

(19)



(11)

EP 2 218 563 A2

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

18.08.2010 Bulletin 2010/33

(51) Int Cl.:

B28B 7/08 (2006.01)

B28B 11/08 (2006.01)

B44C 1/24 (2006.01)

E04F 21/04 (2006.01)

B28B 23/00 (2006.01)

(21) Application number: **10386004.5**

(22) Date of filing: **12.02.2010**

(84) Designated Contracting States:

**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL
PT RO SE SI SK SM TR**

Designated Extension States:

AL BA RS

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(30) Priority: **16.02.2009 GR 20090100093**

(54) **Prefabricated stamped walls**

(57) The prefabricated stamped wall and the prefabricated stamped low wall consist of concrete (1) which is enhanced with polypropylene fiber that consists of structural mesh (2), which results in the construction of walls and low walls with great resistance with embossed stone appearance and of a great variety in the choice of designs

and colors. Furthermore the construction's soft approach to the natural environment is achieved at any geographic region and with whichever cultural-structural character, sparingly, without ruining the natural environment with the excavation of stone, and by offering aesthetic and unwearable choices.

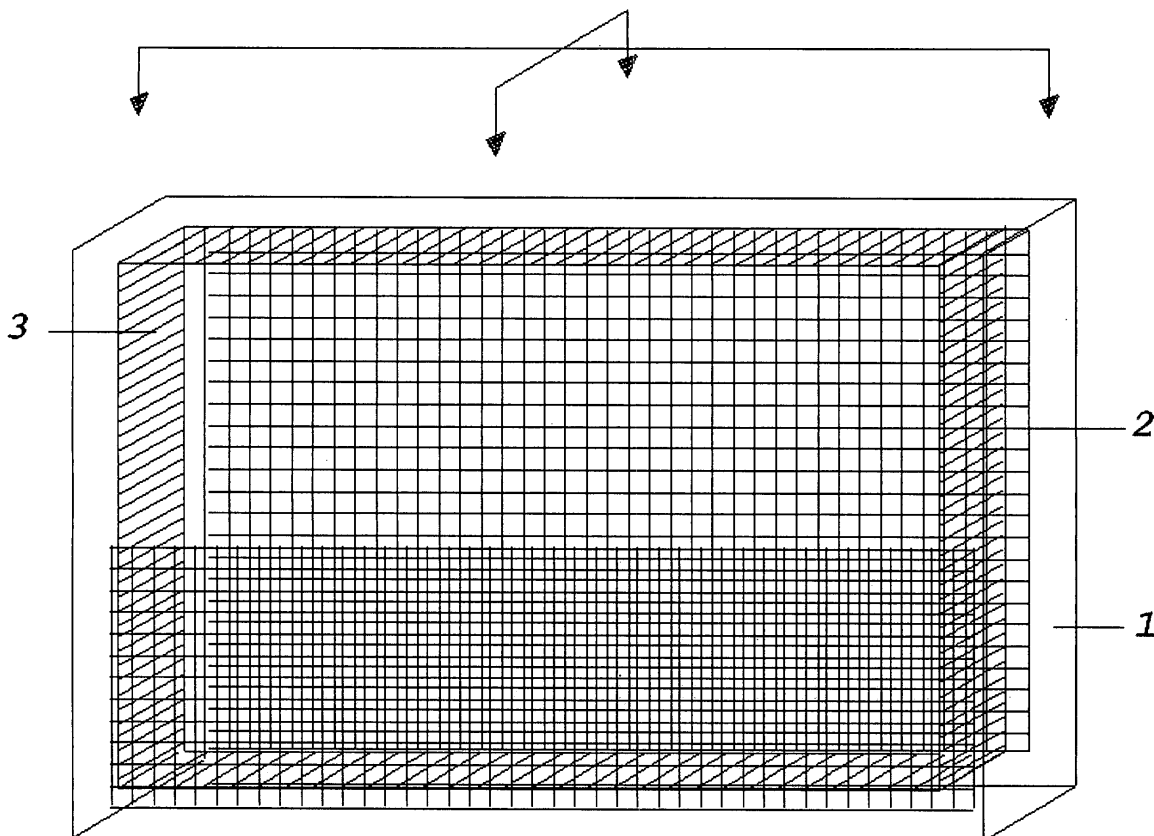


FIGURE 1

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Description

[0001] The purpose of the conceived invention is the construction of prefabricated stamped low walls and walls with great resistance, with embossed stone appearance, great variety in the choice of designs and colors and moreover the construction's soft approach to the natural environment is achieved, at any geographic region and with whichever cultural-structural character, sparingly, without ruining the natural environment with the excavation of stone, and by offering aesthetic and unwearable choices.

[0002] The prefabricated stamped low wall is constructed in the following way:

After casting the low wall on a workbench in the desirable dimensions (20 cm more are added to its height as it is implanted during placement on a concrete footing (4). DR.1 and after the structural mesh has been placed (2) the concrete which has been enhanced with polypropylene fiber is faced (1) (C-16/20 or of a superior quality).

After the surface of the concrete is faced (1) it is then plastered and then special colors are added, having the option to choose between 30 basic shades and then the surface is again plastered with special equipment, as to absorb from the concrete (1), the color that is spread during grinding.

When the concrete is plasticized (1) the special non-stick powder is added on the whole surface, so as to achieve the stamping of the shadows on the build embossed stones and the low wall hinges.

When the concrete (1) begins to hold, the printing of the designs is being processed (embossed stone) with special intaglios (molds) with a selection option of 20 different designs.

The next day the prefabricated low wall is washed with ample water as well as with a mix of water and hydrochloric acid and when it dries it is polished with a special type of polish (the polishing can be done after placing -assembling the whole low wall, in the area where it should be positioned). The one side of the low wall is constructed in this manner.

After completing the construction of the one side, the low wall is being placed upside down on the workbench, so as to construct the other side of the wall in the exact same way. This construction method is also implemented for low walls of a minimum width of 16 cm. For a larger width low wall construction, Styrofoam is inserted within the low wall (3). DR. 1 and DR. 2, which (Styrofoam (3)) will always be surrounded by concrete on its perimeter (1) (8cm reinforced structural mesh (2)), with the above mentioned characteristics. The same construction method is also implemented for supporting low walls.

[0003] Construction of prefabricated stamped wall: after the construction wall is casted on the workbench at

the desirable dimensions, (indoors-ceiling, ridgepoles-floor and pier by pier) the same method with the one used for the stamped low wall is also applied, achieving further thus its monolithic construction.

5 The prefabricated stamped wall has one finished side, whereas the other side could be plastered or faced e.g. with tongue and groove-cement-plasterboard ect.

Also, as to cutback on load, perlite is mixed with concrete (1) or foam concrete is being used.

10 In the up to now level of technique, these are known methods of construction only for stamped floors, which are mostly constructed in exterior spaces, as to achieve low costs by giving aesthetic and resistant options and solutions. The basic disadvantage of the constructions, only on stamped floors that is, is that they limit the implementation of this particular technique.

[0004] The conceived invention is used both in exterior and interior spaces, such as walls, indoor bulkheads, in any color and shape. With this implementation painting is avoided once and for all.

20 **[0005]** An important advantage of the conceived invention is that, an up to 60% gain is achieved of the total coverage of the building site area that is required by any other method of construction for the exterior low walls, since any outdoor stone low wall is constructed with a minimum width of 40 cm., but with the new invention, the width of the construction may be limited to 16 cm. (therefore there may be a gain of approximately 2 / 3 of the low wall coverage in the building site area, in its perimeter which is intended for fencing.)

30 **[0006]** An important advantage of the conceived invention is that the life expectancy of the prefabricated stamped low walls and prefabricated stamped walls is especially long and then in case of replacement the procedure is fairly fast.

35 **[0007]** The technical structural characteristics of the invention will be better understood thanks to the following detail description, where there is a reference to the attached drawings, which portray the technical characteristics as well as the materials of the hereby invention.

Drawing 1 shows all the materials used for the construction of the low wall, as well as their arrangement. Drawing 2 shows the vertical section of the materials used and the way they are used for supporting the low wall.

Drawing 3 shows the section of a solid wall.

Drawing 4 shows the section of a wall with door and window.

50 **[0008]** Referring to a random indicative example of the invention furthermore you will find the corresponding numbers of the basic elements of the object in the attached drawings, which are presented in an indicative encompassed drawing, without a scale but in proportion to size among the elements.

55 **[0009]** The prefabricated stamped wall and the prefabricated stamped low wall are characterized by the fact

that they consist of concrete (1) which is enhanced with polypropylene fibers that consist of structural mesh (2), have as a result the construction of a wall with great resistance. The prefabricated stamped low wall, of over 20 cm., which comprises of two monolithic constructions which are joined together with concrete (1) that penetrates and occupies the remaining space, of that occupied by the Styrofoam (3) and the concrete union of two monolithic constructions is achieved.

[0010] This induction has the following results:

- a. Great resistance is achieved.
- b. Good aesthetics are achieved (embossed stone appearance is achieved with your choice of designs and colors).
- c. Quick construction is achieved
- d. Affordable price is achieved.
- e. Gain of building site area is achieved.
- f. A soft approach of the construction with the natural environment is achieved. All materials of construction (colors-nonstick powder-polishes) are accompanied by ISO certification.
- g. Load reduction on the prefabricated stamped walls is achieved with the mix of perlite and concrete (1), as well as with the use of foam concrete.

Claims

1. The prefabricated stamped low wall and the prefabricated stamped wall, are monolithic constructions of concrete (1) C-16/20 or of a superior quality which is enhanced with polypropylene fiber and reinforced structural mesh (2).

2. The prefabricated stamped low wall, mentioned in assumption 1, is constructed in the following way: after the low wall is casted on a workbench in the desirable dimensions (20 cm more are added to its height as it is implanted during placement on a concrete footing (4). DR.1 and after the structural mesh has been placed (2) the concrete is faced (1) (C-16/20 or of a superior quality) which has been enhanced with polypropylene fiber.

After the surface of the concrete is faced (1) it is then plastered and then special colors are added, and after that the surface is again plastered with special equipment, as to absorb from the concrete (1), the color that is spread at grinding.

When the concrete is plasticized (1) the special non-stick powder is added on the whole surface, so as to achieve the stamping of the shadows on the build embossed stones and the low wall hinges.

When the concrete (1) begins to hold, the printing of the designs is being processed (embossed stone) with special intaglios (molds).

The next day the prefabricated low wall is washed with ample water as well as with a mix of water and

hydrochloric acid and when it dries it is polished with a special type of polish. The one side of the low wall is constructed in this manner.

After completing the construction of the one side, the low wall is being placed upside down on the workbench, so as to construct the other side of the wall in the exact same way. This construction method is also implemented for low walls of a minimum width of 16 cm. At a larger width than 20 cm. low wall construction, (since a width less than 20 cm. is considered monolithic) Styrofoam is inserted within the low wall (3). DR. 1 and DR. 2, which (Styrofoam (3)) will always be surrounded by concrete on the perimeter (1) (8cm reinforced structural mesh) therefore the concrete (1) will penetrate and occupy the remaining space, of that occupied by the Styrofoam (3) as to achieve the union of the two monolithic constructions.

3. The prefabricated stamped wall, mentioned in consumption 1, after the construction wall is casted on the workbench at the desirable dimensions, (indoors-ceiling, ridgepoles-floor and pier-pier) and then the structural mesh has been placed (2) the concrete which has been enhanced with polypropylene fiber is faced (1) (C-16/20 or of a superior quality). After the surface of the concrete is faced (1) it is then plastered and special colors are added, then the surface is again plastered with special equipment, as to absorb from the concrete (1), the color that is spread at grinding.

When the concrete is plasticized (1) the special non-stick powder is added on the whole surface, so as to achieve the stamping of the shadows on the build embossed stones and the wall hinges.

When the concrete (1) begins to hold, the printing of the designs is being processed (embossed stone) with special intaglios (molds).

The next day the prefabricated wall is washed with ample water as well as with a mix of water and hydrochloric acid and when it dries it is polished with a special type of polish. The one side of the wall is stamped with embossed stone and colored in this manner. Also, as to cutback on load, perlite is mixed with concrete (1) or foam concrete is being used.

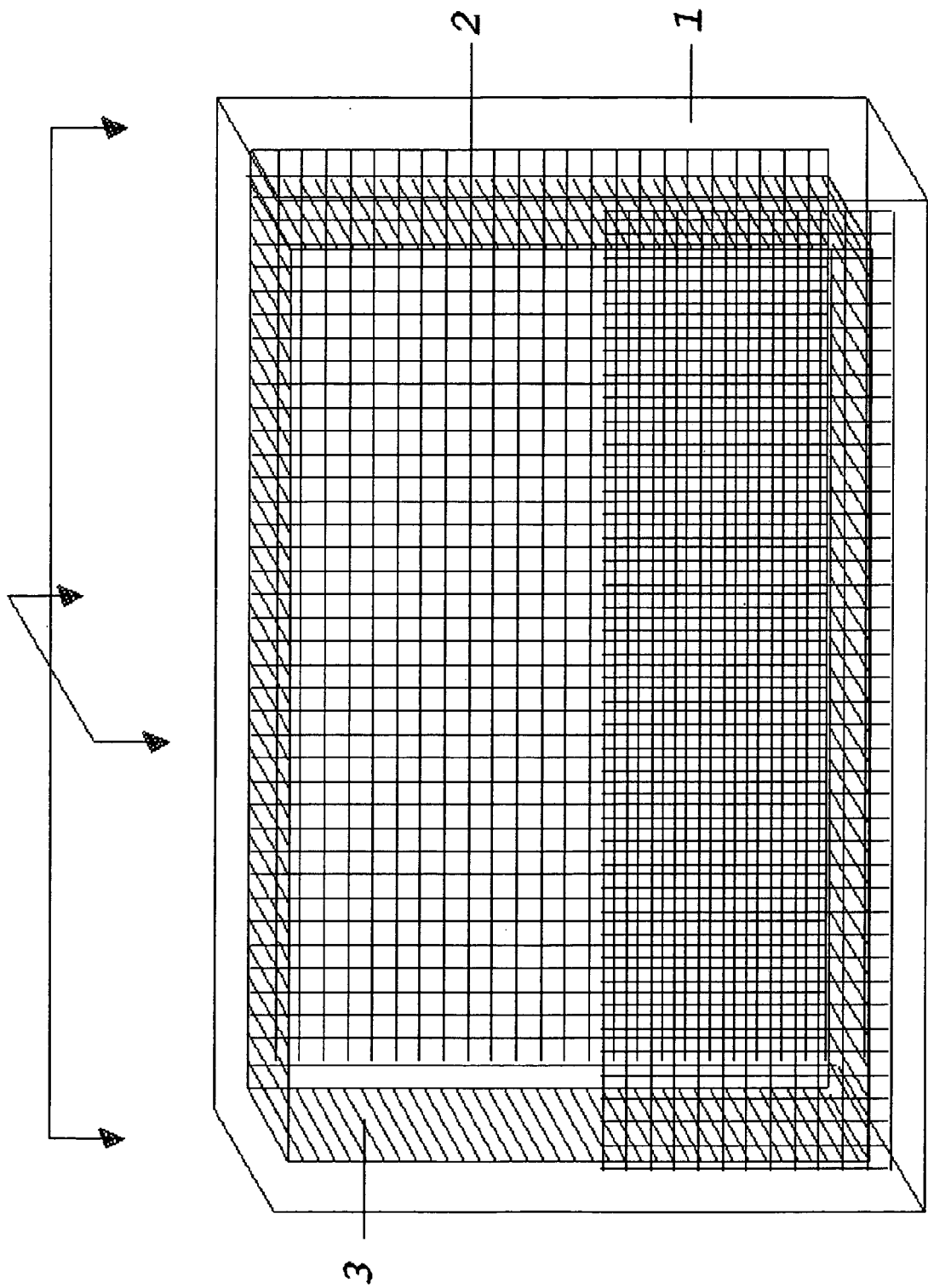


FIGURE 1

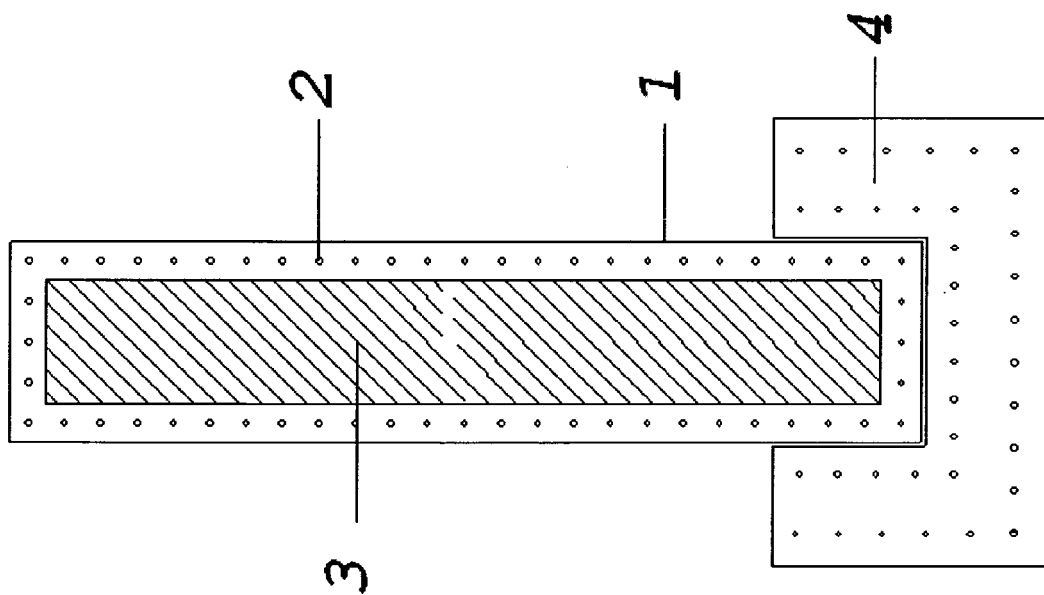


FIGURE 2

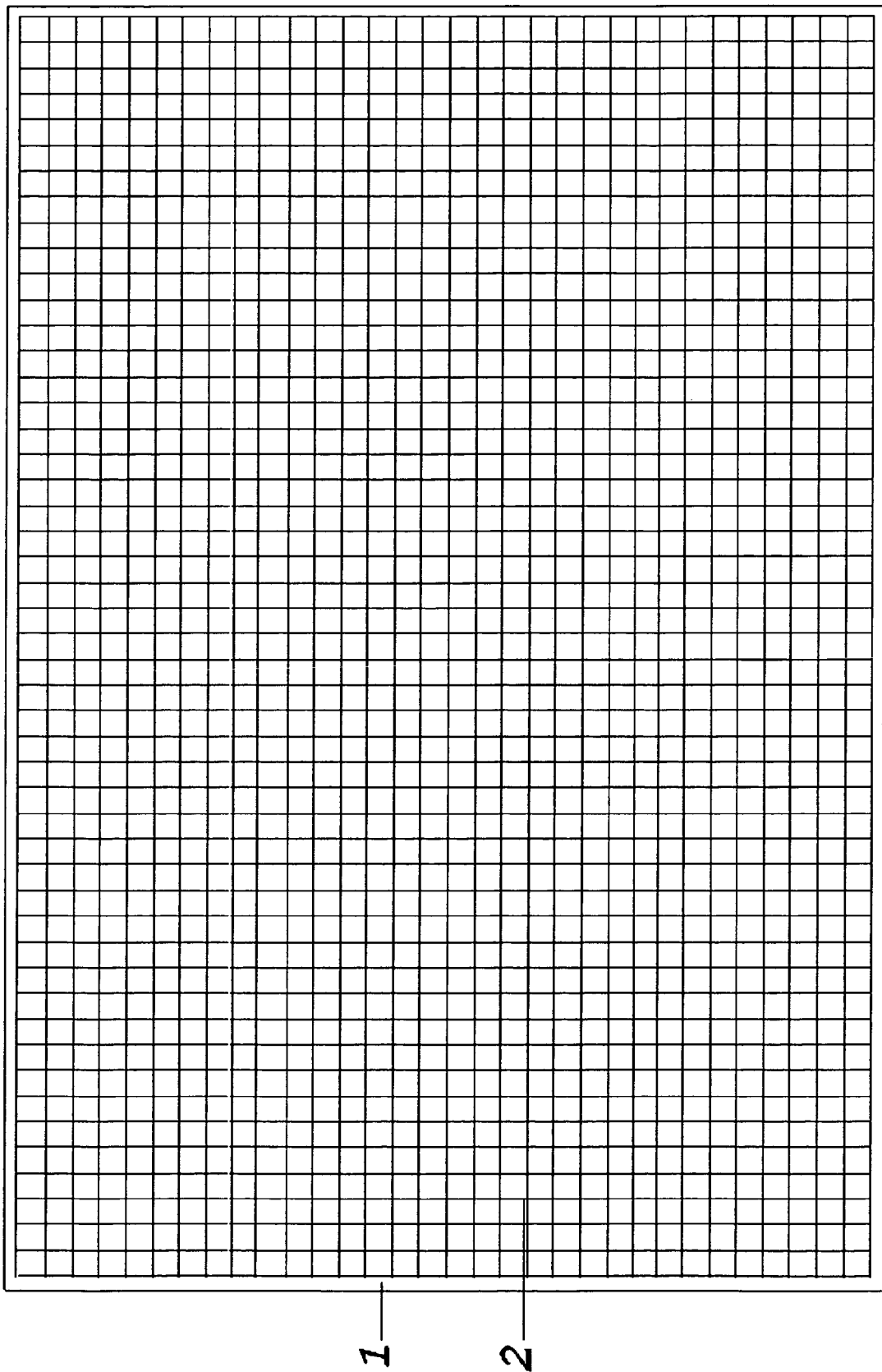


FIGURE 3

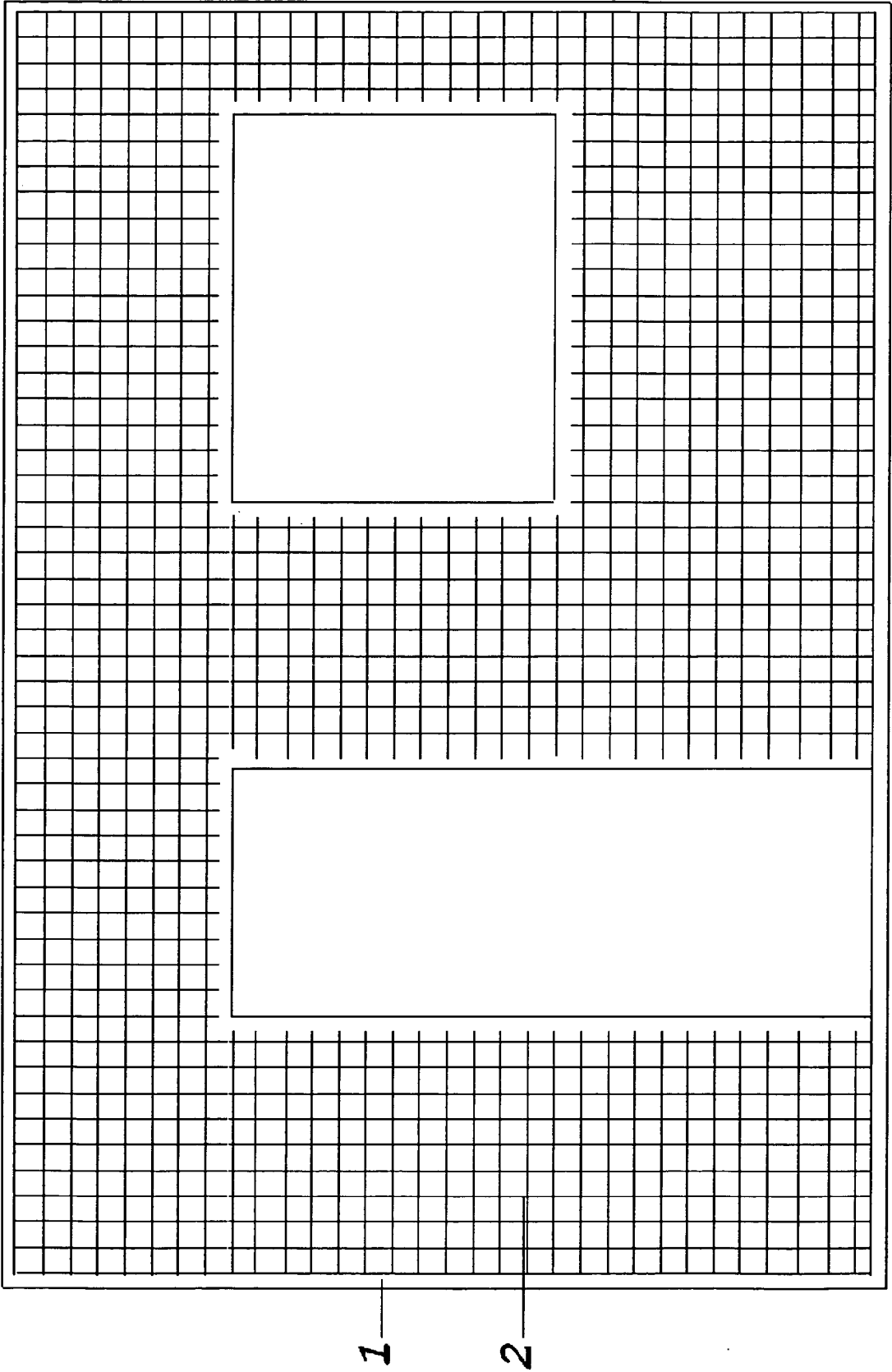


FIGURE 4