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(54) A holder for a level-indicating line

(57) A blocklayer's level-indicating line holder (1) which can mounted spaced apart on building blocks or bricks (2) to support a level indicating line taut between them to facilitate the laying of a course of blocks (2). The holder (1) has two right angled arms (10) connected by a plate (20) forming a bridging piece. The level-indicating line is wrapped round a bollard (13), into a slot (4) and then jammed into a groove (16) in an upright (11) forming part of the right angled arm 10.

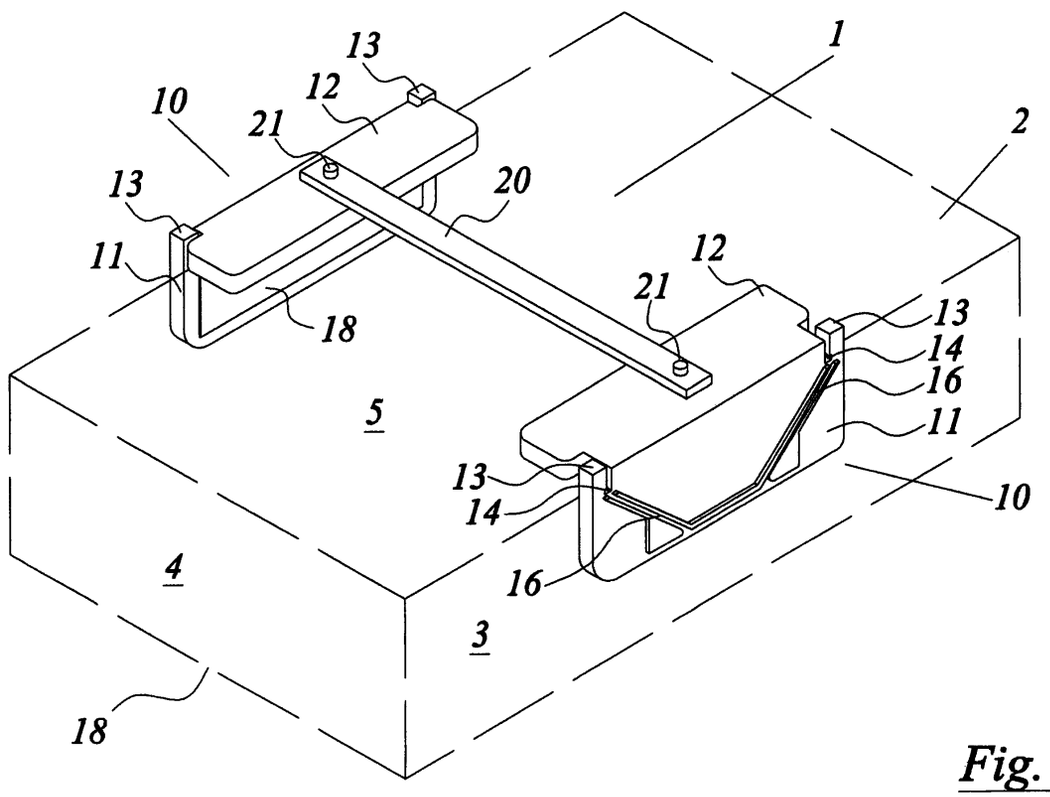

Fig. 1

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Description

Introduction

[0001] The invention relates to a blocklayer's level-indicating line holder for engagement with a building block to hold the line taut between itself and another holder engaging another block, the blocks having side and end upright faces and top and bottom faces therebetween. Such a level-indication line is used for laying a course of building blocks.

[0002] In this specification the terms building blocks and bricks are used synonymously and are deemed to encompass all types of building blocks, bricks and the like units.

[0003] When laying a course of blocks, to form the wall of a building for example, a bricklayer generally indicates the correct level for the course by laying end blocks and by supporting a level-indicating line between the end blocks to indicate the correct level for the blocks to be laid between the end blocks. Commonly the bricklayer winds the level-indicating line a number of times around one end block and then leads it to the other end block and winds it around the second end block tying it off. The level-indicating line is then positioned adjacent an upper side edge of the end blocks at an appropriate tension to give the required line. This method of supporting a level-indicating line is time consuming to set up and the bricklayer may have difficulties in correctly setting the line to the required level. Furthermore, in pulling the line taut the end blocks can be pulled out of position.

Statements of Invention

[0004] According to the invention there is provided a blocklayer's level-indicating line holder for engagement with a building block to hold the line taut between itself and another holder engaging another block, the blocks having side and end upright faces and top and bottom faces therebetween, characterised in that the holder comprises:

a pair of block upright face engaging arms;

a bridging piece interconnecting with the arms to lie across the top face of the block; and

line anchorage means on each member.

[0005] This is a very simple construction and overcomes the problems of having to wind line around blocks and the attendant difficulties in alignment.

[0006] Ideally, each holding arm is a substantially flat plate, this is by far the simplest construction and the holder will embrace for example two opposite upright faces or two adjacent faces of a block for anchorage.

[0007] Alternatively, the arms are of substantially right-angled configuration to embrace the top and an upright face of a block. The advantages of this is obvious since once the top face of the block has been embraced then if the line is correctly positioned on the arm the level-indicating line will be at the correct height relative to the course of blocks.

[0008] Ideally, portion of the arm engaging an upright face incorporates a resilient pad. This allows a certain amount of accommodation for varying thicknesses of block and irregularities in surface finish and also will ensure that if the arms are a force fit over the blocks that the resilient pad will secure the arm in position. Such a pad is ideally of a foamed plastics material.

[0009] Preferably at least one arm is pivotally mounted on the bridging piece. This pivotal movement is particularly advantageous when the holder is used to engage to an end face and a side face. Also by pivotally mounting one arm relative to the other it is possible to use a certain amount of the pivotal movement to jam the arms on to the block in a force-fit manner.

[0010] Ideally, the bridging piece is resilient to allow limited pivotal movement thereon of the arms. The advantage of this is that the two arms can be bent outwards away from each other on offering up to the top face of the block and then released so that the arms to engage pivotal downwards onto the upright faces, clamping the holder on to the block.

[0011] Ideally, the bridging pieces have adjustment means to vary the spacing between the arms and one particular advantageous way of doing this is by providing an elongate slot housing a treaded spud carrying an arm and a nut for securement of the arm on the bridging piece. By having the arms movable towards and away from each other it is possible to clamp the holder securely on a block..

[0012] In one embodiment the line anchorage means comprises an upstanding bollard mounted on the arm. This is a particularly suitable way of securing the level-indicating line as it allows the line to be wrapped tightly around it.

[0013] Ideally the bottom of the bollard is substantially co-planar, in use, with the top face of the block and may incorporate a cut out slot of the bottom of it to secure the line on the bollard, such a slot can for example be of a Vee shape so as to wedge the line thereon.

[0014] In another embodiment of the invention the bottom of the bollard connects to a line engaging groove on an exterior face of the block which line engaging groove may incorporate line engaging barbs, thus the line can be led from the bottom of the bollard through the groove and securely mounted.

[0015] Ideally, such a groove is inclined downwards and away from the bollard to keep the line free.

[0016] In another embodiment of the invention the uprights may incorporate extension pieces in the form of plates. These extension pieces may project laterally from the top limbs or indeed vertically from the uprights. Thus enabling better anchorage especially when the

two upright face engaging right angled arms are positioned vertically in succession one on top of the other, so that both upright face engaging right angled arms engage the end upright face of a building block. This is particularly suitable for securing a levelling line to, for example, coin blocks.

Detailed Description of the Invention

[0017] The invention will be more clearly understood from the following description and sub embodiments thereof given by way of example only, with reference to the accompanying drawings, in which:

Fig. 1 is a perspective view of a holder mounted on a building block according to the invention,

Fig. 2 is a side view of the holder,

Fig. 3 is a side view of the holder mounting a level-indicating line,

Fig. 4 is a plan view of the holder of the Figs.1-3 in use,

Fig. 5 is a plan view of an alternative way of using the holder of Figs.1-3,

Fig. 6 is a perspective view of an alternative construction of holder, and

Fig. 7 is a perspective view of the holder of Fig. 6 mounted on a building block in an alternative way.

[0018] Referring to the drawings an initially to Figs. 1-5 thereof there is provided a bricklayer's level-indicating line holder, indicated generally by the reference numeral 1, shown in Fig. 1 mounted on a building block indicated generally by the reference numeral 2 by interrupted lines. The building block 2 is only shown in outline. The building block 2 has side upright faces 3 end upright faces 4 and top and bottom faces 5 and 6 respectively. The holder 1 comprises a pair of block upright face engaging right angled arms 10 formed from an upright 11 and a top limb 12. The upright 11 is cut away at each end to form a pair of bollards 13 each of which is cut away adjacent its bottom to form a line receiving slot 14. The bollards 13 project above the top limb 12. Two spaced apart projections 15 on the exterior face of the upright 11 form grooves 16 leading downwardly and away from each slot 14. The grooves 16 incorporate line engaging barbs 17. On the interior of each upright 11 is mounted a pad 18 of foamed plastics material.

[0019] Two right angled arms 10 are connected together by a bridging piece formed by a flat plate 20 pivotally mounted by pins 21 at each extremity on a top limb 12 of a right angled arm 10.

[0020] In use, a holder 1 is placed over a block 2 as illustrated in Fig. 1 and Fig. 4. A level-indicating line identified by the reference numeral 25 is led behind the bollard 13 into the slot 14 and down the groove 16 engaging the barb 17 as is dearly shown in Fig. 3.

[0021] Referring now to Fig. 4 where individual blocks are identified by letters (a) to (b), the line is then shown laid in Fig. 4 between holders on blocks 20(a) and 20(b) and against blocks 20(c) and 20 (e) Firstly the blocks 20 (a) and 20 (b) are laid up and holders 1 mounted on the blocks 20(a) and 20(b) and the level-indicating line 25 strung taut there between. Then the blocks 20 (c), 20 (d) and 20(e) are laid and grouted in position as is conventional.

[0022] Referring to Fig. 5 the holders 1 are illustrated pivoted about the bar 20 so as to engage an end face 4 of each block 20 (a) and 20 (b) as well as a side face 3. This will be particularly advantageous in that it will be possible to pull the level-indicating line 25 very taut.

[0023] Referring to Fig. 6, where is illustrated an alternative construction of bricklayers level-indicating line holder indicated generally by the reference numeral 30 having a pair of arms 31 formed by substantially flat plates again having bollards 32. In this case the bollards 32 communicate via a slot 33 with Vee shaped grooves 34 in an exterior face of the arm 31. The Vee shaped grooves will be such as to grip a level-indicating line when pulled therein. In this embodiment there is provided a bridging piece formed by a flat plate 35 rigidly connected to an arm 31 and to the other arm 31 by an upright threaded bolt 36 engaging an elongated closed slot 37 in the plate 35 and secured thereto by a wing nut 39. Extension pieces in the form of plates 40 and 41 are affixed to the bottom edge of the arms 31 positioned undemeath the vee shaped grooves 34.

[0024] In this embodiment it will be appreciated that the arms 31 can be moved towards and away from each other to grip the blocks 20 securely therebetween and that they can be pivot relative to each other.

[0025] This latter holder 30 is not be any means the simplest construction of holder since it is envisaged that a holder made totally from a plastics material which will obviously be the preferred material for example the arms, may be constructed so as to be sufficiently resilient to bend about the bridging piece to allow the arms whether they be right angled arms or simply arms manufactured from a flat sheet of material to engage on a block. It is envisaged that in this later embodiment the holder would be effectively a U shaped body with flat end portions. It is also envisaged that some other adjustment means may be used such as a screw mechanism for forming the bridging piece.

[0026] It will be appreciated that the dimensions of the bollard and of the arms can be so chosen as to ensure that the level-indicating line is always held at the correct height to give the best alignment of blocks for the bricklayer.

[0027] In the specification the terms "comprise, com-

prises, comprised and comprising" or any variation thereof and the terms "indude, indudes, induded and induding" or any variation thereof are considered to be totally interchangeable and they should all be afforded the widest possible interpretation and vice versa.

[0028] The invention is not limited to the embodiments hereinbefore described, but may be varied in both construction and detail within the scope of the claims.

Claims

1. A blocklayer's level-indicating line holder for engagement with a building block to hold the line taut between itself and another holder engaging another block, the blocks having side and end upright faces and top and bottom faces therebetween, characterised in that the holder (1) comprises:

   a pair of block upright face engaging arms (10);

   a bridging piece (20) interconnecting with the arms (10) to lie across the top face (5) of the block (2); and

   line anchorage means on each member.

2. A holder as claimed in claim 1 in which each arm is a substantially flat plate (31).

3. A holder as claimed in claim 1 in which the arms (10) are of substantially right-angled configuration to embrace the top (5) and an upright face (3,4) of a block (2).

4. A holder as claimed in any preceding claim in which portion of the arm (10)
   engaging an upright face (3,4) incorporates a resilient pad (18).

5. A holder as claimed in claim 4 in which the pad (18) is of a foamed plastics material.

6. A holder as claimed in any preceding claim in which at least one arm (10) is pivotally mounted on the bridging piece (20).

7. A holder as claimed in any preceding claim in which the bridging piece is resilient to allow limited pivotal movement thereon of the arms.

8. A holder as claimed in any preceding claim in which the bridging piece (35) has adjustment means to vary the spacing between the arms.

9. A holder as claimed in claim 8 in which the bridging piece (35) has an elongate slot (38) housing a threaded spud (37) carrying an arm (31) and a nut (39) for securement of the arm (31) on the bridging piece (35).

10. A holder as claimed in any preceding claim in which the line anchorage means comprises an upright bollard (13) mounted on the arm (10).

11. A holder as claimed in claim 10 in which the bottom of the bollard (13) is substantially co-planar, in use with the top face (5) of the block (2).

12. A holder as claimed in claim 10 or 11 in which there is a cut-out slot (14) at the bottom of the bollard (13) to secure a line on the bollard (13).

13. A holder as claimed in any of claims 10 to 12 in which the bottom of the bollard (13) connects to a line engaging groove (16) on an exterior face of the arm (10).

14. A holder as claimed in claim 13 in which the groove (16) includes line engaging barbs (17).

15. A holder as claimed in claim 13 or 14 in which the groove (34) is of substantially Vee shape in cross section.

16. A holder as claimed in claim 13 or 14 in which the groove (16) is included downwards and away from the bottom of the bollard.

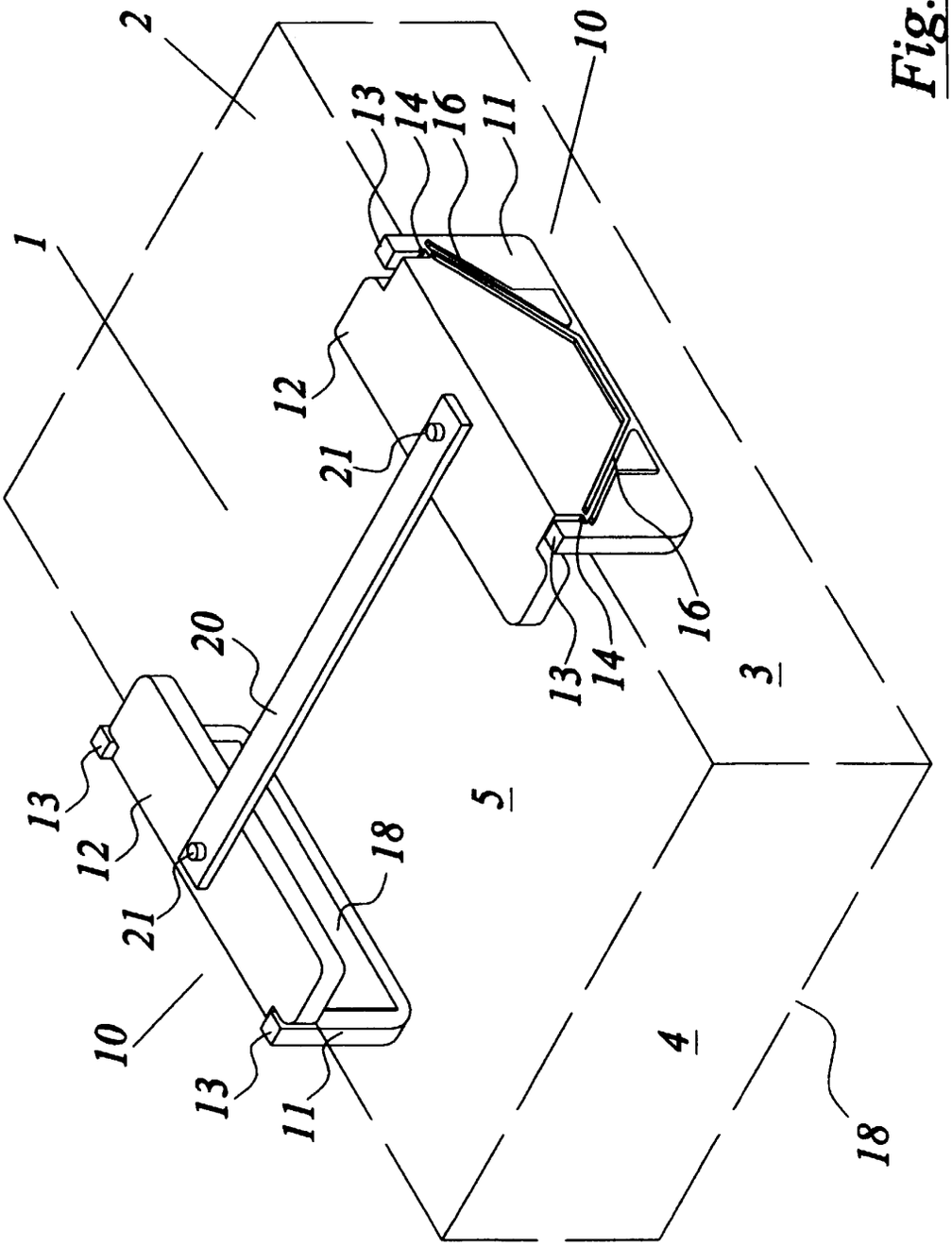

Fig. 1

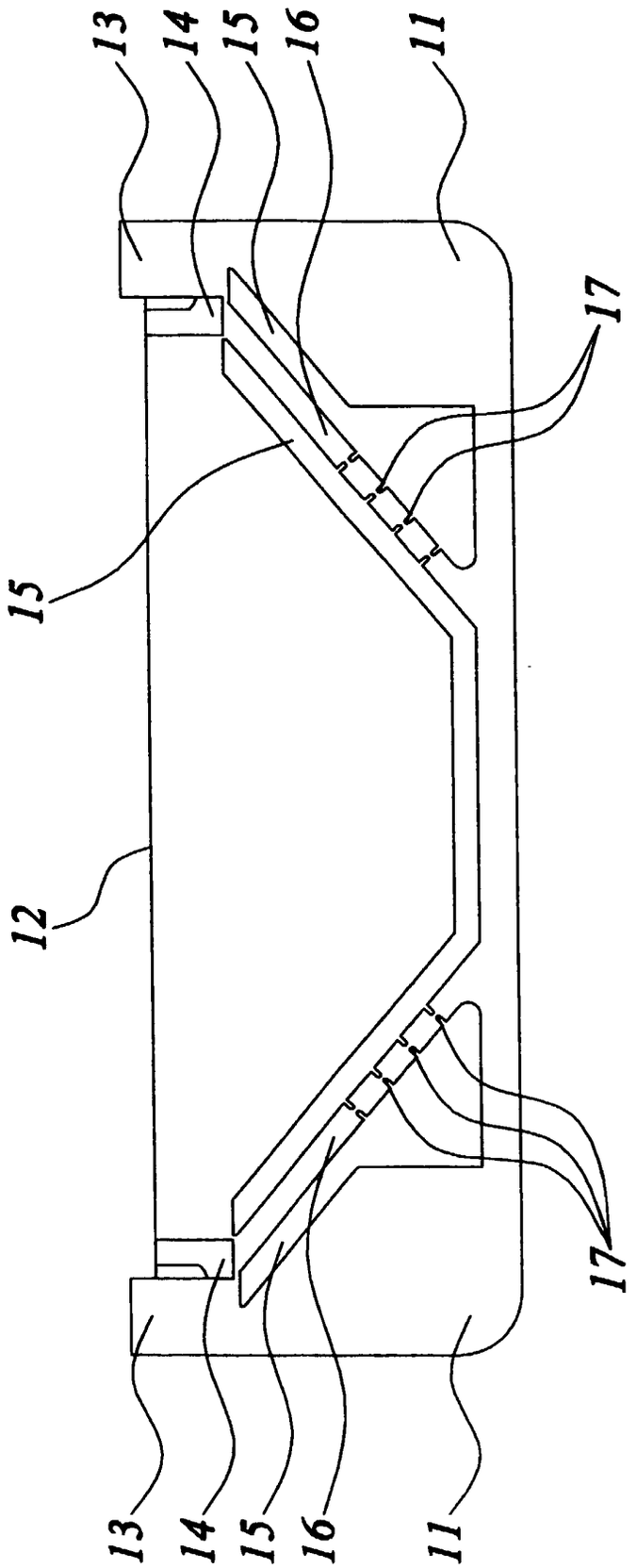

Fig. 2

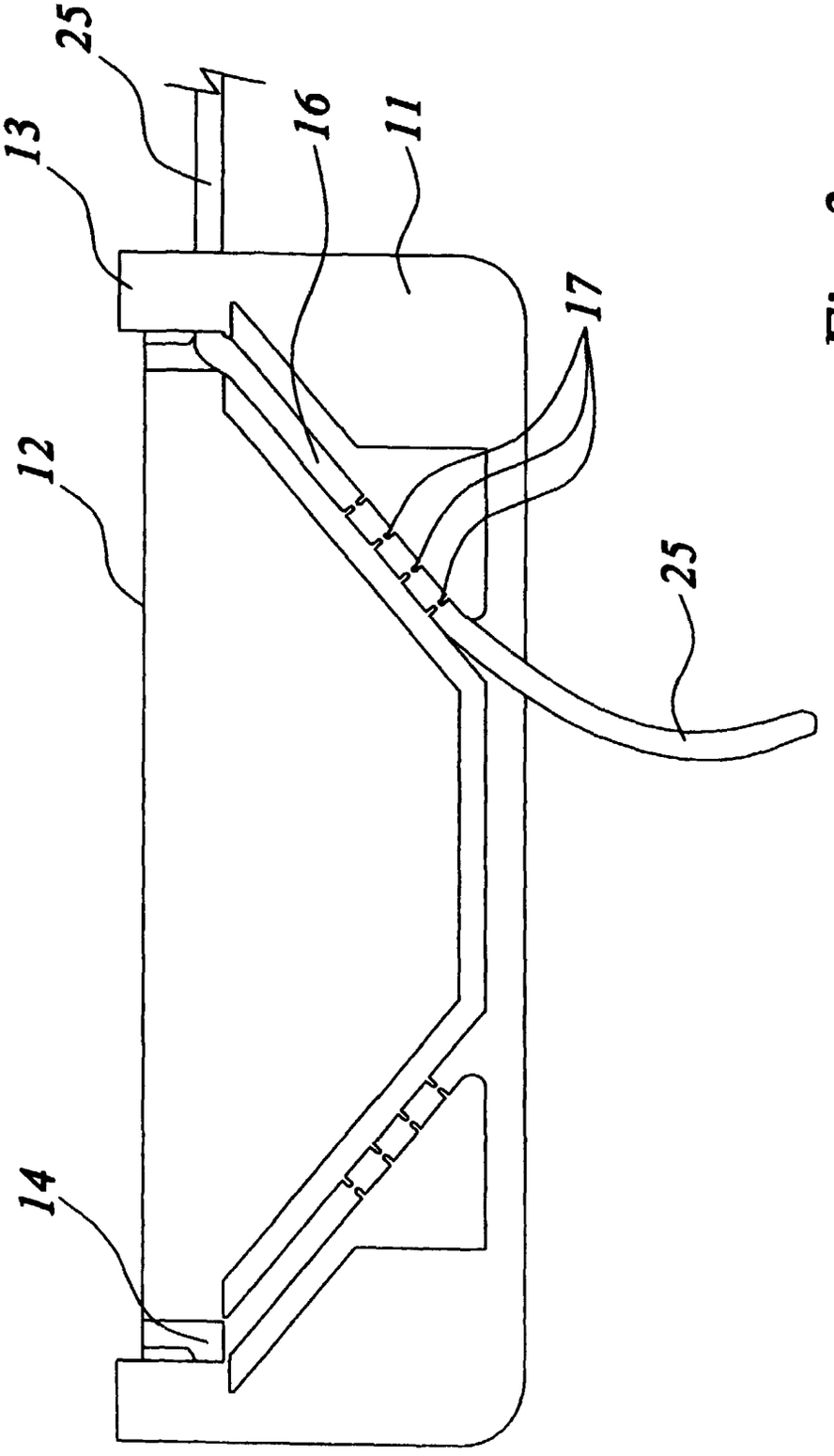

Fig. 3

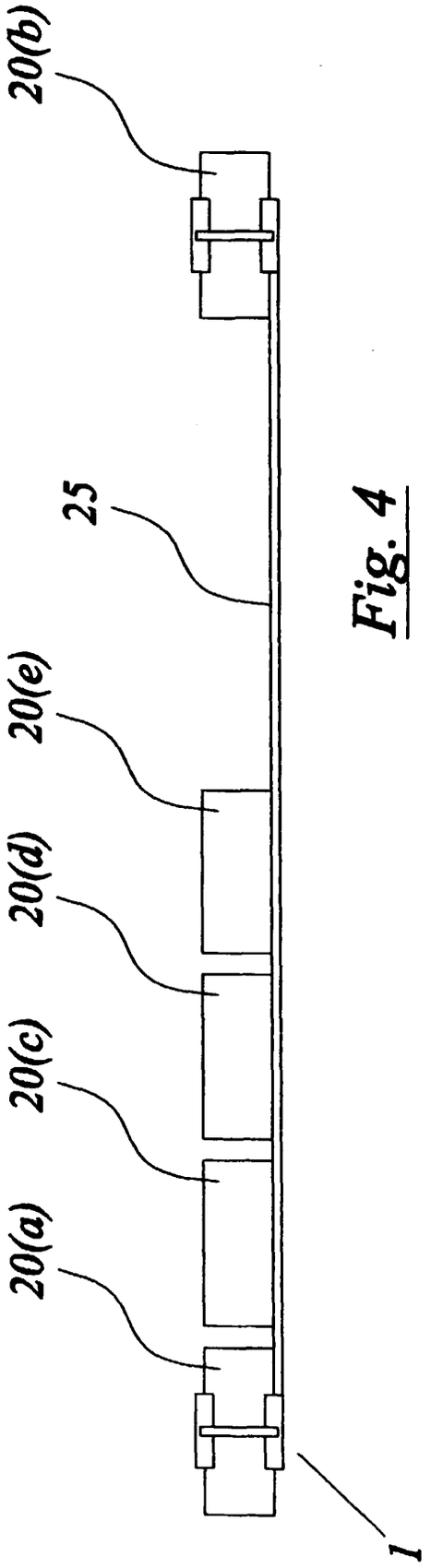

Fig. 4

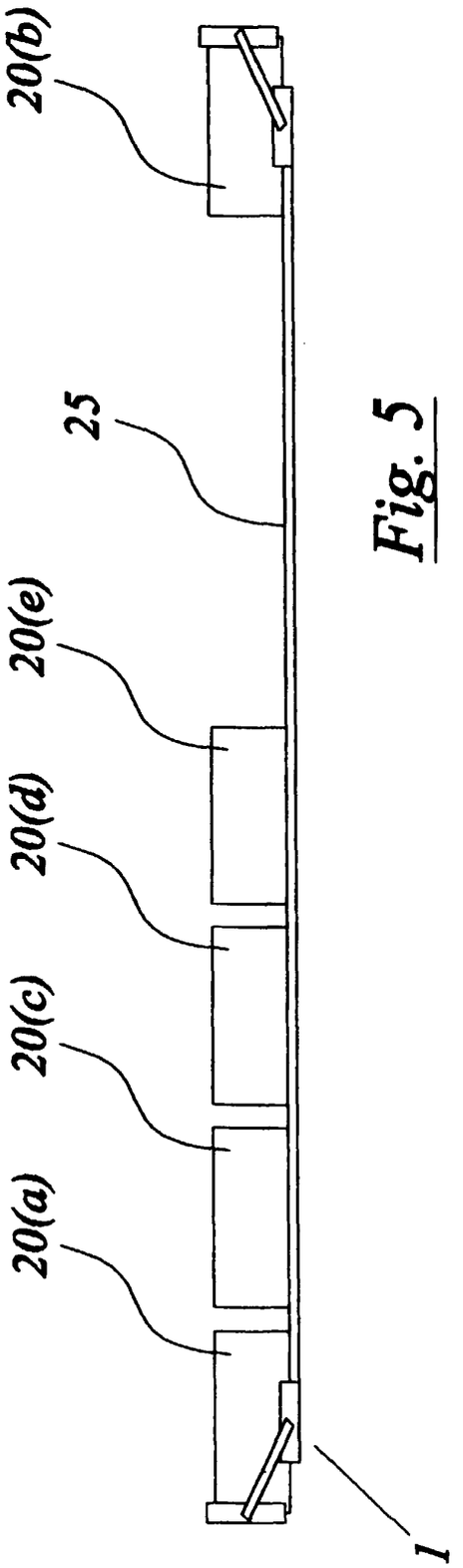

Fig. 5

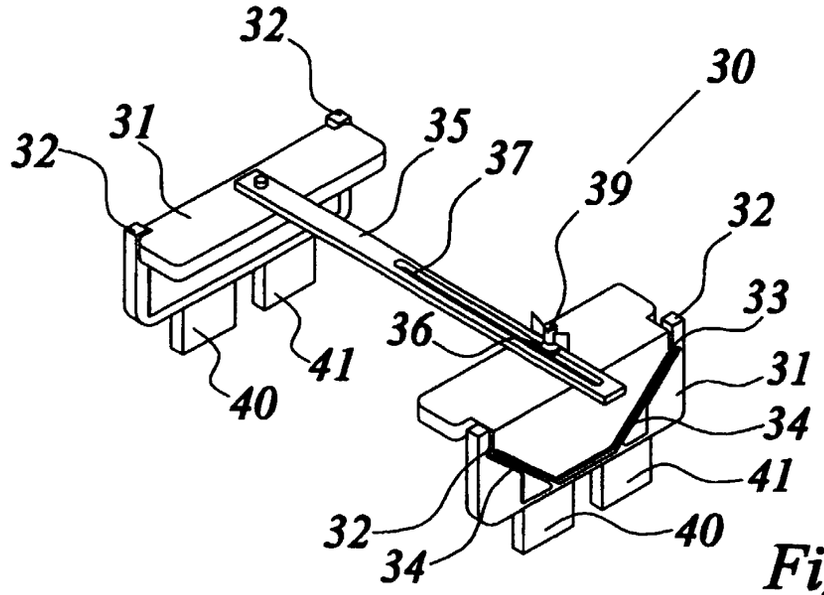
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Fig. 6

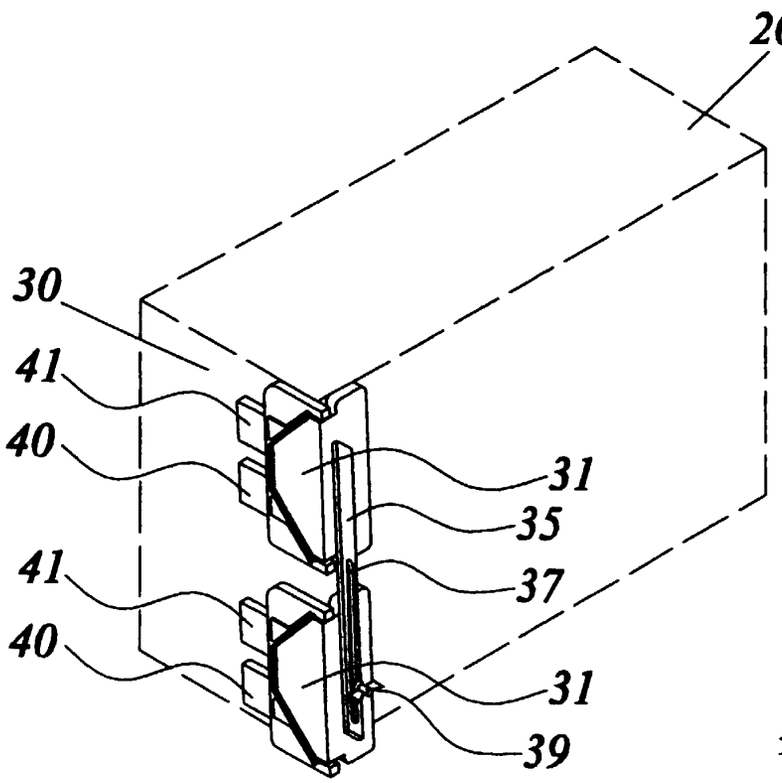
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Fig. 7

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EUROPEAN SEARCH REPORT

Application Number
EP 99 65 0082

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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	17 December 1999	Andlauer, D

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EUROPEAN SEARCH REPORT

Application Number
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THE HAGUE	17 December 1999	Andlauer, D

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