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(54) **Post intended to be partially driven into the ground**

(57) Post (1) intended to be driven, at least partially, into the ground, whereby the post (1) has an H-shaped

cross-section (2) over its entire length (L), except for a limited part (3,5) of its ends (4,6) if desired.

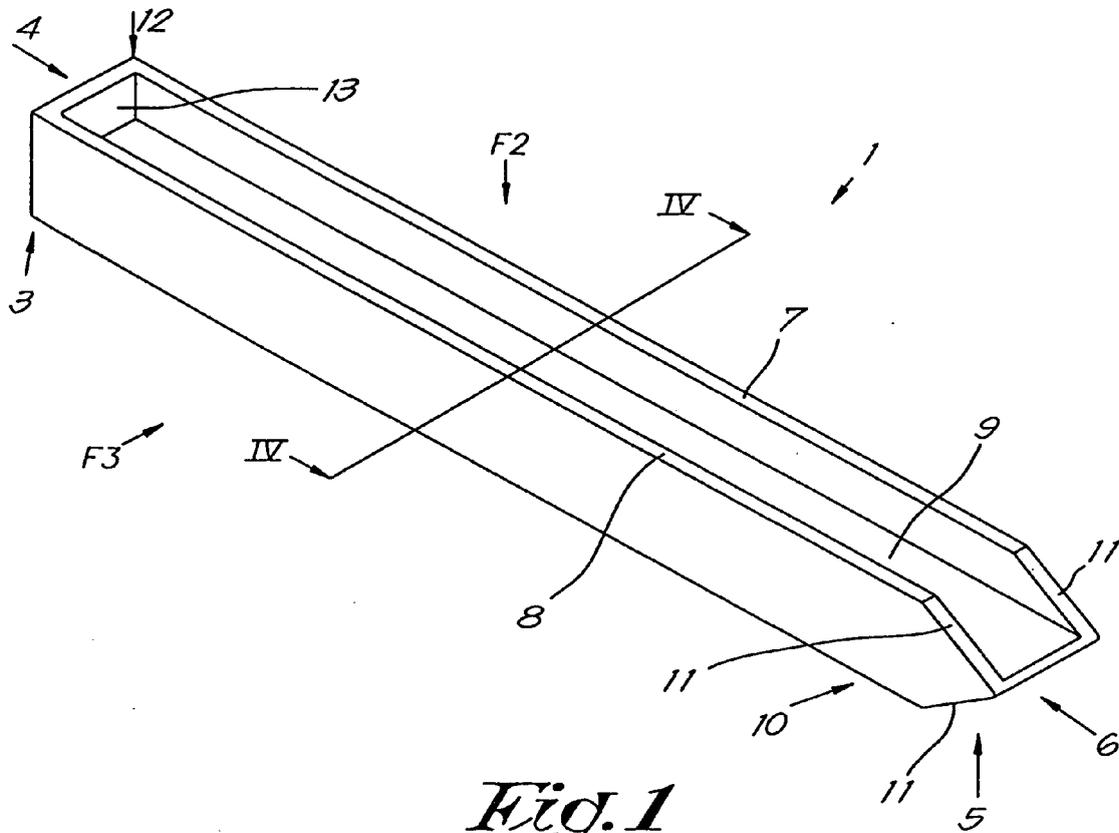


Fig. 1

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Description

[0001] The present invention relates to a post that is intended to be partially driven into the ground.

[0002] Such a post can, for example, be a post for constructing a fence, for example for a garden or a field or similar, borders for ponds or garden paths, to block a passageway, for example to obstruct car traffic, or similar.

[0003] There are of course already many types of posts of the aforementioned type.

[0004] A disadvantage of many of these known posts is that they are manufactured from a raw material that is very heavy, such as metal or concrete or similar, such that they are difficult to handle and the transport of them is cumbersome and expensive.

[0005] There are also known posts that are manufactured from a lighter material, typically from one or another plastic.

[0006] However, in order to give sufficient rigidity to such known posts of a lighter material, these posts are generally hollow, whereby the cross-section of these hollow posts is often such that the stacking of the posts is problematic and not compact, which also hampers the transport of such posts.

[0007] Moreover, such known hollow posts of a light material take up a relatively large amount of space, such that when transporting a number of such posts the required volume per weight unit is very large.

[0008] In this way the maximum capacity of the vehicles, such as lorries and similar, for transporting the posts is often not optimally utilised, as the load volume of such a vehicle is limited, while the maximum tonnage of the vehicle is generally much greater than the weight of the load volume of a vehicle loaded with such posts.

[0009] Another disadvantage of the known posts is that their shape is not suitable for being driven into the ground easily, so that the placement of such a post requires a lot of energy or force.

[0010] Another disadvantage of the known posts is that the materials from which they are manufactured are often difficult or impossible to recycle, and are also relatively expensive.

[0011] Moreover, the known posts usually have the disadvantage that they are not very suitable for reuse because they are difficult to clean, whereby for example earth typically accumulates in certain hollows of the post that is difficult to remove.

[0012] The purpose of the invention is to provide a solution to one or more of the aforementioned disadvantages and any other disadvantages.

[0013] To this end the invention concerns a post intended to be driven, at least partially, into the ground, and this post has an H-shaped cross-section over its entire length, except for a limited part at its ends if desired.

[0014] A first advantage of such a post according to the invention is that its H-shaped cross-section gives the post very great rigidity.

[0015] Another advantage of such a post according to the invention is that its H-shaped cross-section covers a limited surface area, so that a post with such a cross-section can be driven into the ground relatively easily and without having to apply too much force.

[0016] Moreover, as a result of the H-shaped cross-section, the posts can be stacked in an extremely compact way, as will be further demonstrated, whereby during the stacking of the posts large parts of the posts lie within the contours of the underlying and overlying posts.

[0017] Another advantage of such a post according to the invention with an H-shaped cross-section is that the post can cool down very quickly during manufacture, such that the manufacturing process can proceed very quickly.

[0018] A post according to the invention is also easy to clean and earth cannot easily adhere to such a post because of the H-shaped cross-section of the post.

[0019] According to a preferred embodiment of a post according to the invention, the H-shaped cross-section of the post is formed by two parallel flanges that are connected together by means of a transverse web, whereby at one end the post preferably has a point that is formed by the flanges of the post at that end being bevelled towards the web.

[0020] This preferred embodiment of a post according to the invention with a point has the advantage that the post can be easily positioned and driven into the ground even more easily.

[0021] Another preferred characteristic of a post according to the invention is that the post can be manufactured from recycled household plastic waste.

[0022] In this way a post according to this invention helps keep the waste mountain within limits, which of course is favourable for the environment.

[0023] Moreover the cost price of such a post according to this embodiment is kept very low and the weight of the post is very low.

[0024] With the intention of better showing the characteristics of the invention, a few preferred embodiments of a post according to the invention are described hereinafter by way of an example, without any limiting nature, with reference to the accompanying drawings, wherein:

figure 1 shows a perspective view of a post according to the invention;

figure 2 shows a top view of the post of figure 1 according to arrow F2;

figure 3 shows a side view of the post of figure 1 according to arrow F3;

figure 4 shows a cross-section through the post of figure 1 according to the line IV-IV;

figure 5 shows a perspective view of a number of posts according to figure 1 stacked in a number of layers;

figure 6 shows a cross-section through the stacked posts according to a plane indicated by line VI-VI in figure 5; and

figure 7, analogous to figure 5, shows a cross-section of a different embodiment of a post according to the invention;

figure 8, analogous to figure 6, shows a cross-section through the stacked posts according to figure 7.

[0025] The post 1 shown in figures 1 to 4 is intended to be driven into the ground, at least partially, for example in order to construct a fence or similar.

[0026] Preferably such a post 1 according to the invention is manufactured from recycled household plastic waste, such that waste is converted into a useful and usable product, and as such makes a contribution to limiting the environmental burden.

[0027] It is characteristic of a post 1 according to the invention that the post has an H-shaped cross-section 2 over its entire length L, as shown in figure 4, except for a limited part 3 at one end 4 and a limited part 5 at its other end 6.

[0028] It is clear that such a shape of the post 1 is favourable for its stability, and that due to the limited area of the H-shaped cross-section 2 such a post 1 according to the invention can easily be driven into the ground.

[0029] The H-shaped cross-section 2 of the post 1 is formed by two parallel flanges 7 and 8 that are connected together by means of a transverse web 9.

[0030] Preferably one end, in this case the end 6, of the post 1 according to the invention has a point 10 that is formed by the flanges 7 and 8 of the post 1 at that end 6 having a bevel 11 towards the web 9.

[0031] Such a bevel 11 is very practical for positioning a post 1 according to the invention on the ground and then driving the post 1 into this ground.

[0032] Another preferred embodiment of a post 1 according to the invention consists of the post 1 having a closed head 12 at one end, more specifically the end 4 opposite the foot 10, whereby at that end 4 there is a head plate 13 between the flanges 7 and 8, and this head plate 13 is affixed transversely to an end of the web 9.

[0033] Such an embodiment of a post 1 according to the invention has the advantage that the rigidity of the post 1 is improved, while the means for driving the post 1 into the ground increases as the head plate 13 can act as a support surface for driving the post 1 into this ground.

[0034] The flanges 7 and 8 have a height H, which in the case of figures 1 to 4 practically corresponds to the width B of the web 9 between the flanges 7 and 8.

[0035] Moreover, in the case of figures 1 to 4 the thickness of the flanges 7 and 8 is equal to the thickness d' of the web 9.

[0036] Moreover, in the embodiment shown in figures 1 to 4 the web 9 forms a plane of symmetry for the post 1, but this does not necessarily need to be the case according to the invention.

[0037] Figure 5 shows a quantity of posts 1, as described above, stacked on top of one another, and these posts are stacked in layers 14, 15 and 16.

[0038] Each layer of posts 14, 15 or 16 here is formed

by placing the posts 1 next to one another, with their flanges 7 and 8 fitted together.

[0039] Moreover the head 12 and the foot 10 of each post 1 of a layer 14, 15 or 16 are aligned with the head 12 and foot 10 of the adjacent posts 1.

[0040] The posts 1 of a layer 14, 15 or 16 are also oriented in the same direction, whereby all heads 12 and feet 10 of the posts 1 of a layer 14 to 16 are adjacent to one another.

[0041] Furthermore, according to the invention it is extremely useful to orient the posts 1 of successive layers of posts 14 and 15 in the reverse direction, so that a very compact stack is obtained.

[0042] Indeed, in this way it is possible for the flanges 7 and 8 of an overlying post 1 to lie in between the flanges 7 and 8 of the underlying posts 1.

[0043] As shown in more detail in figure 6, a post 1 of an overlying layer of posts 16 or 15 rests with its flanges 7 and 8 on the webs 9 of the underlying posts 1 of the underlying layer concerned, respectively layer 15 and layer 14.

[0044] Moreover, each post 1 of an overlying layer 15 or 16 rests with the middle of its web 9 on the adjacent flanges 7 and 8 of the two underlying posts 1.

[0045] The heads 12 of the posts 1 of an overlying layer 15 or 16 are hereby aligned with the feet 10 of the posts 1 of an underlying layer, respectively 14 and 15.

[0046] It is clear that in this way an extremely compact stack is obtained, which can be very clearly inferred from figure 6 for example.

[0047] Figures 7 and 8 show that the dimensions and positioning of the flanges 7 and 8 with respect to the web 9 of a post 1 according to the invention are not important to obtain stacks in such an efficient way, as long as the cross-section 2 of a post 1 is an H-shaped cross section 2.

[0048] More specifically a post 1 as shown in figure 7 has a web 9 that does not form a plane of symmetry between the flanges 7 and 8, so that from the web 10 the flanges 7 and 8 form long arms 17 and short arms 18.

[0049] Moreover, a post 1 according to the embodiment of figure 7 is constructed with a thickness d' that is greater than the thickness d of a flange 7 or 8.

[0050] Nevertheless, a compact stack of such posts 1 according to the embodiment of figure 7 can be obtained by alternately placing the posts 1 of successive layers 14 to 16 either with the long arms 17 of the flanges 7 or 8, or with the short arms 18 of the flanges 7 and 8 on the upper side.

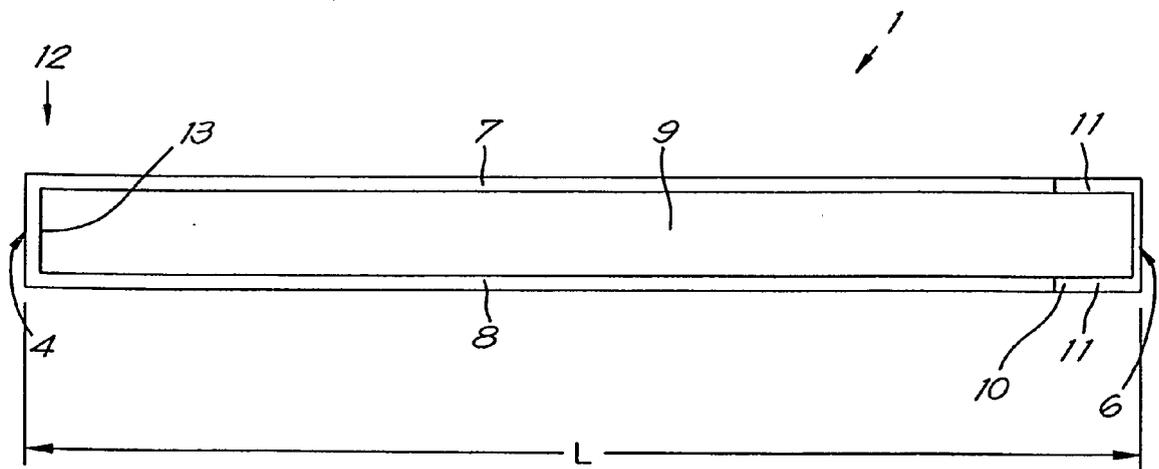
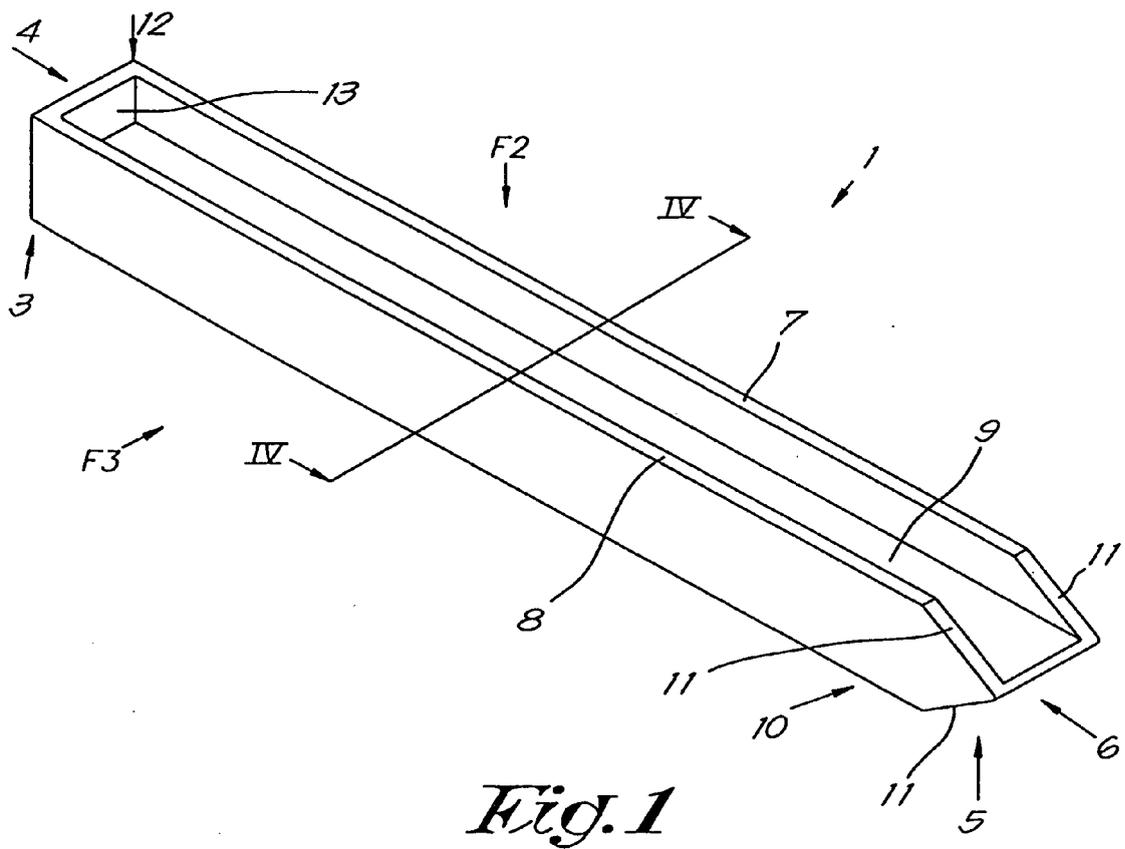
[0051] Of course a symmetrical construction provides the advantage that when stacking the posts 1 on each other, the orientation of the flanges does not need to be considered.

[0052] The present invention is by no means limited to the embodiments of a post 1 according to the invention described as an example and shown in the drawings, but a post 1 according to the invention can be realised in all kinds of variants, without departing from the scope of the invention.

Claims

1. Post (1) intended to be driven, at least partially, into the ground, **characterised in that** the post (1) has an H-shaped cross-section (2) over its entire length (L), except for a limited part (3,5) of its ends (4,6) if desired. 5
2. Post according to claim 1, **characterised in that** the H-shaped cross-section (2) of the post (1) is formed by two parallel flanges (7,8) that are connected together by means of a transverse web (9). 10
3. Post according to claim 2, **characterised in that** the post (1) has a point (10) at one end (6) that is formed by the flanges (7,8) of the post (1) at that end (6) having a bevel (11) towards the web (9). 15
4. Post according to claim 3, **characterised in that** the post (1) has a closed head (12) at one end (4) whereby a head plate (13) is provided at that end (4) between the flanges (7,8), transversely to an end of the web (9). 20
5. Post (1) according to one or more of the claims 2 to 4, **characterised in that** the thickness (d) of the flanges (7,8) and the thickness (d') of the web (9) are equal. 25
6. Post (1) according to one or more of the previous claims, **characterised in that** the post (1) is manufactured from recycled household plastic waste. 30
7. Quantity of posts (1) stacked on each other with the characteristics of all claims 1 to 6, **characterised in that** the posts (1) are stacked in layers (14-16), whereby each layer of posts (14-16) is formed by placing posts (1) next to one another with their flanges (7,8) fitted together, and whereby the head (12) and the foot (10) of each post (1) of the layer (14-16) are aligned together and oriented in the same direction, whereby the posts (1) of successive layers of posts (14-16) are oriented in the reverse direction and whereby a post (1) of an overlying layer of posts (15,16) rests with its flanges (7,8) in the middle of the web (9) of two underlying posts (1) and with its web (9) on the adjacent flanges (7,8) of the two underlying posts (1). 35
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8. Quantity of posts (1) according to claim 6, **characterised in that** the heads (12) of the posts 1 of an overlying layer (15,16) are aligned with the feet (10) of the posts (1) of an underlying layer (14,15). 50

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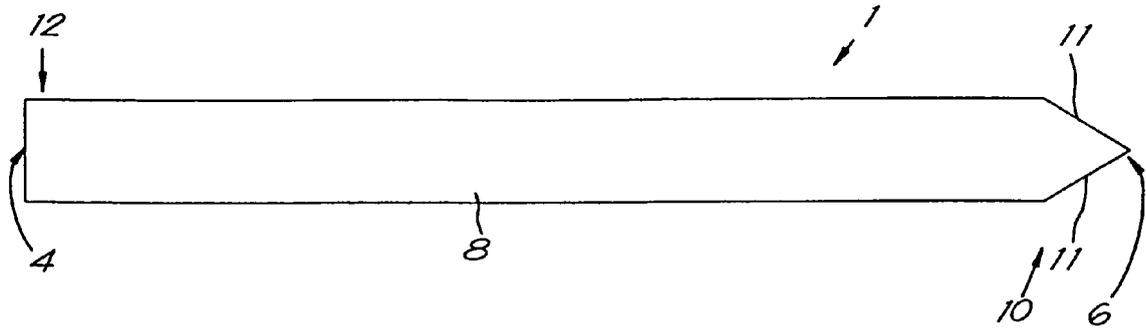


Fig. 3

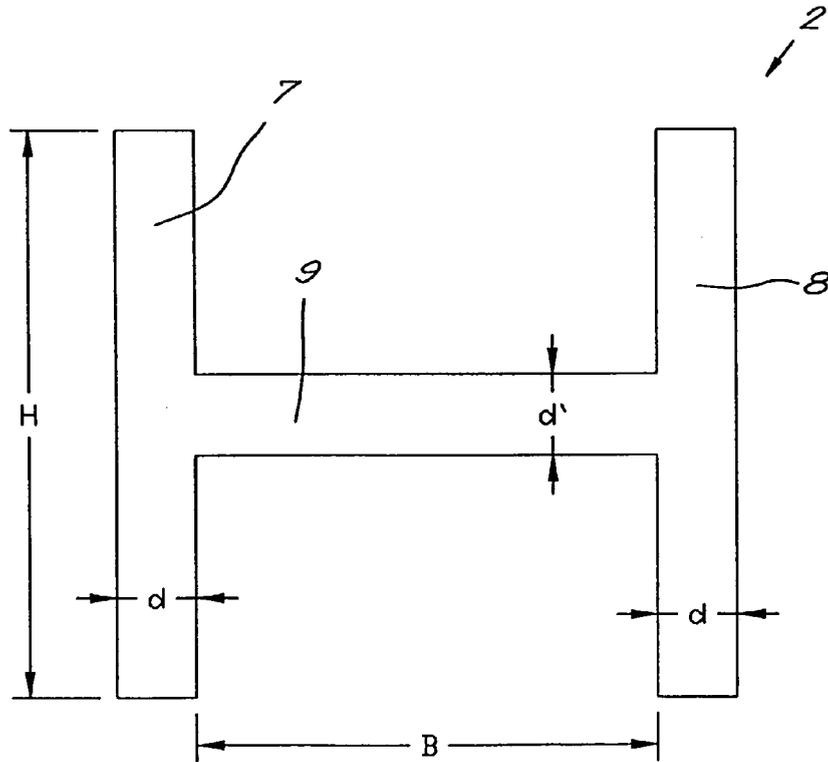


Fig. 4

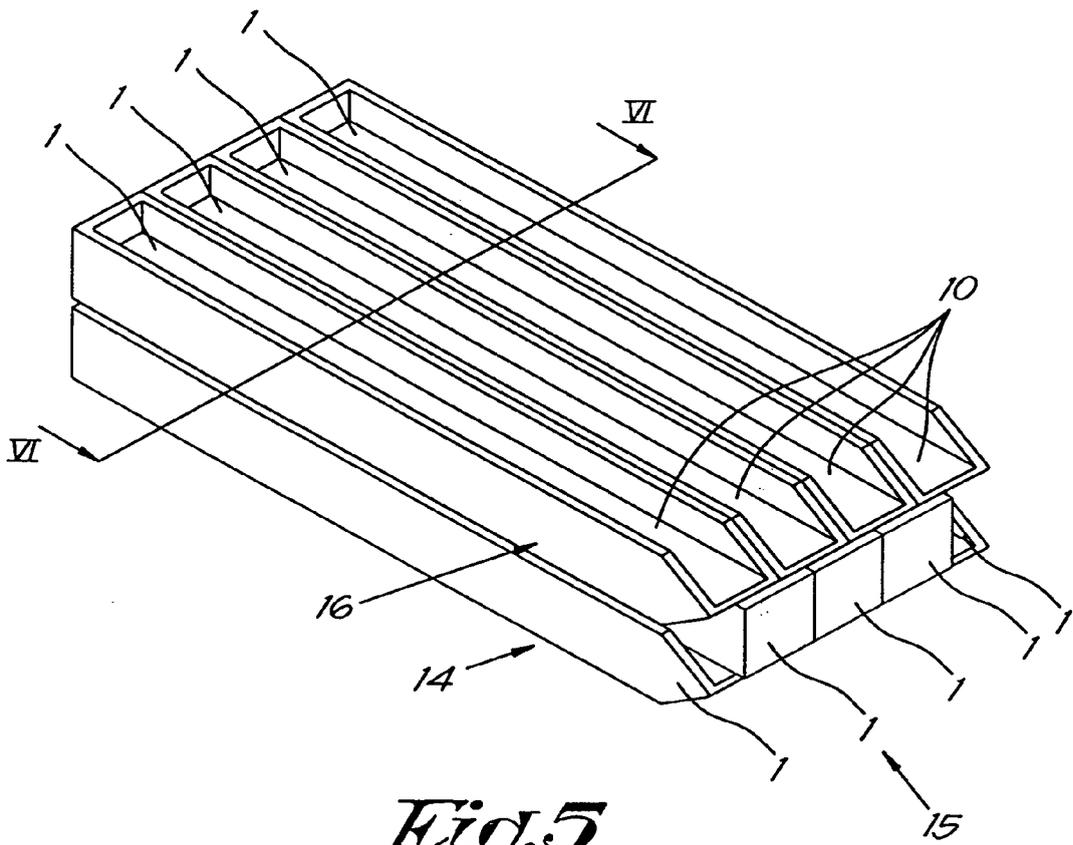


Fig.5

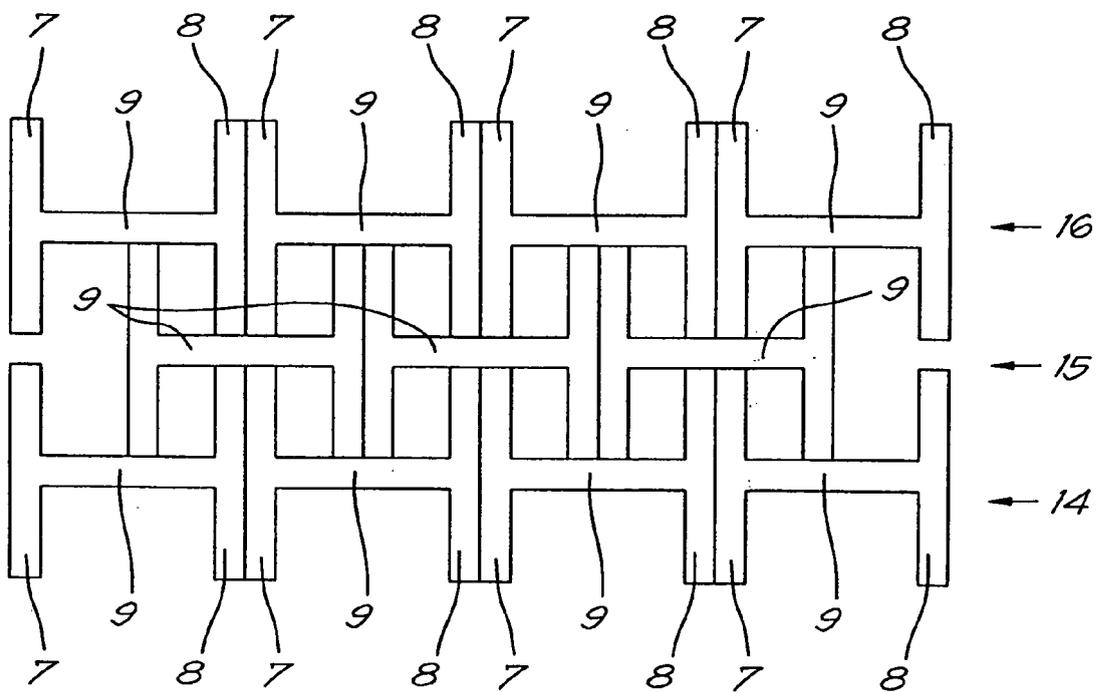


Fig.6

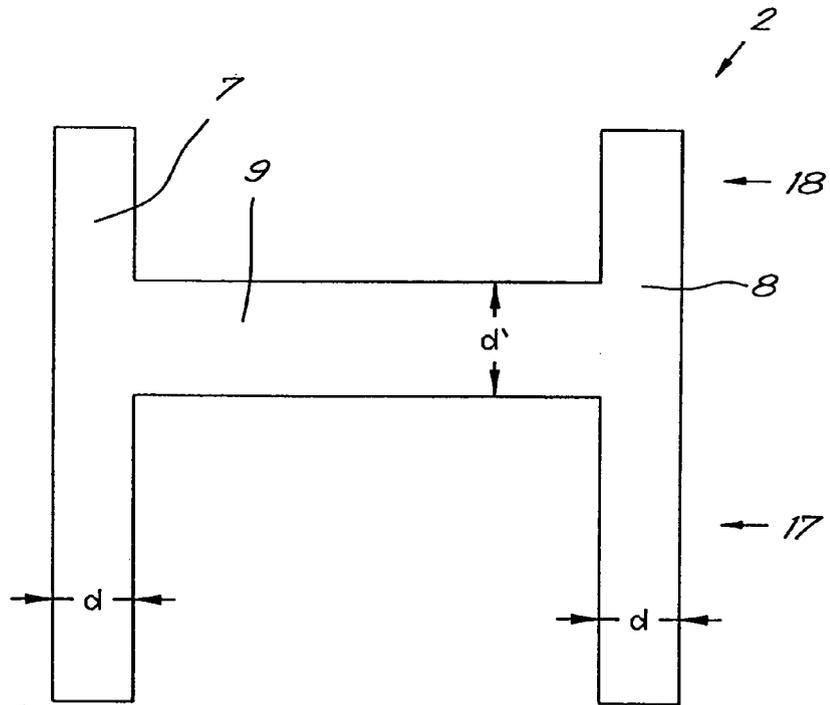


Fig. 7

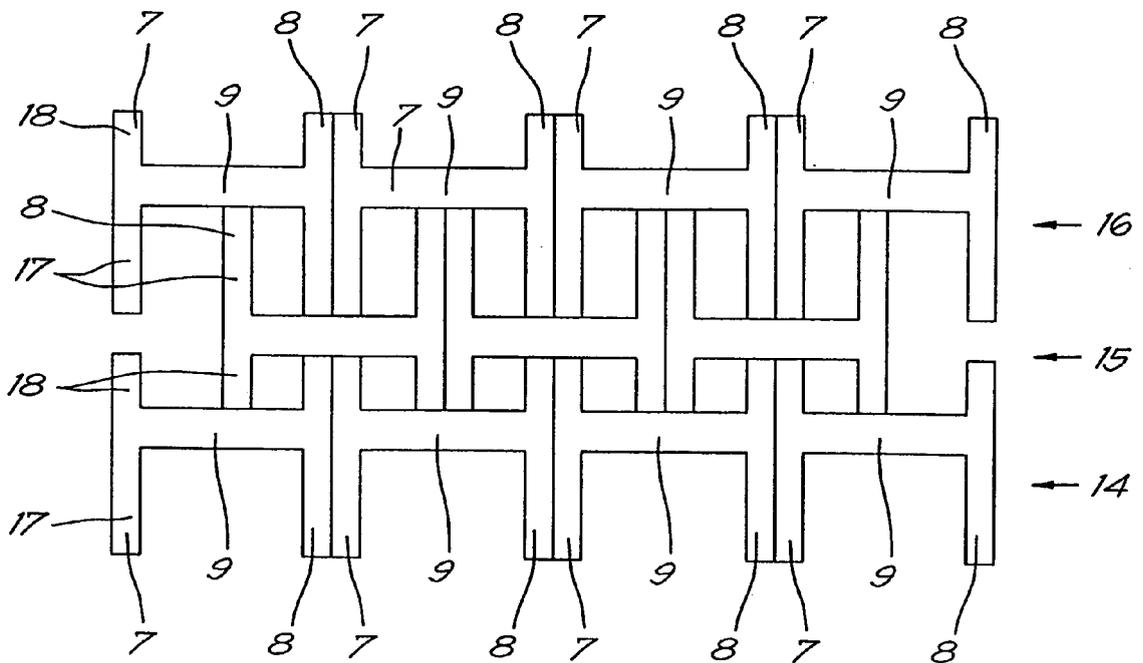


Fig. 8



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Application Number
EP 12 00 2920

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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		19 July 2012	Zuurveld, Gerben
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 & : member of the same patent family, corresponding document	
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82