Dec. 24, 1935. G. COURTOIS 2,025,496

PAVING OF ROADS OR STREETS

Filed Nov. 17, 1933

FIG. 1

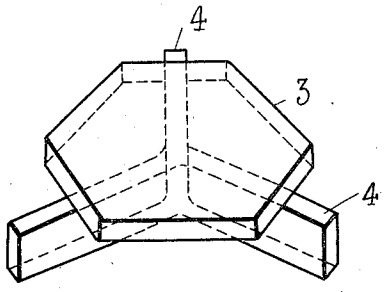
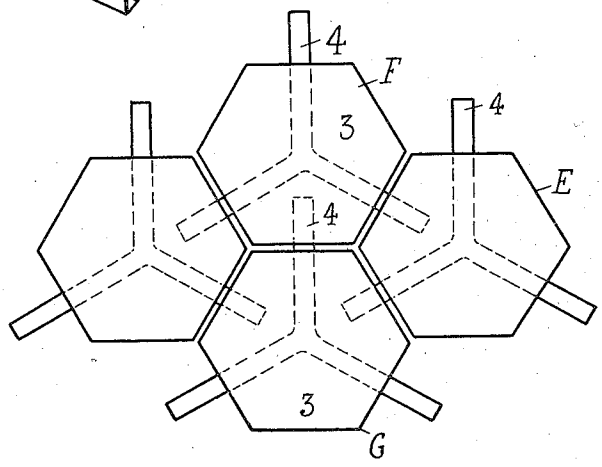


FIG. 2



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PAVING OF ROADS OR STREETS

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2 Claims. (Cl. 94—13)

The present invention relates to the paving of roads or streets.

It has been found that, in order to obtain a roadway surface adapted to resist heavy traffic, paving remains, at the present time, the best solution. However if it is not laid on a bed that evenly distributes on the ground the efforts exerted by the vehicles at some points of the surface of the roadway, the best existing pavement still deteriorates very quickly. Now, a perfectly monolithic bed has some drawbacks, because all the materials are not equally fit for this use, and furthermore, in towns, they are liable to prevent an easy access to the many underground systems of pipes or the like that generally exist under the pavement. It has therefore been endeavored to make paving elements which, being suitably connected to one another, do not necessarily require the presence of such a bed or foundation, and, up to the present time, three types of pavings have been utilized.

In the first type of paving, the various elements that go to make the roadway are connected together by means of bolts, pins, lugs, rivets, etc. But these auxiliary connecting members, in spite of a very careful machining which greatly increases the cost of the pavement, are unavoidably deteriorated by atmospheric agents, humidity, etc., and consequently do not any longer allow of easily taking the pavement to pieces.

Consequently, in the second and third types of pavements, the auxiliary connecting members above mentioned are no longer utilized, and the connection between the elements of the pavement results merely from their geometrical shape. In the second type, tongues or feathers, on the one hand, and grooves or slots, on the other hand, are provided on the vertical faces of the elements that are to be in contact with the adjoining elements. But the importance of the tongues and grooves, which is a necessary condition of an efficient connection between adjoining elements, leads to increasing the thickness of the elements, and, especially if the material that is being utilized is expensive, the cost of the pavement, which is already high due to the special shaping of the paving elements, is greatly increased.

In the third type of pavement, the last mentioned drawbacks are very much reduced, but to the expense of the connection between adjoining elements, which is then incomplete, since each paving element is provided with a nonvertical face which bears against a corresponding parallel face of an adjoining paving element. Consequently, with this arrangement, one of these two paving elements is prevented by the other one from moving, for instance, in an upward direction, but nothing opposes its motion in the opposite direction.

The object of the present invention is to provide a system of paving that overcomes these drawbacks.

The present invention is characterized by a paving element consisting of a regular hexagon-shaped plate provided, on its lower face with vertical ribs radiating from the center of the plate and projecting beyond the edge of said plate, said ribs being preferably disposed along the apothems of the hexagon.

As for the pavement obtained, according to the present invention, by means of these paving elements, it is characterized in that, a plurality of hexagonal plates being assembled in such manner as to form a continuous surface, the three ribs of each paving element each extend under the under face of an adjacent paving element in such manner as to be disposed substantially along the bisector of the angle formed by two ribs of said adjacent paving element.

A preferred embodiment of the present invention will be hereinafter described, with reference to the accompanying drawing, given merely by way of example, and in which:

Fig. 1 is a perspective view of a paving element according to my invention;

Fig. 2 is a plan view showing the assembling of four paving elements of this type.

The paving element shown in the drawing consists of a plate 3 of regular hexagonal shape provided, on its under face, with three vertical projections 4 radiating from its center and projecting from its edges. These parts 4 are disposed along three apothems of the hexagon and they make angles of 120° between them. They are of course integral with the upper plate 3 and they are so dimensioned as to engage under the upper portion 3 of the adjoining paving elements, the length of the portions of said ribs 4 projecting beyond the edges of the plate being at least one fifth of the length of one side of the hexagon.

The paving element shown in the drawing has many advantages. First it makes it possible to ensure an extremely efficient jointing of elements of the roadway, while reserving the possibility of readily taking said roadway to pieces. The hexagonal shape of the upper portion of each paving element ensures an excellent distribution of the tangential efforts exerted by vehicles, since these efforts are transmitted to the

edging of the roadway, and the formation of undulations is consequently made nearly impossible. Furthermore, as the plate that forms the upper portion of the paving element is reinforced by vertical ribs 4, its thickness can be substantially reduced. A pavement of that kind can be merely laid on a bed of sand, maintained in position by the vertical ribs. The edges of the roadway may be made of concrete or any other material.

It should be well understood that the embodiment of my invention that has been above described has been given merely as an example and that my invention extends, in a general manner, both to paving elements as above described and to a roadway obtained by assembling these paving elements as above explained.

The paving elements according to my invention may be made of any suitable material such as wood, metal, etc., and they may be either homogeneous or heterogeneous. The upper portion of the paving element may optionally be provided with corrugations. It may be either utilized directly as the surface on which the vehicles will roll, or covered with a suitable coating.

Finally, it should be well understood that, while the chief advantage of the present invention is to make it possible to dispense with a monolithic bed or foundation for the pavement, it is however quite possible to dispose the paving elements according to my invention on a more or less resistant under layer of a material playing the part of a foundation.

While I have described what I deem to be practical and efficient embodiments of my invention, it should be well understood that I do not wish to be limited thereto as there might be changes made in the arrangement, disposition and form of the parts without departing from the principle of my invention as comprehended within the scope of the appended claims.

What I claim is:

1. A paving element adapted to be associated with other identical elements to form a pavement, comprising, a plate in the form of a regular hexagon provided on its lower face with vertical ribs radiating from the center of said plate and projecting beyond the edge of the plate, said ribs making angles of 120° with one another.

2. A pavement composed of a plurality of paving elements of the same size according to claim 1, assembled in such manner that the hexagonal plates form a continuous surface and that the three ribs of each paving element each extend under an adjacent paving element between two ribs of said adjacent paving element in such manner as to be disposed substantially along the bisector of the angle formed by these two ribs of said adjacent paving element.

GEORGES COURTOIS.