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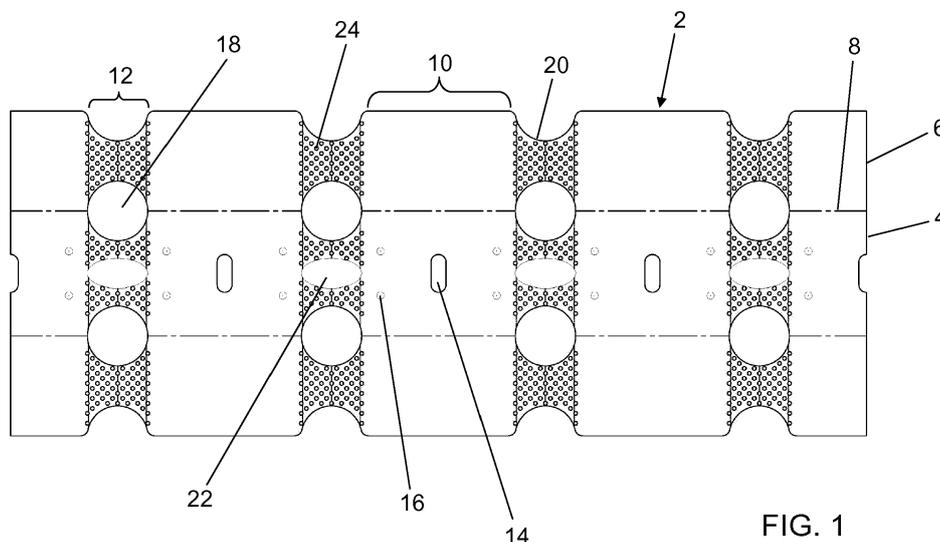
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 Amended claims in accordance with Rule 137(2) EPC.

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(54) **DEFORMABLE GUIDE FOR PARTITIONS IN GENERAL**

(57) Deformable guide for partition walls consisting of a strip of sheet metal punched carved formed by a central strip (4) and wings (6) bent in a U along fold lines (8), said guide having portions (10) alternating with portions (12) provided with apertures, characterized in that:  
 a) each portion (12) has:  
 - two holes (18,118) with an axis of symmetry place along the bending lines (8),  
 - the edges of the wings (4) provided with a semicircular seat (10.120) with diameter equal to the diameter of the

holes (10,118),  
 - a hole (22.122) disposed along the longitudinal axis of the guide,  
 - the remaining surface of the portion provided with a plurality of small holes (24), and  
 b) each portion (10) presents in correspondence of the central band (4) a hole (4,114) and four cusps (16) pointed facing outwards of the guide.



**FIG. 1**

**Description**

[0001] The present invention relates to a deformable guide for partitions in general.

[0002] Currently, to form dividing walls or furnishing walls, metal structures are used, to support panels of plaster board or other similar materials.

[0003] These structures, which are simple and quick to prepare, enable walls of particular or arched shapes to be formed.

[0004] In the case of arched walls, deformable guides are used consisting of a die-cut and bent profile.

[0005] In particular, sheet metal is die-cut and bent to U or C shape to form U-shaped segments joined together by three tabs, one on the base and two on the segment arms.

[0006] To use the tabs, these are bent towards the interior of the U-profile to form a series of elements joined together by portions of lesser area.

[0007] An object of the invention is to provide an improved deformable guide which facilitates fixing of the screws.

[0008] Another object of the invention is to provide a flexible guide which enables the guide to be adjusted during its installation.

[0009] These objects and others which will be apparent from the ensuing description are attained according to the invention by a deformable guide for partitions as described in claim 1.

[0010] The present invention is further clarified hereinafter in terms of a preferred embodiment and a modification thereof with reference to the accompanying drawings, in which:

Figure 1 shows a strip of die-cut sheet metal in plan view,

Figure 2 shows the guide according to the invention in perspective view ready to be deformed,

Figure 3 shows it in plan view,

Figure 4 shows it in lateral view,

Figure 5 shows it in front view,

Figure 6 shows a modified strip of die-cut sheet metal in plan view,

Figure 7 shows it in perspective view ready to be deformed.

Figure 8 shows it in front view.

[0011] As can be seen from the figures, the deformable guide according to the invention is formed from a die-cut sheet metal strip 2 bent to the shape of a U comprising a central strip 4 and two lateral arms 6 disposed perpendicular to the central band along bending lines 8.

[0012] The strip consists of transverse portions 10 alternating with portions 12.

[0013] In particular each portion 10 presents in the central strip 4 a slotted hole 14 with its major axis perpendicular to the longitudinal axis of the guide, and four raised cusps 16 facing outwards from the guide.

[0014] Each portion 12 presents:

- two circular holes 18 with their axis of symmetry positioned along the bending lines 8,
- in the edges of the arms 6, a semicircular seat 20 of diameter equal to the diameter of the holes 18,
- a slotted hole 22 disposed along the longitudinal axis of the guide,
- in the remaining surface of the portion 12, a plurality of small holes 24.

[0015] Once the guide has been formed, to curve it along its longitudinal axis the arms 6 of the portions 12 are pressed in opposing directions, whereas to arch the guide, the guide is pressed upwards on the central strip 4 of the portion 10.

[0016] When the guide has been shaped, initial resting against the structure is achieved by striking the pointed cusps 16 against the structure.

[0017] In the embodiment shown in Figures 6-8, the seats 120 are of semi-elliptical pattern, the holes 118 are of slotted shape, the hole 114 is a circular hole and the bending lines 8 are provided with longitudinal slotted holes 126 in the region of the portions 110.

[0018] From the foregoing it is apparent that the guide according to the invention presents a plurality of advantages, and in particular:

- easy centring both with respect to the floor and to the ceiling by virtue of the slots 14 and the holes 114,
- gripping to the floor and to the ceiling by virtue of the presence of the raised cusps 16,
- the ability to shape it as an arch in both directions (concave, convex),
- easy fixing by screws by virtue of the holes 24 distributed over a large surface,
- easy transportation by virtue of the guide rigidity, due to the ribs.

**Claims**

1. Deformable guide for partition walls consisting of a strip of sheet metal punched carved formed by a central strip (4) and wings (6) bent in a U along fold lines (8), said guide having portions (10) alternating with portions (12) provided with apertures, **characterized in that:**

a) each portion (12) has:

- two holes (18,118) with an axis of symmetry place along the bending lines (8),
- the edges of the wings (4) provided with a semicircular seat (10.120) with diameter equal to the diameter of the holes (10,118),
- a hole (22.122) disposed along the longitudinal axis of the guide,

- the remaining surface of the portion provided with a plurality of small holes (24), and
- b) each portion (10) presents in correspondence of the central band (4) a hole (4,114) and four cusps (16) pointed facing outwards of the guide.
2. Guide according to claim 1 **characterized in that** the holes are circular holes (18).
  3. Guide according to claim 1 **characterized in that** the holes are elliptical holes (118).
  4. Guide according to claim 1 **characterized in that** the hole which is arranged along the longitudinal axis of the guide is a slotted hole (14) with a major axis perpendicular to the longitudinal axis of the guide.
  5. Guide according to claim 1 **characterized in that** it further comprises longitudinal slotted holes (126) disposed along the fold lines.

**Amended claims in accordance with Rule 137(2) EPC.**

1. A deformable guide for partition walls consisting of a strip of sheet metal punched carved and bent in a **U-shape along fold lines (8), the U-shape is formed from** a central strip (4) and **two wings (6)**, said guide having **first** portions (10) alternating in **longitudinal direction of the guide with second** portions (12) provided with apertures, **characterized in that:**
  - a) each **second** portion (12) has:
    - two holes (18,118) with an axis of symmetry **of each hole (18,118) along each of the fold lines (8),**
    - the edges of the wings (4) provided with a semicircular seat (10.120) with diameter equal to the diameter of the **said two** holes (10,118),
    - a **further** hole (22.122) disposed along the longitudinal axis of the guide,
    - the remaining surface of the **second** portion (**12**) provided with a plurality of small holes (24), and
  - b) each **first** portion (10) presents in correspondence of the central **strip** (4) a hole (4,114) and **four cusps** (16) pointed facing outwards of the guide.
2. Guide according to claim 1 **characterized in that** the holes are circular holes (18).

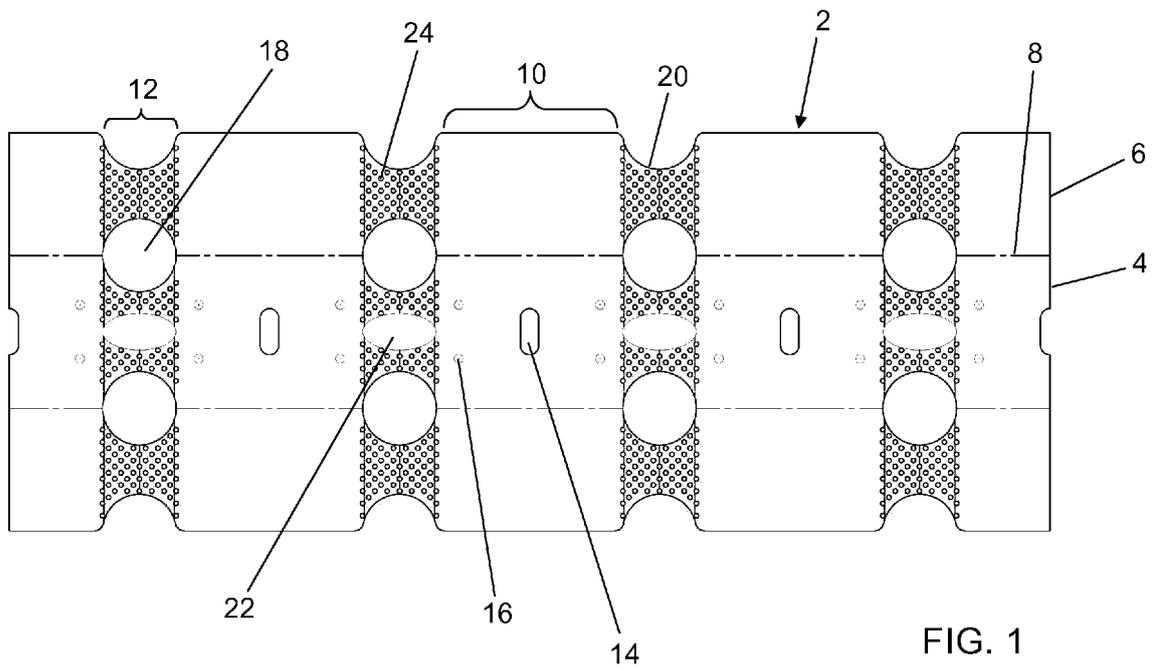
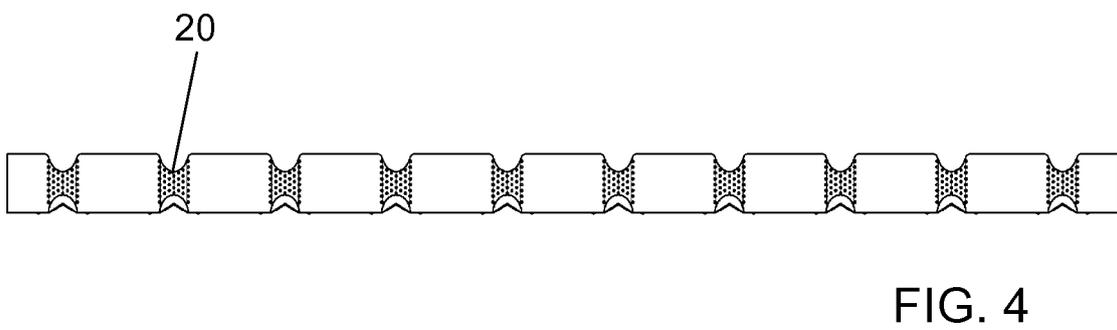
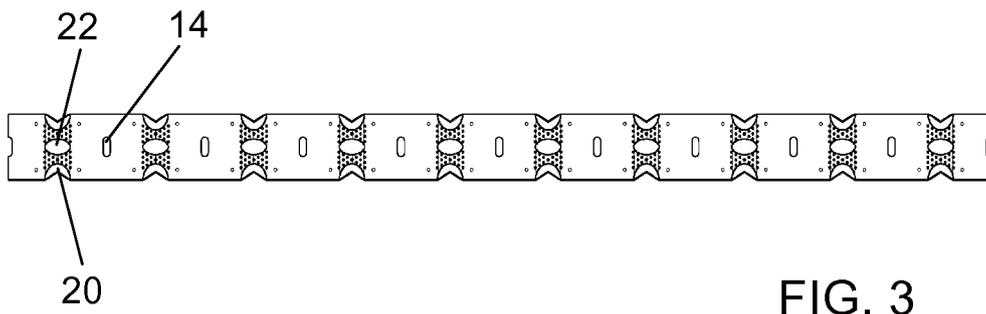
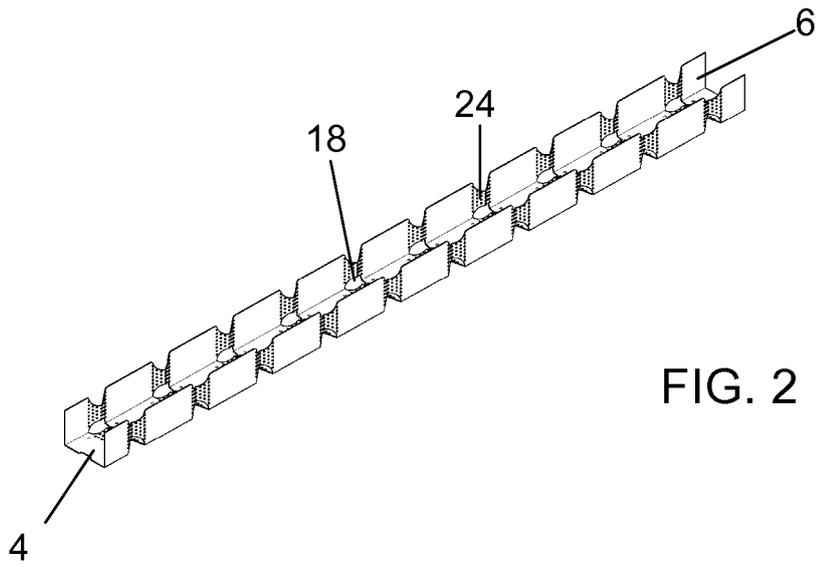
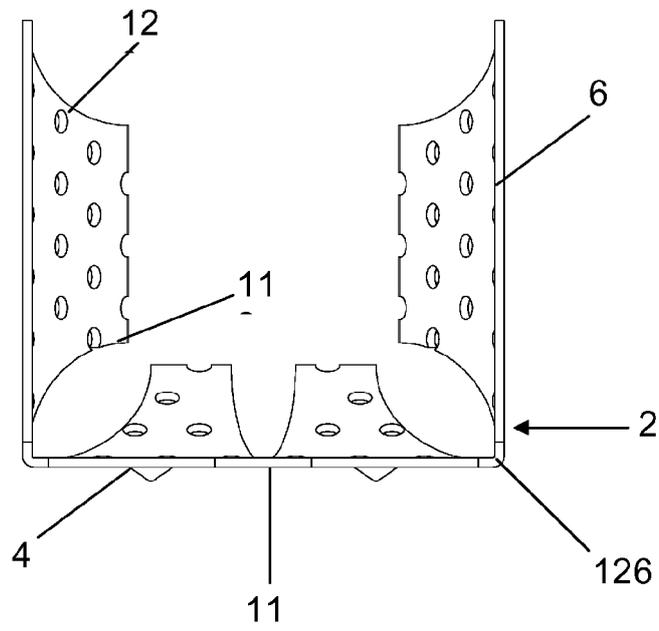
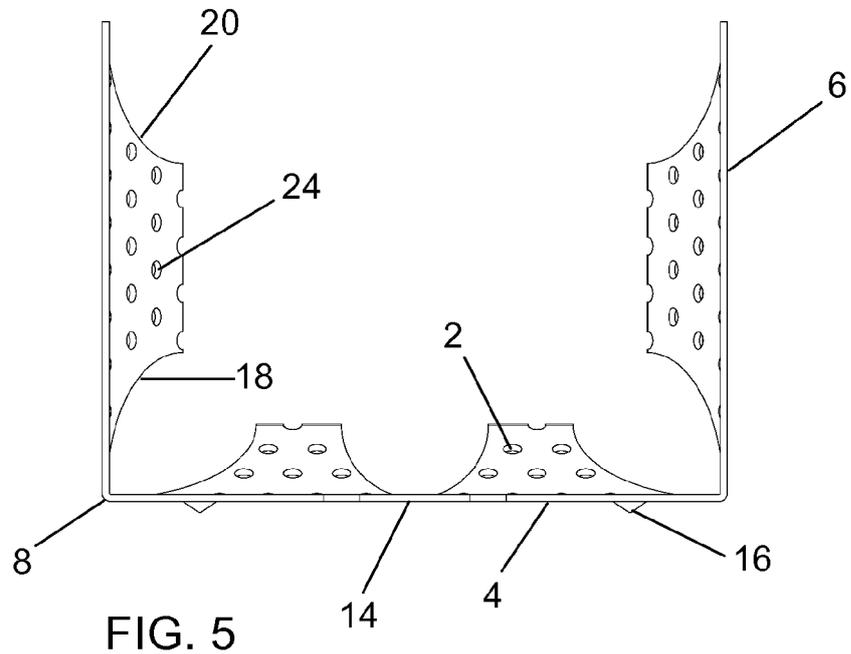
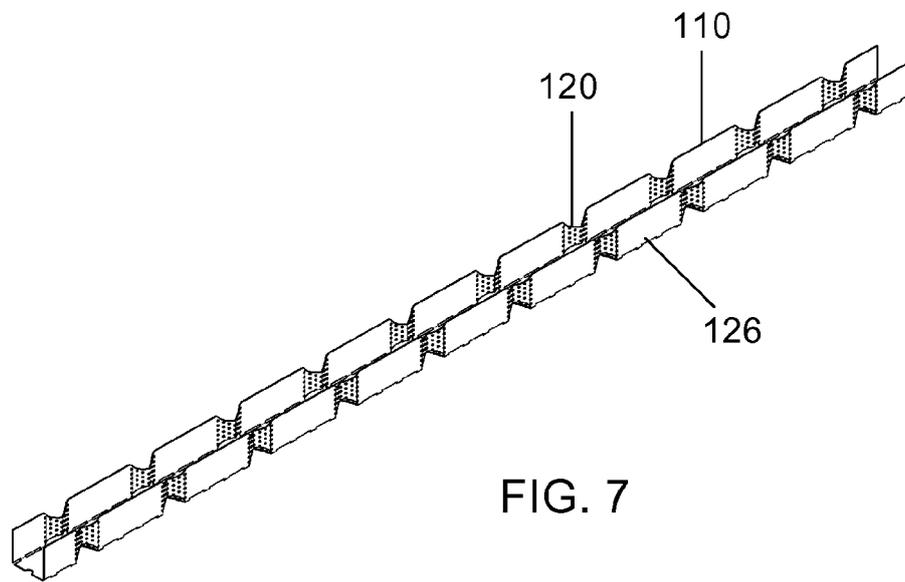
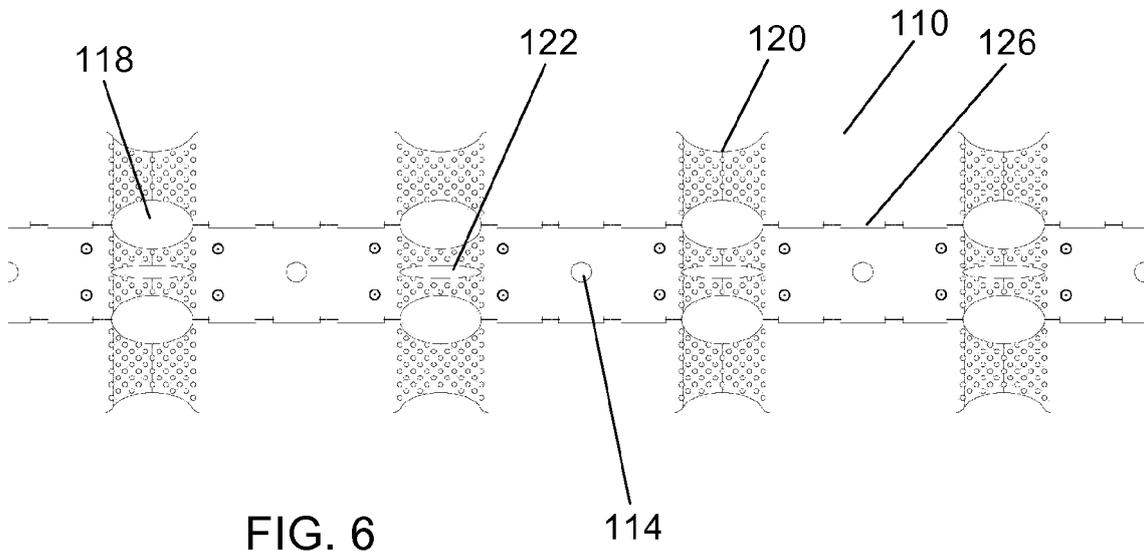


FIG. 1









EUROPEAN SEARCH REPORT

Application Number  
EP 15 18 5286

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	WO 2012/107803 A1 (CECCATO NICOLA [IT]) 16 August 2012 (2012-08-16) * page 1, line 3 - page 5, line 24; figures *	1-5	INV. E04B9/06 E04C3/00 E04B2/74 E04C3/04 E04F13/06
A	WO 2013/175272 A1 (CECCATO NICOLA [IT]) 28 November 2013 (2013-11-28) * page 1, line 4 - page 7, line 10; figures *	1-5	
A	NZ 506 567 A (RONDO BUILDING SERVICES LTD) 26 April 2002 (2002-04-26) * page 1, line 4 - page 4, line 8; figures *	1-5	
A	GB 2 350 850 A (BPB PLC [GB]) 13 December 2000 (2000-12-13) * page 2, line 25 - page 8, line 9; figures *	1-5	
			TECHNICAL FIELDS SEARCHED (IPC)
			E04F E04B E04C
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		20 October 2015	Dieterle, Sibille
CATEGORY OF CITED DOCUMENTS		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	
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		& : member of the same patent family, corresponding document	

1  
EPO FORM 1503 03.02 (P04C01)

ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.

EP 15 18 5286

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2012107803 A1	16-08-2012	CA 2826082 A1	16-08-2012
		CN 103348067 A	09-10-2013
		CO 6771433 A2	15-10-2013
		EP 2673426 A1	18-12-2013
		JP 2014508231 A	03-04-2014
		KR 20140056158 A	09-05-2014
		MA 34954 B1	01-03-2014
		RU 2013141450 A	20-03-2015
		US 2013305657 A1	21-11-2013
		WO 2012107803 A1	16-08-2012
-----			
WO 2013175272 A1	28-11-2013	EP 2855791 A1	08-04-2015
		WO 2013175272 A1	28-11-2013
-----			
NZ 506567 A	26-04-2002	NONE	
-----			
GB 2350850 A	13-12-2000	CA 2354493 A1	17-02-2002
		EP 1182304 A2	27-02-2002
		GB 2350850 A	13-12-2000
		HU 0103351 A2	28-08-2003
		US 2002043040 A1	18-04-2002
		ZA 200106765 A	25-02-2002
-----			

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82