded perspective view illustrating an angle joint; and

Figure 10 illustrates the connection of an angle joint and a sidewall of the subject drawer construction.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the number references of the above mentioned figures, the modular-element drawer construction according to the present invention, which has been generally indicated by the reference number 1 comprises sidewalls 2 and a back-wall 3, the main feature of which is that they are made of an extruded aluminium section member, as clearly shown in figures 3 to 5.

The section member forming said sidewalls and back-wall of the drawer is provided with an outwardly bent top edge portion 10, forming the top edge of the drawer.

At a top portion thereof, on the inner side of the drawer, is provided a top ridge 11 allowing to apply inside the drawer several different fittings, such as, for example, knife holders, shelf elements, paper holders and so on.

At the bottom portion of the drawer a bottom band 12 is provided, for coupling the bottom 14 proper of the drawer construction.

The bottom band 12, in particular, is delimited by a fitting element 15, having a rounded top contour, which, by engaging with the drawer bottom, will facilitate the

cleaning thereof and will prevent soil from penetrating.

The top ridge portion 11 and the bottom fitting or connecting element 15 define, on the inner face of the section member, a seat for housing therein joint elements, as it will become more apparent hereinafter.

At the rear corners a rear angle joint, indicated by the reference number 20, is provided, said rear joint including perpendicular inner lugs 21 engaging in the region defined by the ridge 11 and fitting element 15, as well as rear abutment walls 22 defining the engaging region of the section members 2 and 3.

Moreover, a coupling tooth element 24 is provided, engaging in a milled slot 25 formed at the end portion of the back-wall of the drawer, so as to provide a snap type of connection.

The joint 20, in particular, is provided with a central body 26 joining the section members.

On the front are provided coupling brackets 30, which can be engaged in recessed portions 31, as provided at the end portions of the sidewalls 2 and which can be coupled by screws engaging in respective seats 32 defined on a respective pawl supported by the wing 33 of the bracket, and operating as a bearing element for the drawer front.

Sliding guides are moreover applied laterally, said guides including a fixed section member 40 which can be connected to the other section members at the region 12 and which, owing to their U-shape cross sections, will practically provide a tooth element 41 engaging in a milled slot 42 defined on the bottom 14 of the drawer.

The fixed section member 40 is slidably engaged in a guide section member 43, provided for connection to the walls of the furniture piece.

From the above disclosure it should be apparent that the invention fully achieves the intended aim and objects.

In particular, a drawer construction has been provided which can be made of extruded aluminium section members which can be easily and quickly connected to one another so as to provide a monolithic assembly with a very high finishing degree.

In practicing the invention, the used materials, though the best results have been achieved by using the mentioned aluminium section members, can be variously modified, without departing from the scope of the invention.

Claims

1. A modular-element drawer, characterized in that said drawer comprises sidewalls and a back-wall made of extruded aluminium section members, which are mutually coupled by rear angle joints, on the front of the sidewall section members being moreover provided brackets for coupling a front element, a bottom element being moreover provided which is supported at the bottom edge portions of said section members.

2. A drawer according to Claim 1, wherein said section members are provided with a cross outwardly upturned top edge.

3. A drawer according to Claim 1, wherein said section members are provided with a cross ridge provided on an inner face thereof for supporting thereon fitting elements and the like.

4. A drawer according to Claim 1, wherein said section members are provided, on an inner surface thereof, with a band for coupling said drawer bottom, said band being delimited at a top thereof by a fitting element.

5. A drawer according to Claim 1, wherein said rear angle joints are provided with inner lugs which can be engaged in a region defined between said ridge, fitting element and abutment walls which can be arranged outside of said section members.

6. A drawer according to Claim 1, wherein said angle joints are provided with a tooth element in an abutment wall thereof, for snap coupling with a hollow portion defined on the back-wall of the drawer.

7. A drawer according to Claim 1, wherein said brackets for coupling said front element are provided with an engagement pawl for engaging with a clamping screw of said bracket, at a recessed portion provided at a front end portion of each said sidewalls, said pawl being supported by a coupling wing of said front element.

8. A drawer according to Claim 1, wherein the sliding guide elements of said drawer comprise a fixed section member coupled to said bottom connecting band and engageable in a guide section member which can be connected to a wall of a furniture piece.

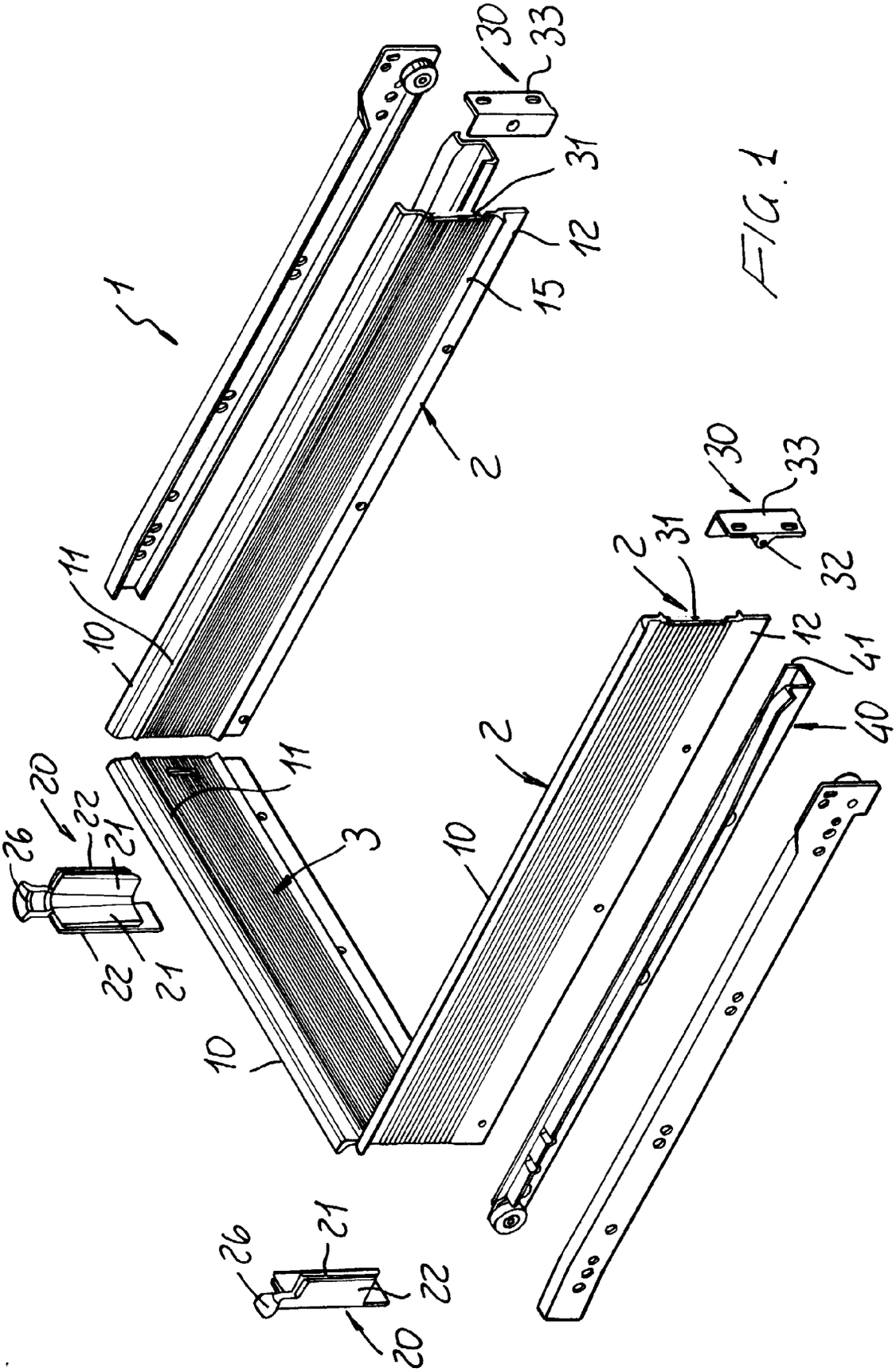

FIG. 1

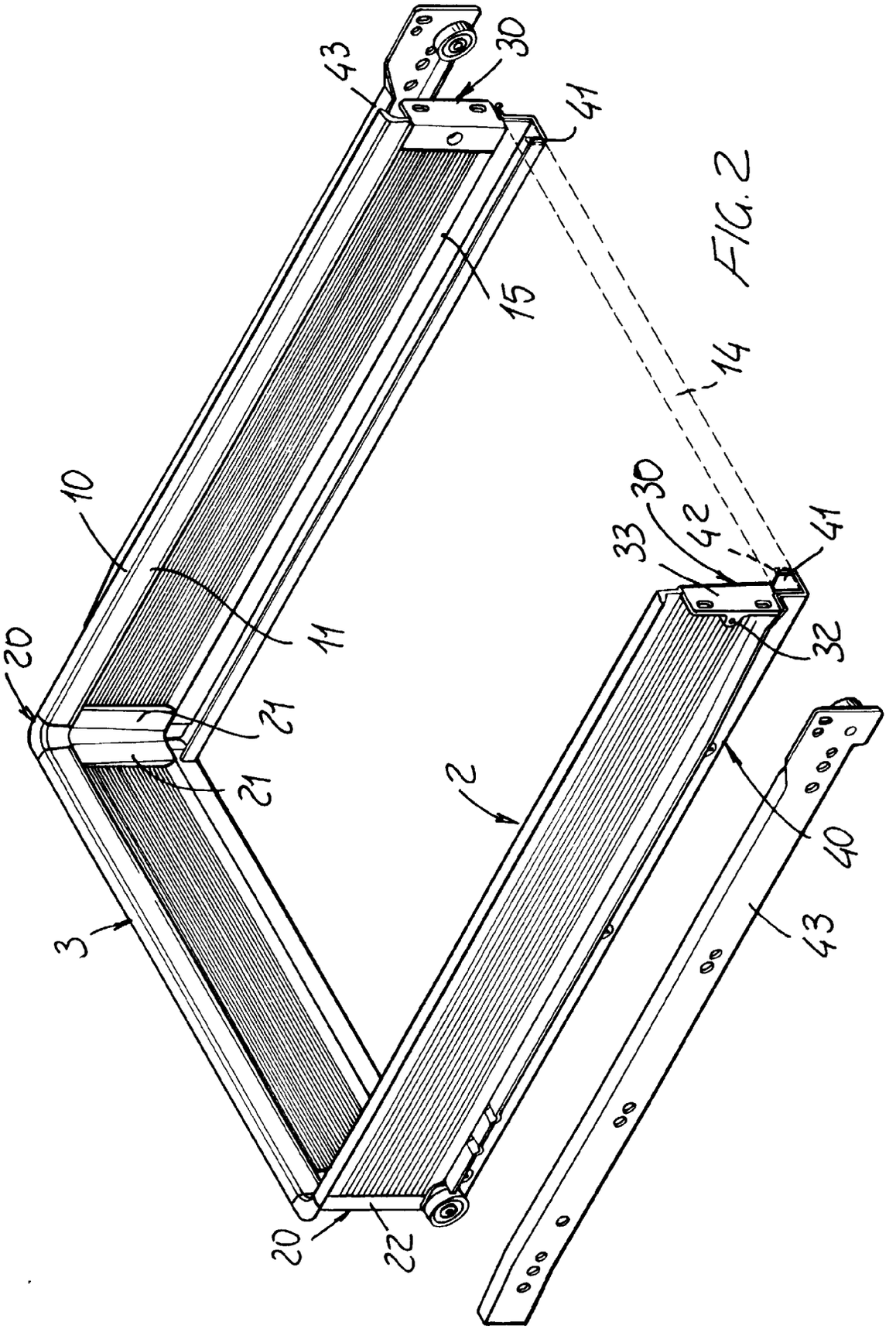

FIG. 2

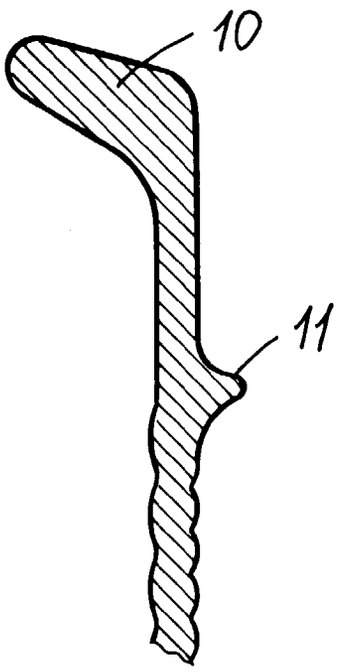

FIG. 4

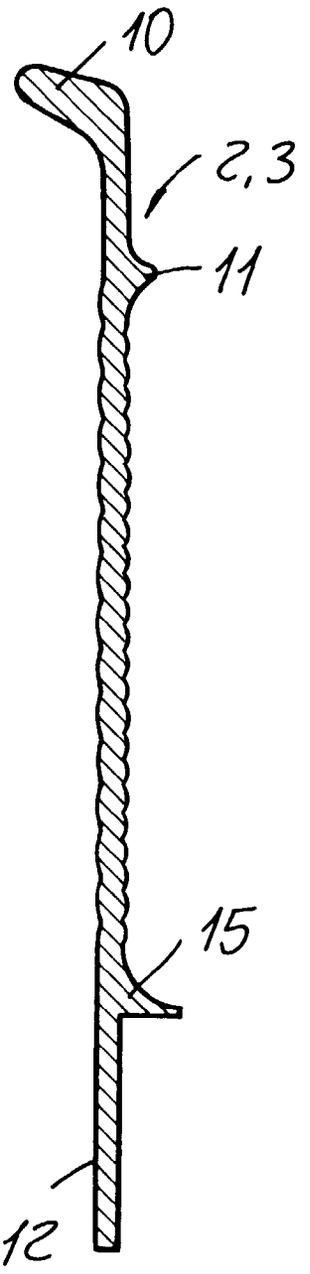

FIG. 3

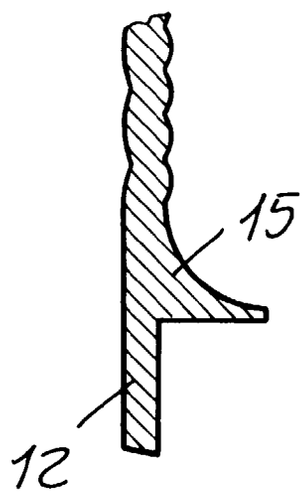

FIG. 5

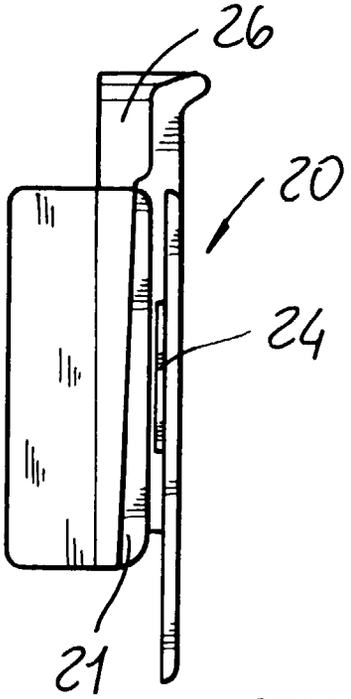

FIG. 6

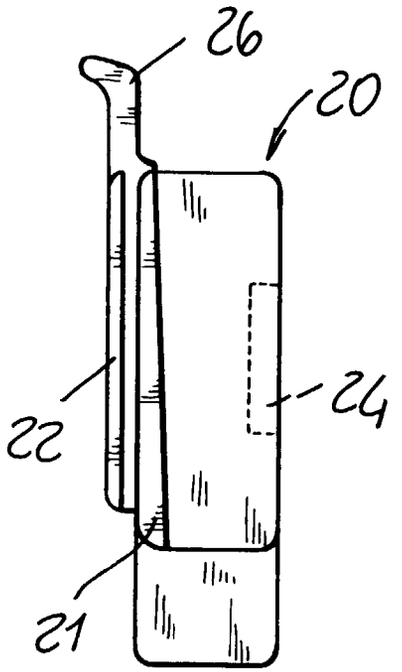

FIG. 7

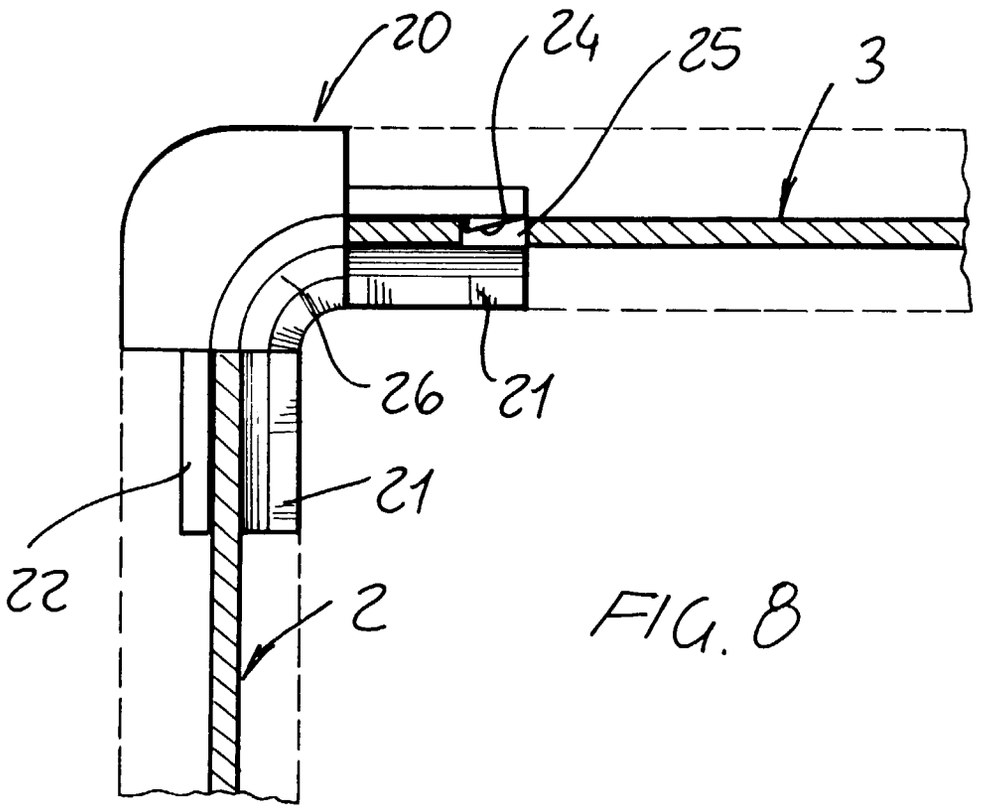

FIG. 8

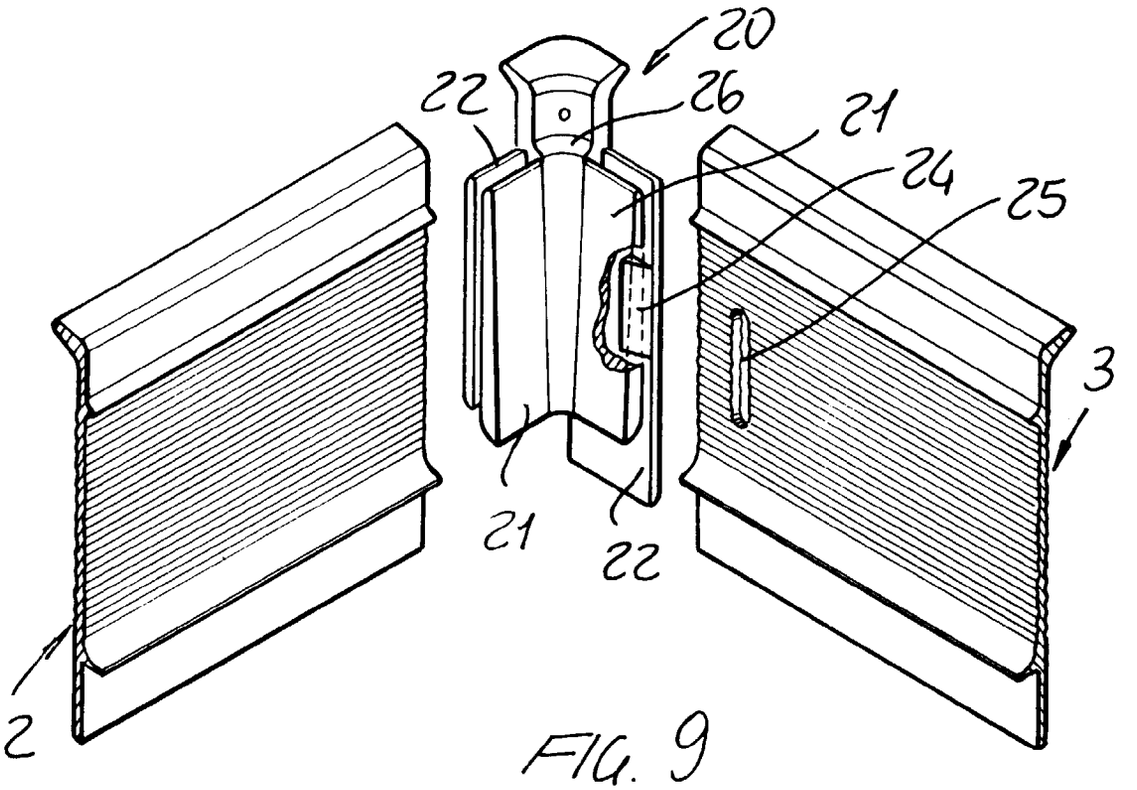

FIG. 9

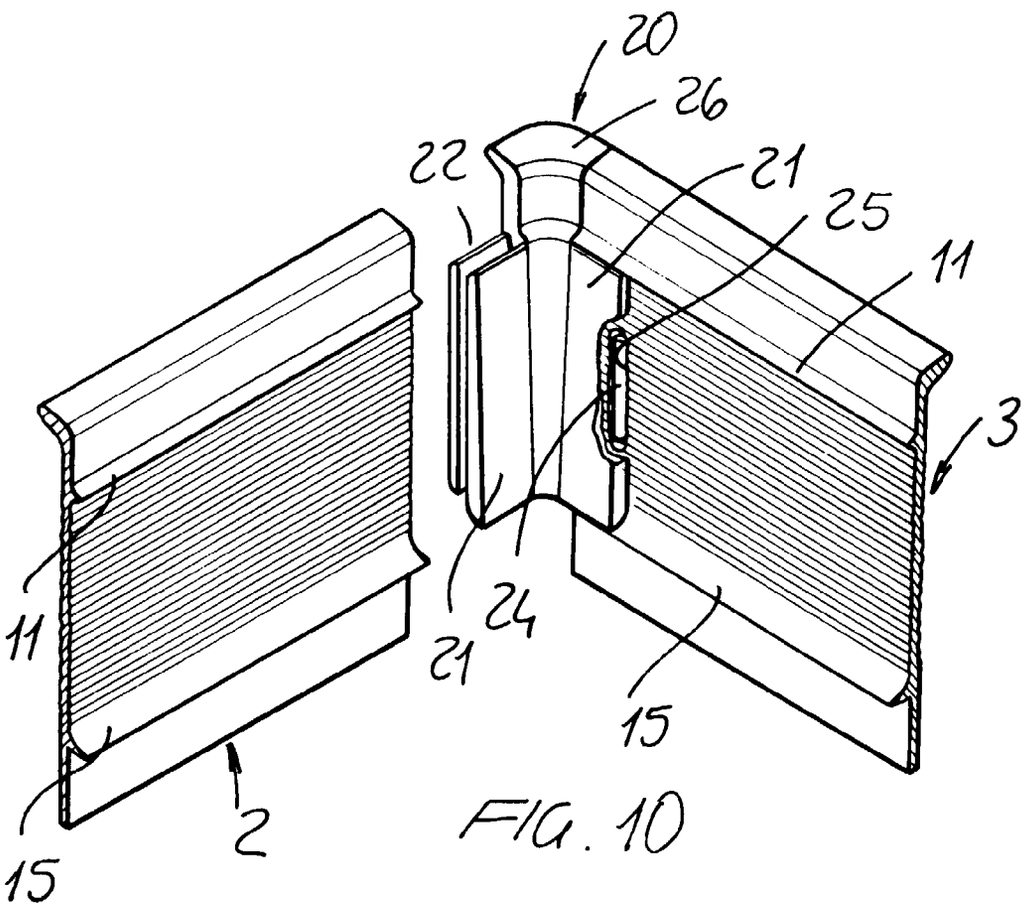

FIG. 10

European Patent Office

EUROPEAN SEARCH REPORT

Application Number EP 97830028.3

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. 6)
X	US - A - 5 181 772 (ALBIEZ) * Column 2, lines 52-65; column 3, lines 53-55; column 5, line 44 - column 7, line 25; fig. 3-6 *	1,2,4, 8	A 47 B 88/00
A	--	6	
X	EP - A - 0 425 447 (SISCO SISTEM S.A.S.) * Totality *	1	
A	--		
	US - A - 4 128 284 (KING) * Column 2, line 42 - column 4, line 3; fig. 1, 2,5 *	1,5,6	

TECHNICAL FIELDS SEARCHED (Int. Cl. 6)

A 47 B 88/00

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
VIENNA	06-05-1997	VELINSKY-HUBER

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

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