

P. ZADIG.  
Paving-Blocks.

No. 153,187.

Patented July 21, 1874.

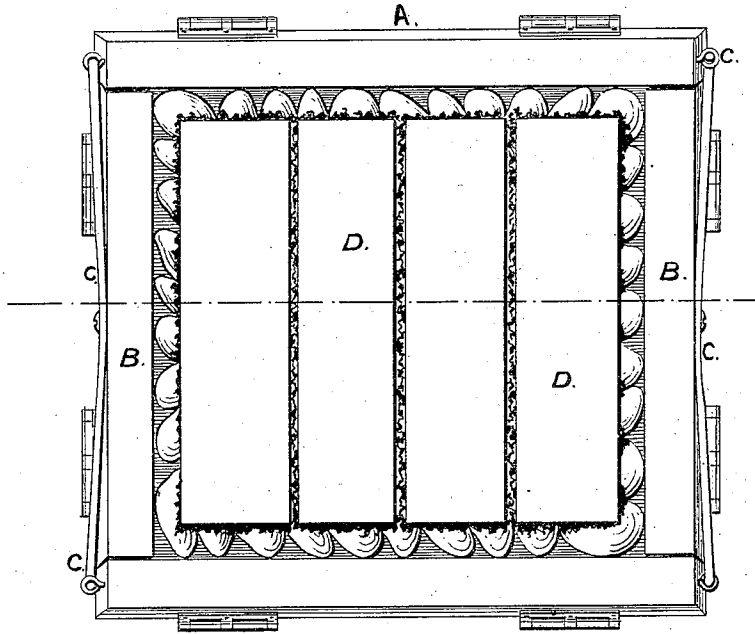


Fig. 1

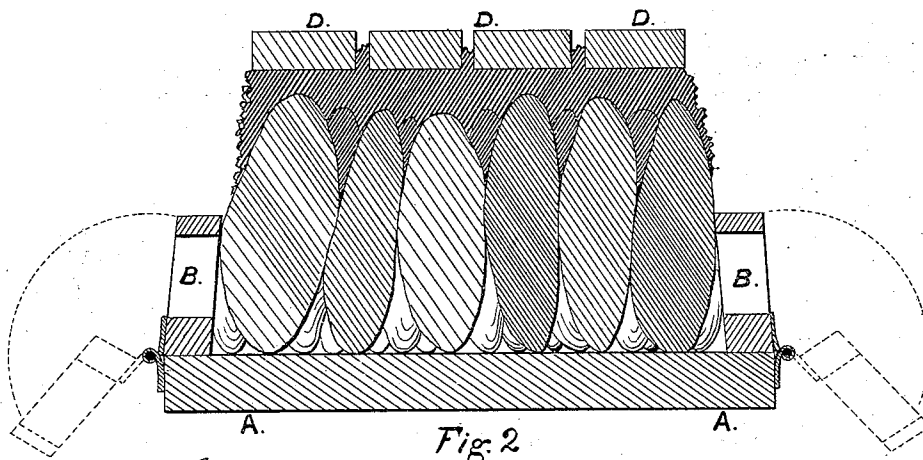


Fig. 2

*Edw. C. Osborn*  
Edward C. Osborn

*Philip Zadig*  
By *E. W. M. Smith,*  
*Atty.*

# UNITED STATES PATENT OFFICE.

PHILIP ZADIG, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN PAVING-BLOCKS.

Specification forming part of Letters Patent No. **153,187**, dated July 21, 1874; application filed February 10, 1874.

*To all whom it may concern:*

Be it known that I, PHILIP ZADIG, of San Francisco, in the county of San Francisco and State of California, have invented an Improvement in the Construction of Street-Pavements; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters marked thereon.

My invention consists, first, in the employment of cobble-stones placed in a form or flask of the desired dimensions, in which position they are embedded in and held by asphaltum, or a concrete of asphalt and gravel, the base of the block being of brick, and held also by the same material; second, to the flask or box in which the block is formed.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a bottom view of my improved paving-block in position in the flask or form in which it is constructed, with the sides of the flask closed. Fig. 2 is a vertical section, in which the dotted lines show the sides of the flask open.

In the building up of my paving-block I prefer to construct it broader at the top than at the base, and for holding the cobbles in position while the block is being prepared I have devised special means, consisting of a flask or form, A, having hinges at all four of its sides B, the sides being held by pivoted bars or clamps C, so that when the block is formed these sides can be lowered, and the block contained in the flask be placed in position without adhering to it. The box I construct of iron, the four sides being about four and one-half inches high, or of a height sufficient to hold the cobbles when packed in it a little above the point of the largest swell or circumference, so that when the box is turned bottom up in the act of placing the block in position no portion of it will be displaced until the door or sides are opened to release the whole. The sides of the form being now closed, I fill the space with cobble-stones set on end and packed closely, so that no lateral movement of the cobble is had, after which dry sand is scattered over them, and falls down so as to fill the spaces between to a depth of from one and one-half to two inches from the bottom of

the flask up, which prevents the stones from adhering to the flask when the block is turned bottom up for laying, and also furnishes a sand-packing around the body of the cobbles, to be held by a coating to be described hereinafter. In this position a cement of asphalt and gravel, tempered with coal-tar or other material usually employed to retain the adhesive properties of the asphalt, is poured upon the cobbles, which fills the spaces between and builds up the block to the desired height or thickness for the brick foundation. This consists of four bricks or tiles, D, embedded in asphaltum, and covering the entire bottom or surface in the inverted position of the block. The tiles or bricks may be of inferior quality, but are set firmly in asphalt or cement. The blocks being now built up and formed in the flasks, and the road-bed having been properly prepared with the usual crown, and the whole battered down with a mall, so as to render the foundation as compact as possible, the flask having the block is transported to the place where it is intended to be laid, when it is inverted or turned bottom up and the sides or doors opened, which releases the block. The blocks are placed in position, so as to break joints and leave spaces between the sides and ends of about three inches, which spaces are filled with asphalt and gravel up to the top edges of the door of the flask in its inverted position, which binds the blocks together laterally in a strong band from about midway down to its base, when the doors of the flask are unhooked, which permits it to be removed for another filling, after which the filling of the space remaining between the blocks may be completed with the same material.

It will here be observed that the unequal projections of the cobbles of the block upon its base are embedded in asphalt resting upon a flat surface of bricks or tile, while the upper surface of the block will be composed of projecting points upon a plane, with unfilled spaces between; and these spaces I now fill with hot asphalt or coal-tar, in which I place from ten to fifteen per cent. of lime-sweepings with gravel, so that only the tips or ends of the cobble are visible.

In the construction of my pavement nothing is relied upon for the adhesiveness of the as-

phaltum to the cobble-stones, but much depends upon embedding the cobble in a material which is immovable in itself, and which has become compact when set or cooled, rendering the cobble immovable, and at the same time having a solid foundation and a smooth surface. By this means the objection to the use of cobble-stones for paving streets, by reason of their upwardly-projecting points and the liability of being moved about by heavy traffic, is overcome, and the paving-block made firm, durable, and impervious to water.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A paving-block composed of cobble-stones, with a brick or tile foundation, D, when constructed and built up substantially in the manner as specified and shown.

2. The flask or form A, provided with hinged sides B and clamps C, substantially as and for the purpose specified and shown.

In witness whereof I have hereunto set my hand and seal.

PHILIP ZADIG. [L. S.]

Witnesses:

C. W. M. SMITH,  
S. P. WHITMAN.