S. BUTZ.

PAVING BLOCK.

APPLICATION FILED FEB. 17, 1909.

930,153.

Patented Aug. 3, 1909.

Fig. 1.

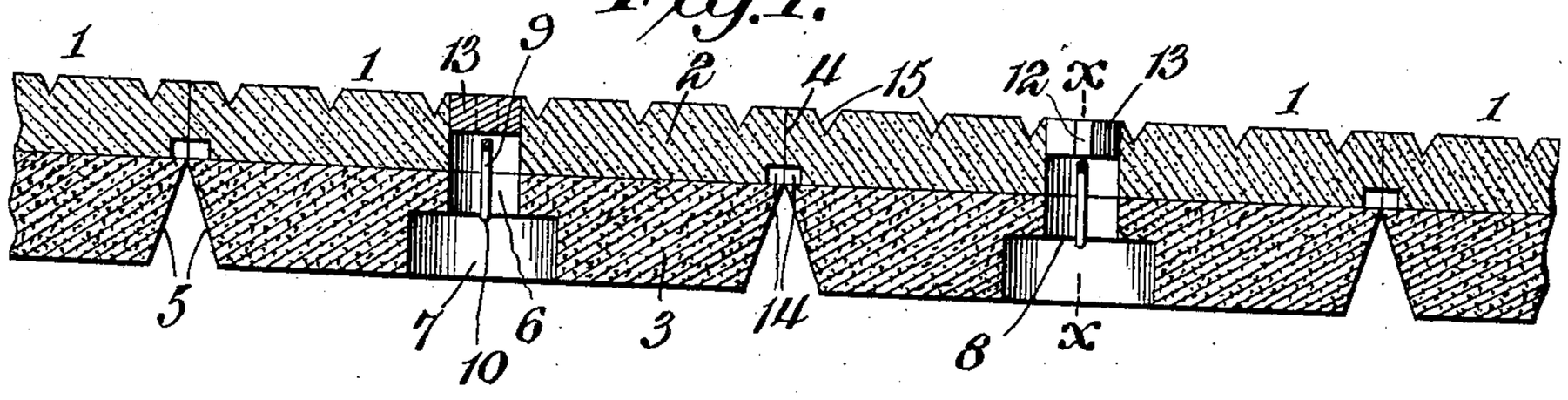


Fig. 2.

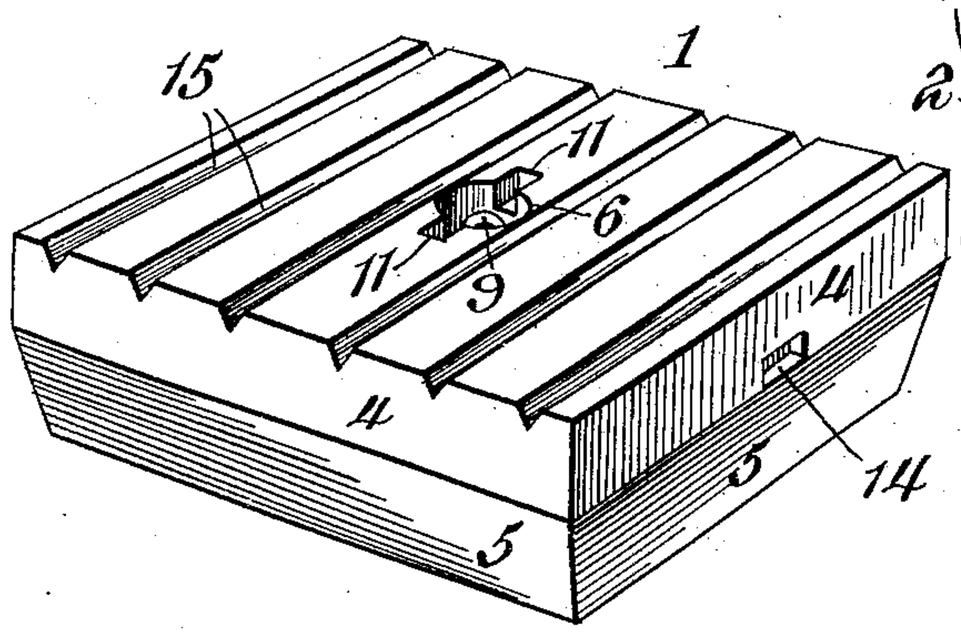


Fig. 3.

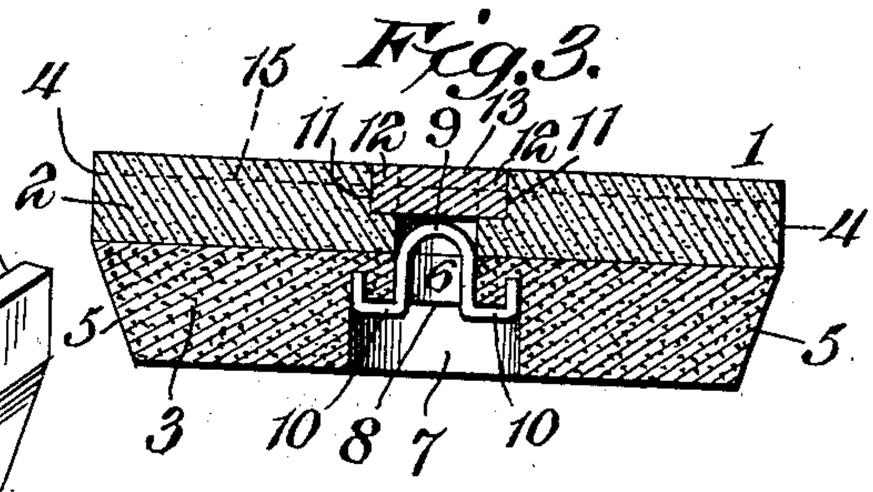


Fig. 5.

Fig. 4.

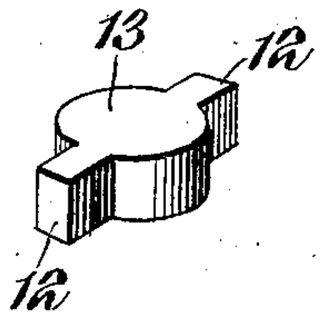
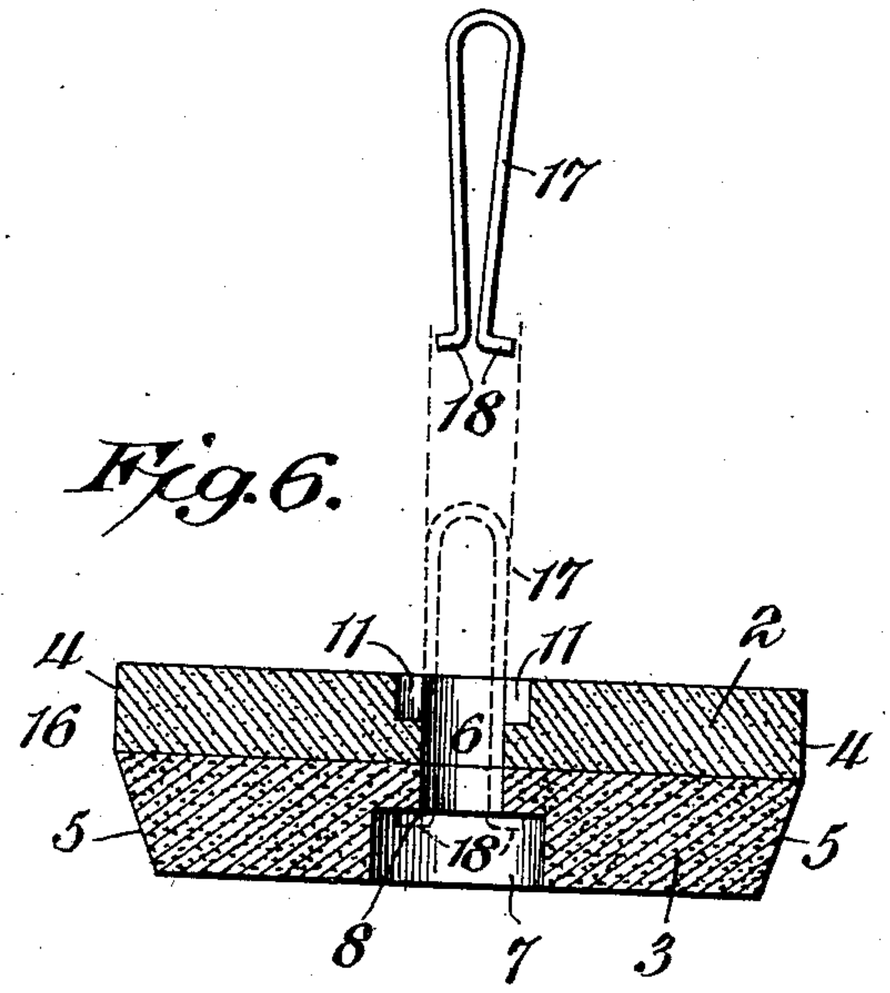


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

SAMUEL BUTZ, OF EASTON, PENNSYLVANIA.

PAVING-BLOCK.

No. 930,153. Specification of Letters Patent. Patented Aug. 3, 1909.

Application filed February 17, 1909. Serial No. 478,475.

To all whom it may concern:

Be it known that I, SAMUEL BUTZ, a citizen of the United States, residing at Easton, in the county of Northampton and State of Pennsylvania, have invented a new and useful Paving-Block, of which the following is a specification.

The invention relates to improvements in paving blocks.

The object of the present invention is to improve the construction of paving blocks, and to provide a simple and comparatively inexpensive paving block of great strength and durability, designed for use in paving both side walks and streets, and capable of being laid with the same facility as an ordinary paving block and of being readily taken up without injury in making either repairs to the pavement or in putting down or repairing pipes.

A further object of the invention is to provide a paving block of this character, adapted to be constructed either wholly of plastic material such as concrete or artificial stone or partially of such material, when it is desired to construct a pavement having an upper surface of concrete, wood, or other material, and capable, when a portion of the surface of a pavement is taken up or repaired, of enabling the same to be relaid as good as when first put down.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawing, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawing:—Figure 1 is a vertical sectional view of a portion of a pavement having a plurality of paving blocks, constructed in accordance with this invention. Fig. 2 is a perspective view of one of the paving blocks. Fig. 3 is a vertical sectional view on the line *x*—*x* of Fig. 1. Fig. 4 is a detail perspective view of the removable plug. Fig. 5 is a detail view of a removable tool-engaged member. Fig. 6 is a vertical sectional view of a paving block, illustrating a modification of the invention and adapted for use in connection with the removable tool-engaged member.

Like numerals of reference designate corresponding parts in all the figures of the drawing.

1 designates a paving block consisting of an approximately rectangular body composed of upper and lower portions or sections 2 and 3. The lower portion or base of the paving block is designed to be constructed of cement, artificial stone, or other plastic material and while the upper portion or section of the body may be constructed of the same material as the lower section or portion, it is also designed to use asphalt, wood, or other material in the construction of the upper portion of the paving block. When the paving block is constructed wholly of plastic material, cement, sand and gravel may be advantageously employed in its construction. By constructing a composite paving block with the upper portion of a different material from the cement base, a block having a firm base or foundation and an upper surface to suit the requirements for a particular character of pavement is afforded. Also this construction will enable the type or character of the upper surface of the paving block to be readily changed when desired.

The upper section or portion of the paving block is rectangular, and is provided with vertical side edges or faces 4, and in practice the upper section will be at least four inches in depth or thickness so as to render the upper portion exceedingly strong, and reduce to a minimum the liability to crack. Also the straight vertical edges permit the paving blocks to be fitted squarely against each other and afford a firm pavement. The lower portion or base 3 of the paving block is tapered downwardly and is provided with inclined side edges or faces 5, extending downwardly and inwardly from the vertical upper edges 4 and spacing the lower portions of the contiguous paving blocks from each other to eliminate friction and to permit the material of the bed of the pavement to extend upward between the blocks, the latter being adapted to be partially embedded in sand, or other material constituting the bed of the pavement. The tapered lower portion of the paving block also facilitates an easy removal of the same from a pavement, when

it is desired to repair the same, or to take up portions thereof for laying or repairing pipes, conduits, etc.

The block 1, which may be made of any size, is designed to be equipped with one or more openings 6, extending entirely through the block and having a lower enlarged portion 7, forming an interior shoulder 8, arranged horizontally and located at an intermediate point between the ends of the opening. The opening is extended entirely through the block in order that any accumulation falling into the opening may pass entirely through the same. The shoulder 8 is formed in the lower section or base of the block when the latter is of composite form, and the block is equipped with a loop or member 9 having terminal portions 10, embedded in the material at the shoulder 8, as clearly illustrated in Fig. 3 of the drawing. The loop or member is substantially inverted U-shaped and is composed of two sides and a curved connecting top portion, the terminals or arms 10 of the sides being approximately L-shaped and consisting of horizontal and vertical portions, the horizontal portions being fitted against the shoulder 8 and the vertical ends being embedded in the material. The loop or member, which extends upward from the shoulder is adapted to be engaged by a suitable tool for enabling the paving block to be lifted clear of the pavement without chipping, or otherwise injuring it.

The block is provided at the upper end of the opening with opposite notches 11, formed in the upper surface of the block and extending in opposite directions therefrom and arranged to receive lugs or wings 12 of a plug 13, fitted in the upper portion of the vertical opening 7 and forming a closure for the same and adapted to protect the loop or member. The plug 13, which may be constructed of any suitable material, is adapted to be removed to afford access to the opening 7 and the loop or member 9. The blocks are also preferably provided at opposite sides with notches or recesses 14, adapted to enable the block to be engaged by stone dogs in the usual manner in handling the block. The block is also provided with a roughened upper face, which may be formed by shallow parallel grooves 15, V-shaped in cross section, as clearly illustrated in Figs. 1 and 2 of the drawing, but any other form of roughened upper surface may be provided.

In Figs. 5 and 6 is illustrated a modification of the invention, the block 16 being equipped with a removable loop or member 17, approximately inverted U-shaped and having terminal outwardly extending approximately horizontal portions 18, arranged to fit against and engage the shoulder 8 and the opening 7, as illustrated in dotted lines in Fig. 6. The opening 7 is constructed the same as that heretofore described and is provided with opposite upper notches 11 and is adapted to receive a removable plug or closure 13. When the plug or closure is removed, the loop or member 17 may be engaged with the block 16. The sides of the loop or member are compressed, as shown in Fig. 5, to permit the laterally extending terminals 18 to pass through the upper contracted portion of the opening 7. The resiliency of the metal of which the loop or member 17 is constructed is adapted to permit this operation and will maintain the said loop or member in engagement with the block. The loop or member 17 is of a length to extend through and project above the opening 7, and it may be engaged by any suitable tool. After a block has been removed and replaced, the loop or member 17 may be detached and the plug replaced in the opening.

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

1. A block of the class described provided with an opening enlarged at the lower portion and provided with an intermediate shoulder, said block being also provided at the upper end of the opening with superficial notches extending from the opening, and a plug fitting within and forming a closure for the opening and having lugs or wings extending into the notches and supporting the block in the upper portion of the opening.

2. A block of the class described composed of upper and lower sections or portions, said block being also provided with an opening enlarged at the lower portion and providing an interior shoulder formed in the lower section or portion of the block and arranged to be engaged by a device for removing the block, whereby the block may be removed without separating the upper and lower sections.

3. A block of the class described provided with an opening enlarged at the lower portion to form an intermediate shoulder, and a tool-engaged member located entirely within said opening and having a portion fitted against the said shoulder.

4. A block of the class described provided with an opening enlarged at the lower portion to form an intermediate shoulder, and a loop or member having terminal arms or portions extended laterally so as to engage with the said shoulder.

5. A block of the class described provided with an opening enlarged at the lower portion to form an intermediate shoulder, and an approximately U-shaped loop or member having terminal portions extending in opposite directions and fitted against the said shoulder.

6. A block of the class described provided with an opening enlarged at the lower por-

tion to form an intermediate shoulder, and a loop or member located within the opening and having terminal arms or portions fitting against the said shoulder and extended beyond the same and embedded in the block.

7. A block of the class described provided with an opening, a substantially U-shaped loop or member located entirely within the opening and provided with terminal portions embedded in the block, and a closure fitted in the opening above the loop or member.

8. A block of the class described provided with an opening and having superficial recesses at the top thereof, a substantially U-shaped loop or member located within the opening and having terminal portions extended beyond the opening and embedded in the block, and a plug fitted in the opening above the loop or member and having lugs or wings extending into the said notches.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

SAMUEL BUTZ.

Witnesses:
CHARLES J. KNOWLES,
JOHN S. NOBLE.