

J. R. ABRAMS.

PAVEMENT.

No. 176,573.

Patented April 25, 1876.

Fig. 1.

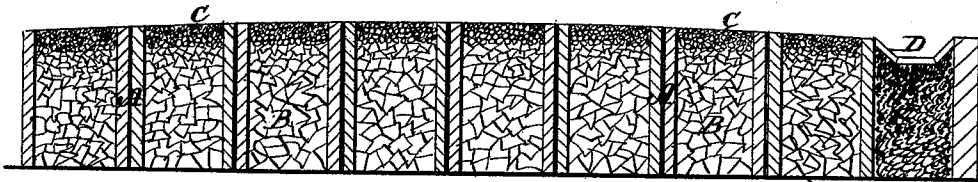
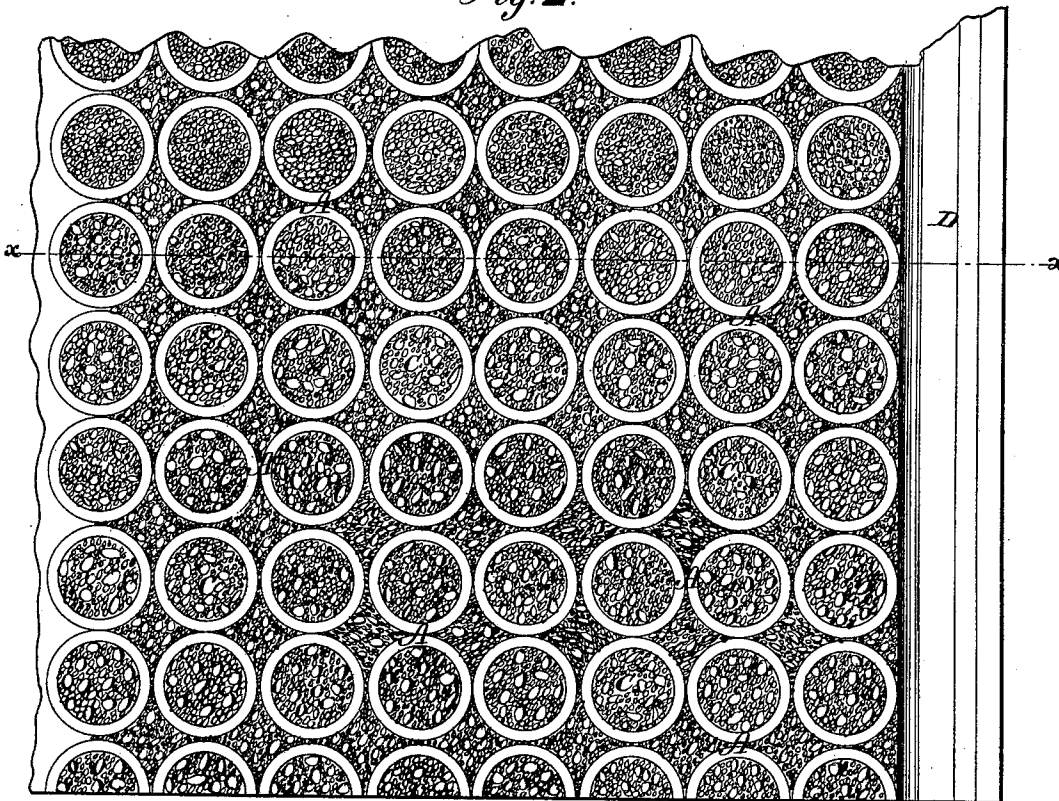


Fig. 2.



WITNESSES:

W. W. Hollingsworth
John C. Kemou

INVENTOR:

Jos. R. Abrams
BY *Wm. B.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH R. ABRAMS, OF GREENVILLE, ALABAMA.

IMPROVEMENT IN PAVEMENTS.

Specification forming part of Letters Patent No. **176,573**, dated April 25, 1876; application filed November 12, 1875.

To all whom it may concern:

Be it known that I, JOSEPH R. ABRAMS, of Greenville, in the county of Butler and State of Alabama, have invented a new and Improved Pavement; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a section through the line *x x*; Fig. 2, a plan view.

This invention relates to certain improvements in pavements; and it consists in a series of receptacles made of artificial stone, terra-cotta, or other analogous earthenware, capable of disintegration and wear, which said receptacles are filled with tightly-rammed macadamized material or broken stone, with a top-dressing of sand and gravel. The said receptacles are placed upon a smooth road-bed, and the interstices between the same are also packed with the same material and in the same way, so as to present a perfectly smooth upper surface. The dimensions and form of the receptacles will vary according to the circumstances of their application; but, ordinarily, I prefer to make them of a cylindrical shape, about ten inches in diameter and length, and about an inch and a half in thickness.

In the drawing, A represents cylinders of artificial stone, terra-cotta, tile material, porcelain, concrete, or other analogous material which is capable of slow disintegration from the traffic over the same. B represents the filling of tightly-rammed macadamized material, which is contained in the receptacles and the intervening spaces. C represents the top layer of gravel, or sand and gravel; and D is the gutter.

By the employment of proper material in the construction of the receptacles, and suitable modifications of the character of the filling, the invention is applicable to all kinds of uses to which a pavement is subjected, but especially is it valuable in the construction of the macadam or broken-rock pavement.

In the construction of this class of pavement I prepare the bed of the road upon the most approved general known plan, procuring a smooth and firm surface. The receptacles are then laid in alternating rows, and the

rock introduced into the openings and well rammed—say, to within an inch or two of the surface. The rest of the distance is then filled with gravel, or sand and gravel, and again rammed, and, finally, a coating of an inch or two of gravel and sand placed thereon, and the vehicles then admitted, which, in their passage over the same, soon brings the surface to a smooth solid pavement. In constructing the receptacles, I may make them of any desired shape, and with or without a bottom, according to the character of the road-bed. The size, depth, and thickness of the cylinders, or other shaped receptacles, will be regulated by the material to be used in their construction, as well as the weight of the traffic. As to the best form of material used in the construction of the receptacles, I prefer the best class of artificial stone, as it may be easily molded, can be made very hard, and is of cheap production.

By means of the above construction of pavement it will be seen that the receptacles act in the nature of binders to hold the material, which, although forming a good road-bed, is liable, under ordinary circumstances, to become loose and tossed about from the action of travel, producing ruts in the road and damage to the vehicles.

My invention obviates this sinking and spreading of the material, and the consequent formation of ruts, and, being smooth, it will be free from the pounding and wear of the material by the passage of the vehicles incident to the ordinary mode of construction, and thereby requires but little repair. The top dressing of gravel prevents the rising of dust, and co-operates to form a cheap, durable, and pleasant road to travel upon.

I am aware of the fact that iron receptacles have been used with a filling of broken stone; but this is objectionable, in that the iron does not wear down level with the rock, and the pavement is soon a series of holes, formed by the projecting edges of the iron, which makes the travel rough, and is certain to injure the horse's hoofs. By using earthenware, however, it will be seen that it holds the material with sufficient tightness to form a practically solid surface, and yet wears away smoothly and uniformly with said material.

I do not claim the tubular receptacles of burnt clay or earthenware; neither do I claim a filling of cement, concrete, or paving composition; but

What I claim is—

The combination of the cylinders A, of artificial stone or analogous earthenware, with a filling of broken stone and a top-dressing of gravel and sand, substantially as and for the purpose described.

The above specification of my invention signed by me this 11th day of November, A. D. 1875

J. R. ABRAMS.

Witnesses:

SOLON C. KEMON,
CHAS. A. PETTIT.