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(54) A better solution for the concrete boxes normally used in the fungiform pavements

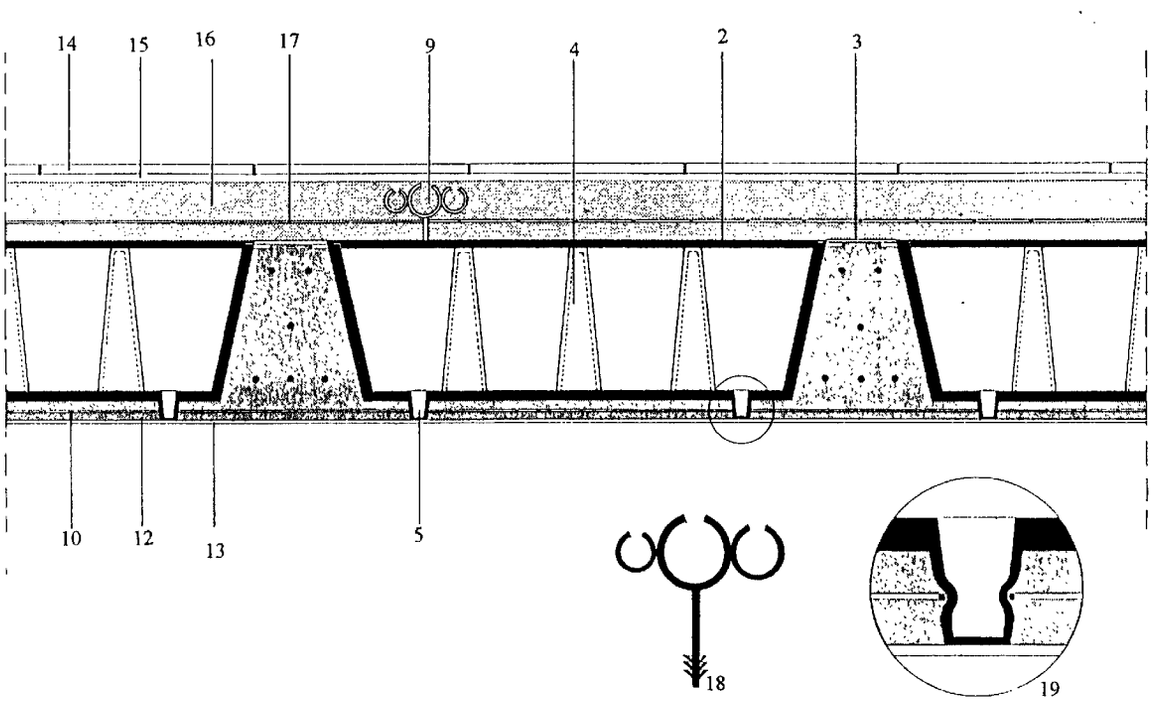
(57) This invention is to be used in fungiform concrete floors. It's is made by a box (1) of plastic material (any polymer) characterised to have feet (5) wich permit to keep a distance from the bottom of the box to the formwork and like that permitting a total envolvement by the concrete (12).

With this invention it's possible to make simultaneousely the floor of the superior floor and the roof of the inferior floor(16 and 12).

Because of his form - truncated pyramidal - the transport (20) his very easy and cheap.

The box is also cheaper than the normal concrete boxes because it can be made of recycled plastic. On the other hand it's easier for workers to manipulate them because of his light weight and easy distribution in the work.

Fig 3



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Description

The invention we proprose here it's a better solution for the concrete boxes normaly used in the fungiform pavements. These traditional boxes in concrete are composed of three pieces because they are very heavy, and because of that they took to much time to be manipulated.

More than that the traditional boxes in cement concrete are very expensive to transport because of his form weight and they make what can be called the "drum effect".

And at last the traditional cement boxes are very fragil and they broke it more than 8% to manipulate or transporting it .

In this invention the material used is the plastic (any polymer) recycled or not, wich makes the boxes (1) composing the alveolus of the fungiform concrete roofs lighter(not so heavy) and making, of course, lighter the pavement. Because of his formation the "drum effect" do not occur.

On another hand these boxes are made in only one piece wich permits na easy manipulation and safe costs in construction. Also the transport costs can be reduced because of the mortise way of transport and it's pyramidal truncated form.

Because his very light weight it is possible the collocation of the iron before and the boxes after wich allow a better and quicker manipulation.

Notwithstanding his low density this boxes have some holes (7) in the superior part where they can be tied to the iron if necesary.

As a big diference and inovation to the traditional cement boxes these boxes have feet (5) wich gaves a distance to pass down the concrete and permits the total involvment of the box by the concrete and, like this, the simultaneous execution of the superior pavement(16) and the roof of the inferior floor (12).

The roof of the inferior floor is suported by a net (in plastic or not) (10) wich is adapted automaticaly by compression to the feet of the box (19). This do not happen actually because the concrete boxes are put directly in the form works and it is necessary to finish the roof later with supplementary costs.

In the domain of the fungiform pavements there are other solutions more complex and expensive than this invention we purpose because they don't fill all the requisites of this plastic box because they are different materials or because they don't allow a prefect finish work or because they are recovered form works.

As an innovation we have also the candlestick (9) support for the electric tubes and others. These candlesticks can be placed in the different holes(8) of the box cover(2) in order to make a map of the distribuition and easier repair later on any incovinience in the electric system.

Naturaly the cover holes will be closed with plastic bottoms when they are not in use in order do not permit the concrete to invade the box.

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Claims

1. This is a piece to be used in civil construction in the land of fungiform pavements. With this invention, like in the materials used today, the interest is to create alveolus (boxes) wich can't be invaded by concrete . However this is characterized by the material wich is composed by recicled plastic (or original plastic) like a box (with a pyramidal truncated form) with a covering wich cover the box and do not allow the concrete to come inside the box. That is also characterized because of his configuration (with interior truncated cones) wich supports the forces in the covering and, of course, the weight of the workers or the weight of a concrete layer till 30 cms. Because of the feet (in a truncated cone form also) this boxe is also characterized by the distance kepped up from the form works to the down size of the box wich allow the concrete to pass down the box. There is also a net(in plastic or not) down adapted by compression to the feet wich permits a rapid solution to the job. Also the covering has some holes wich can be used to receive a piece in form of a candlestick (with different diameters) wich receive the electric tubes and other tubes mantaining them superficially embebed in the concrete.

2. According with the claims described in 1- this box is characterizad because it is made in plastic.

3. It's also characterized because it is not so heavy like the other boxes (made in cement concrete)

there are in the market.

4. Because of his configuration and of their feet it's characterized also because it permit the total involvement of the concrete.

5. Because of that it's characterised also to allow the simultaneous execution of the floor of the superior floor and the roof of the inferior floor.

6. It's also caraterised because of his pyramidal truncated form that allows a very easy and multiple transport in big quantities.

7. By the same reason it's easy the distrubuition in works operations.

8. This box is also characterised because of the net (in plastic or not) we can easily put in the bottom(of each one) to agregate the concrete.

9. This box is also characterised to permit the total (100%) plastic recycling. It permits also to increase the volume of recycled material by increasing the measure of the box walls.

FIG 1

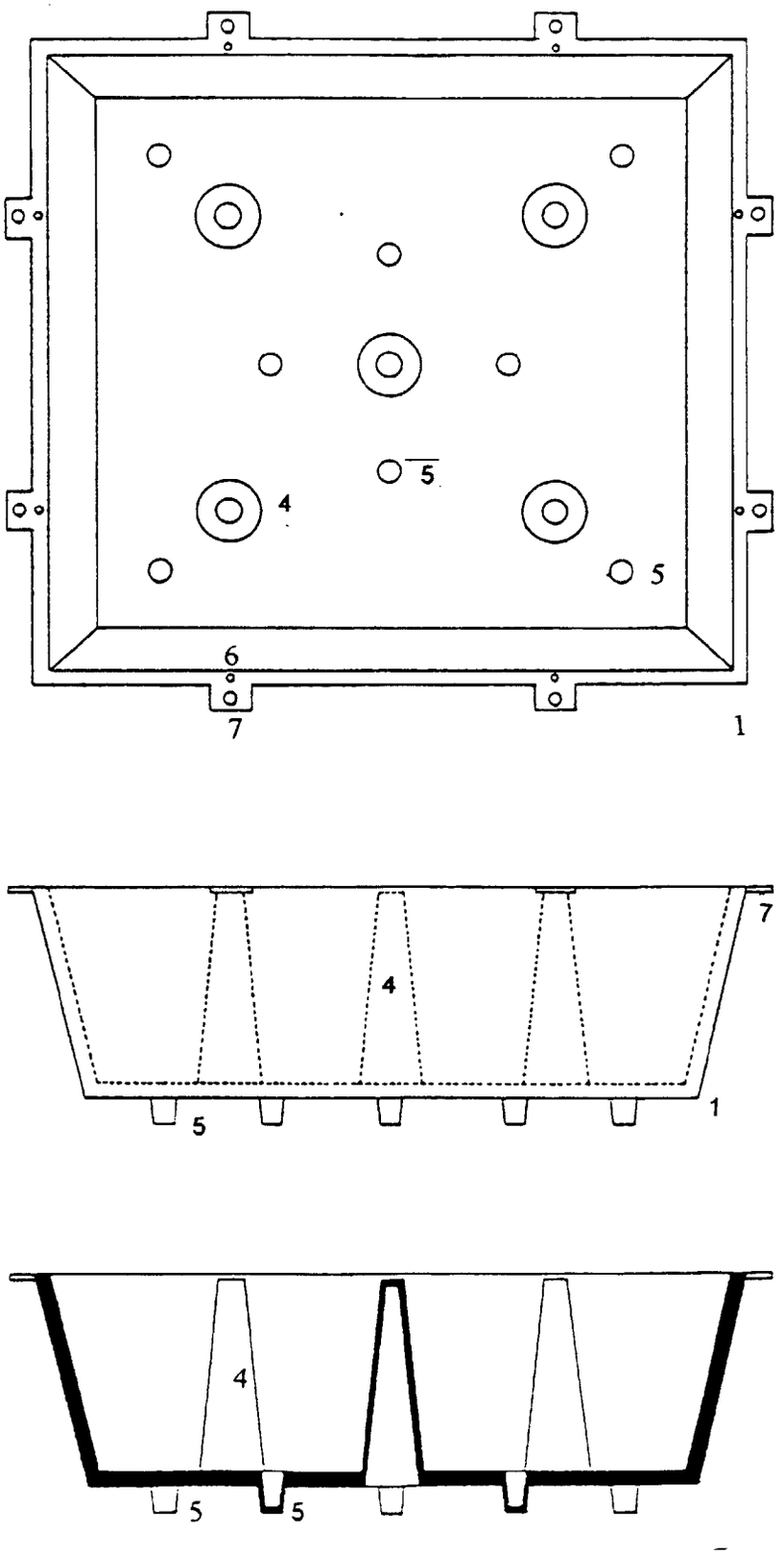

FIG 2

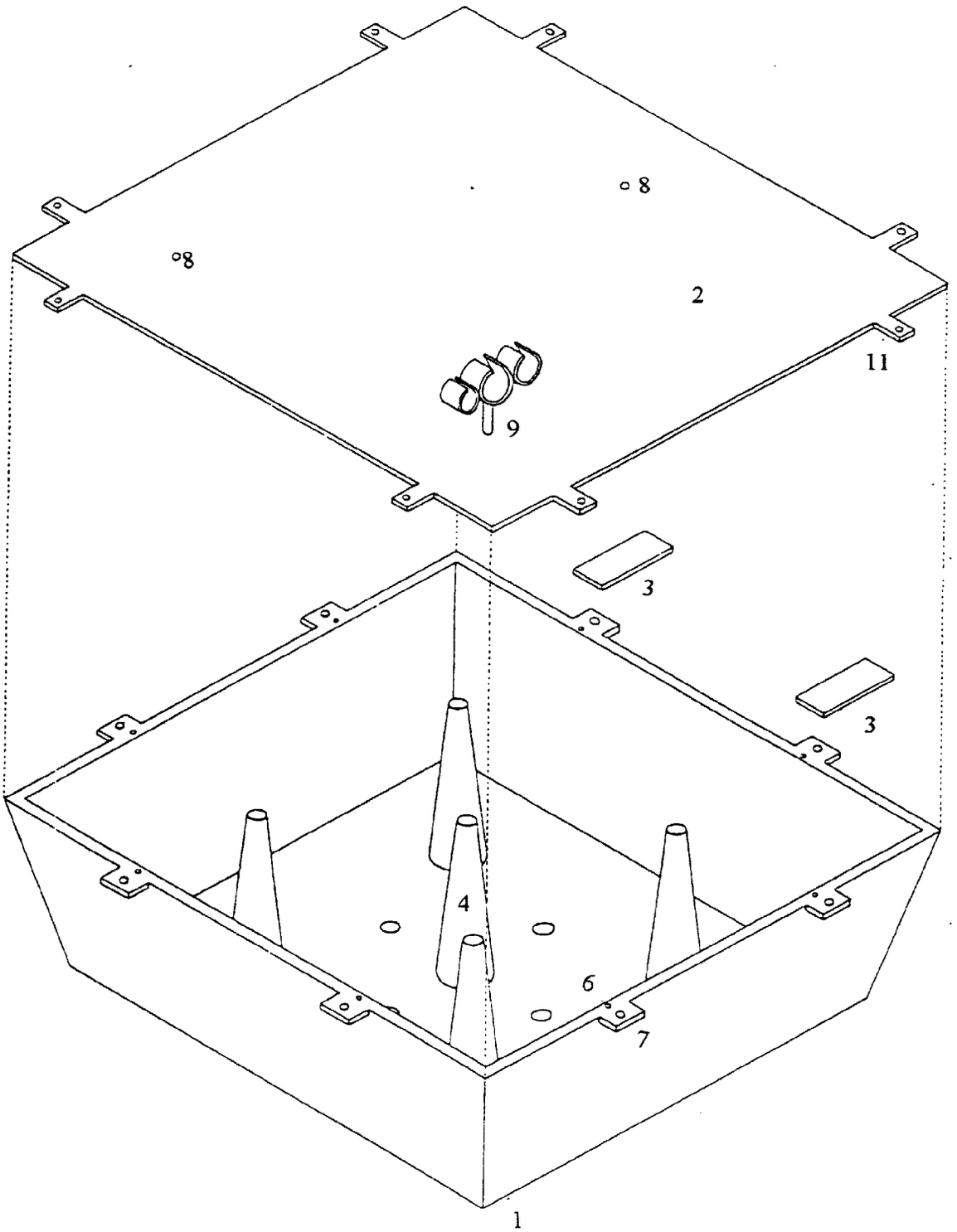

Fig 3

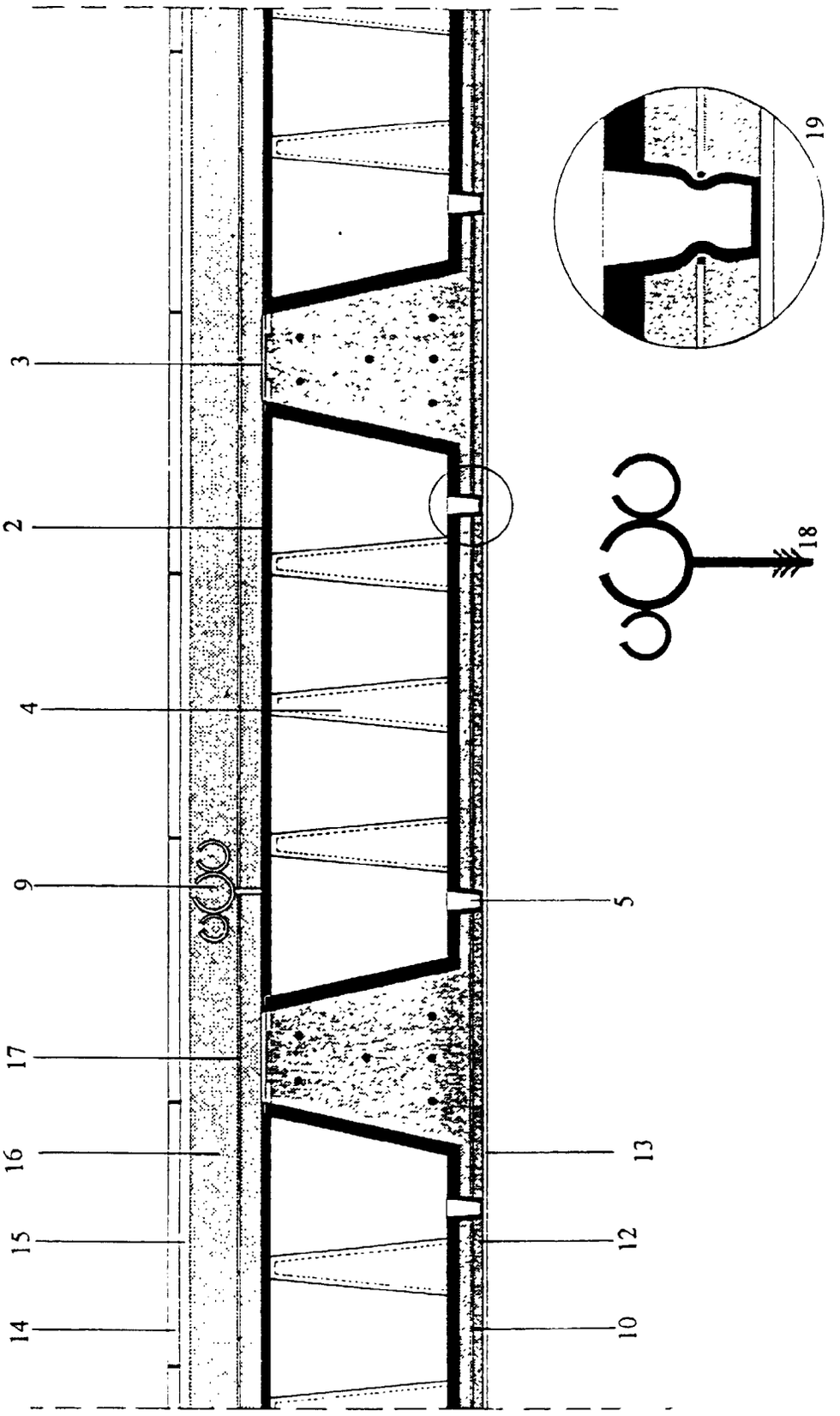

Fig 4

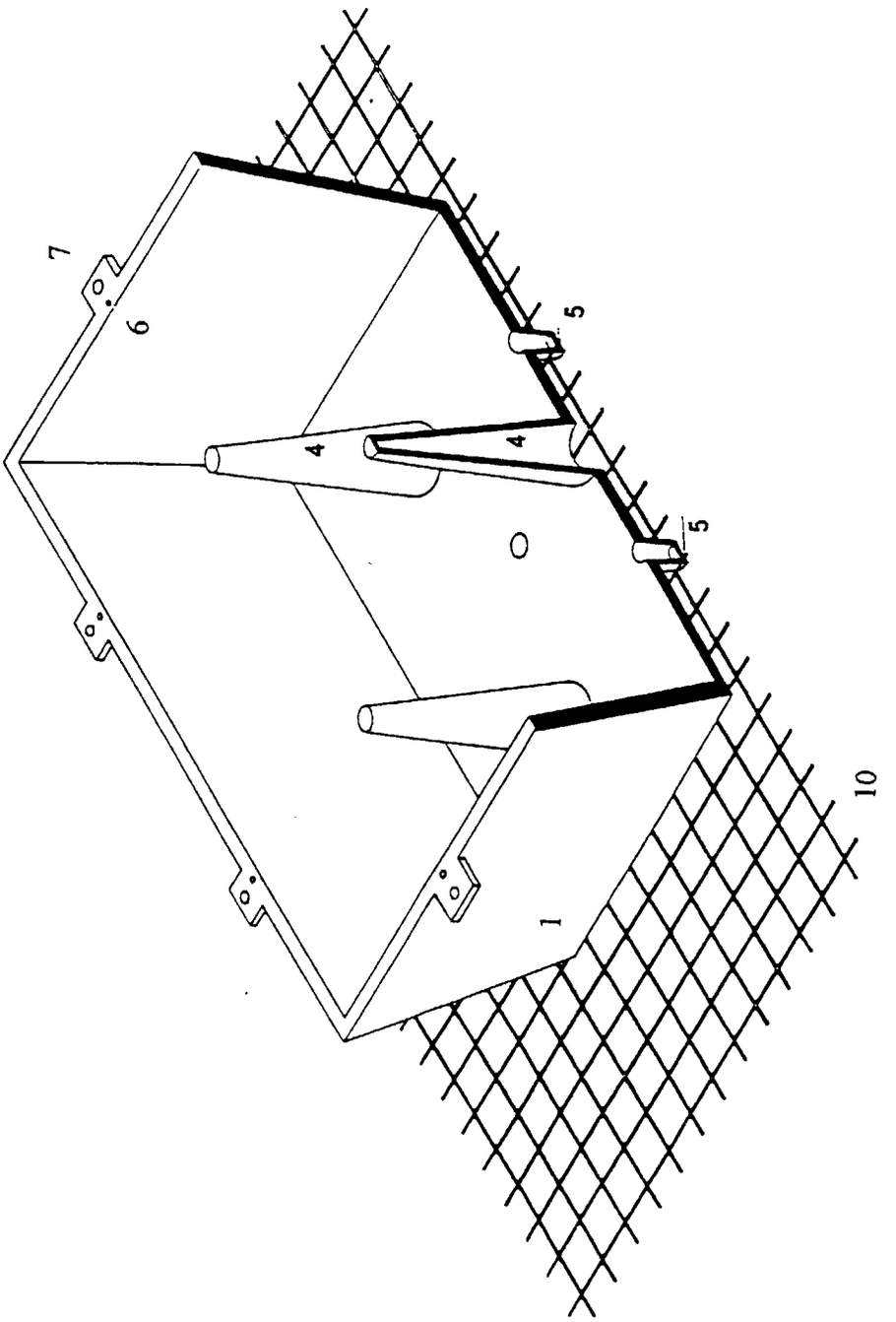

Fig 5