

L. W. MULFORD.
SIDEWALK, VAULT LIGHT, SKYLIGHT, OR FLOOR LIGHT CONSTRUCTION.
APPLICATION FILED JULY 29, 1911.

1,052,084.

Patented Feb. 4, 1913.

Fig. 1.

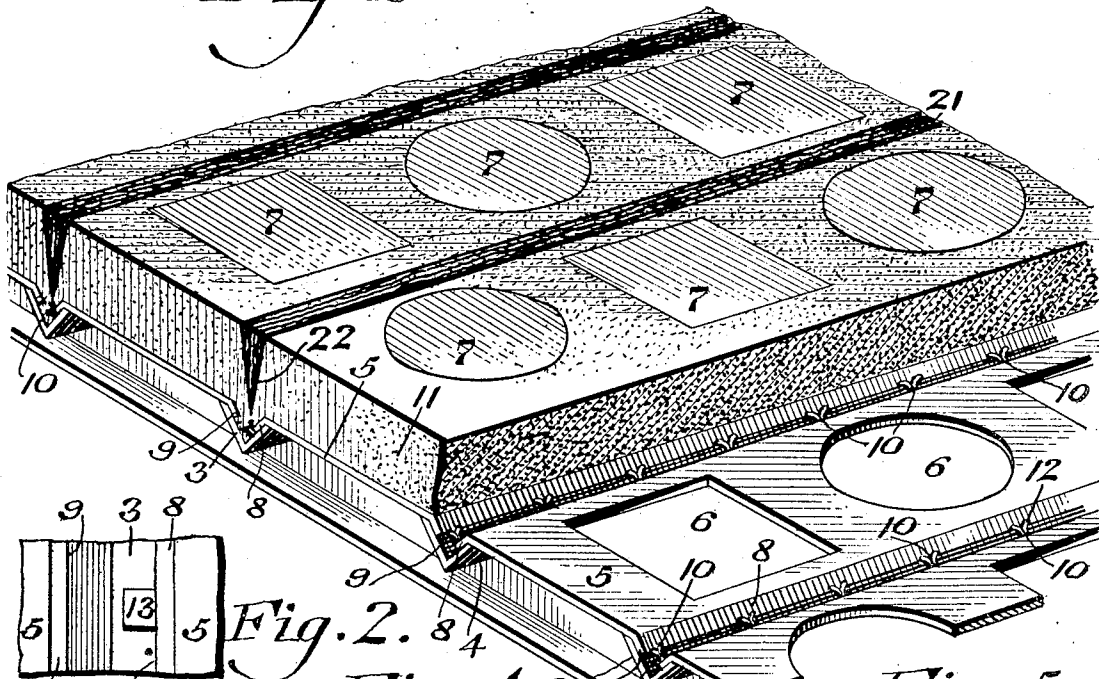


Fig. 2.

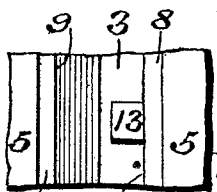


Fig. 3.



Fig. 4.

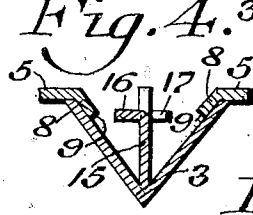


Fig. 5.

Fig. 6.

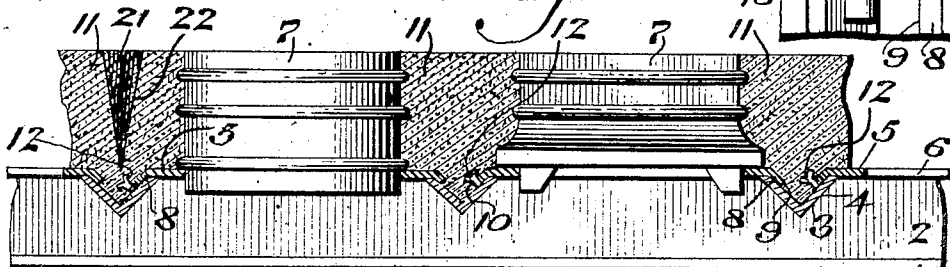
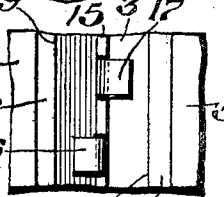
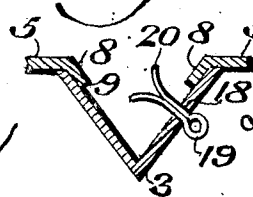


Fig. 7.



WITNESSES

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LOGAN WILLARD MULFORD, OF NARBERTH, PENNSYLVANIA, ASSIGNOR TO AMERICAN BAR LOCK COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

SIDEWALK, VAULT-LIGHT, SKYLIGHT, OR FLOOR-LIGHT CONSTRUCTION.

1,052,084.

Specification of Letters Patent.

Patented Feb. 4, 1913.

Application filed July 29, 1911. Serial No. 641,238.

To all whom it may concern:

Be it known that I, LOGAN WILLARD MULFORD, a citizen of the United States, residing at Narberth, county of Montgomery, State of Pennsylvania, have invented a new and useful Sidewalk, Vault-Light, Skylight, or Floor-Light Construction, of which the following is a specification.

My present invention relates to a sidewalk, vaultlight, skylight or floorlight construction in which the tiles or lenses are supported in any desired manner.

My invention in its broad and generic scope consists of novel means for preventing irregular relative longitudinal creeping or other movement of the concrete, and for preventing the separation of the concrete from its supports or its relative outward movement with respect to the supports.

It further consists of a novel sidewalk, vaultlight, skylight or floorlight, in which grooved supporting bars carry projections integral therewith or separate therefrom and secured thereto in any desired manner, whereby a bond is formed with the concrete in order to positively anchor the same, and my invention in its broad scope also comprises any means in conjunction with primary and secondary bars and lens carrying plates carried by the secondary bars, which form an anchor for the concrete in such a construction.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

For the purpose of illustrating my invention, I have shown in the accompanying drawings one form thereof which is at present preferred by me, since the same has been found in practice to give satisfactory and reliable results, although it is to be understood that the various instrumentalities of which my invention consists can be variously arranged and organized and that my invention is not limited to the precise arrangement and organization of these instrumentalities as herein shown and described.

Figure 1 represents a perspective view of a skylight, vaultlight and floorlight embodying my invention. Fig. 2 represents a plan view of another embodiment of my invention. Fig. 3 represents a sectional elevation of Fig. 2. Fig. 4 represents a sec-

tional elevation of another embodiment of my invention. Fig. 5 represents a plan view of Fig. 4. Fig. 6 represents a sectional elevation of Fig. 1. Fig. 7 represents a sectional elevation of another embodiment of my invention.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings:—I have preferred to illustrate my present novel invention containing anchoring elements in conjunction with a structure such as is disclosed in one of my copending applications, Serial No. 632,549, filed June 12th, 1911, for sidewalk, floor, vault and rooflight construction, wherein I have described and broadly claimed a novel sidewalk, floor, vault and rooflight construction, but it is of course to be understood that my present invention is not limited to use in conjunction with a construction such as is illustrated, but is adapted to be employed with any desired or conventional type of sidewalk, floor or vault light construction.

I designate primary spacing bars, which may be of any desired or conventional type, but which in the present instance I have preferred to illustrate as comprising inverted T-shaped bars, the upwardly extending stem 2 of which, is adapted to carry the secondary bars 3, and for the purpose of showing one manner of spacing or supporting such bars, I have shown the inverted T bar 1 as having its web 2 notched or recessed as is indicated at 4, thereby adapting the same to receive the secondary bars 3, which may be of any desired or conventional form. The primary bars 1 are adapted to be supported in the usual manner in the vault, room or building where the construction is to be installed.

5 designates plates of metal or other desired material which are provided with apertures 6 of any desired contour, thereby adapting same to receive the lenses or tiles 7, the contour of which may vary as desired, and in the present instance I have shown the plate 5, for the purpose of illustration, as being adapted to receive either a round or a square lens. The plates 5 are adapted to seat on the upper face of the secondary bars 3, and in the present instance they are seated on the upper face of

one of the angles of the V-shaped bar illustrated, and are provided at their opposite edges with the downwardly deflected portions 8, which engage the side of the angle, and terminate a desired distance from the bottom of the recess or groove formed in the secondary bars, such extensions in the present instance terminating as indicated at 9. The secondary bars 3 are provided with anchoring elements 10, the construction of which may vary widely in practice, and in Figs. 2, 3, 4, 5, and 7 I have shown practical modifications thereof, it being understood that my invention in its broad and generic scope embodies any type of an anchoring element which is adapted to extend into the concrete 11 or other binding material employed so as to prevent the irregular movement of the concrete or to prevent a separation of the concrete from the construction.

In Figs. 1 and 6, I have shown the anchoring element 10 as comprising a rod or pin extending from one of the secondary bars 3 and provided with a plurality of prongs 12. In Figs. 2 and 3 I have shown the secondary bar as having a portion 13 thereof inwardly deflected at suitable intervals along the bar. In Fig. 4 I have shown a different type of a secondary bar 3, which is provided with an upwardly extending web or rib 15, the upper end of which at desired intervals is provided with a deflected portion 16, and if desired it may be provided with a deflected portion 17 as will be readily apparent by reference to Figs. 4 and 5, it being understood that the deflected portions may be spaced from each other as desired. In Fig. 7, I have shown another manner of forming an anchoring element in which the secondary bar 3 is provided with apertures 18, through which is adapted to pass a split pin 19, the ends of which are deflected as indicated at 20 in the usual manner, whereby the inner ends of the pin form an anchoring element and are also prevented from disengaging with the secondary bar 3.

I provide a novel expansible joint to prevent leakage of water through the construction. At desired distances apart, I provide a waterproof composition 21, which is seated in a V or other shaped groove 22, said groove being located in alinement with the secondary bar. The groove 22 preferably terminates a desired distance from the bottom of the secondary bar and in case any liquid leaks into the groove 22, which in practice is open at its lower end due to the expansion or contraction of concrete, such liquid will be retained within the chamber formed by the secondary bar and prevented from passing through the construction. The plates 5 are preferably longitudinally adjustable on the secondary bars 3 and are

spaced by such bars. Any desired type of lens may be employed and the same may interlock with the concrete in any desired manner. After the construction is completed, and the concrete or other binding material is in place, it will be apparent that the anchoring element of any desired construction will form a bond with the concrete or binding material in such a manner that the irregular movement of the concrete will be prevented.

Attention is directed to my novel anchoring elements, which give many very advantageous results in practice. They serve as a reinforcement to the concrete and they also serve to maintain both laterally and longitudinally the uniform movement of the concrete so that the concrete is prevented from separation and cracking. In addition, the anchoring elements serve as a bond between the concrete and the supporting members and lock or tie the same together. My novel anchoring elements may be employed to advantage in conjunction with any form of sidewalk, floor, skylight or rooflight construction.

It will now be apparent that I have devised a novel and useful construction of a sidewalk, vaultlight, skylight or floorlight, which embodies the features of advantage enumerated as desirable in the statement of the invention and the above description, and while I have, in the present instance, shown and described a preferred embodiment thereof which has been found in practice to give satisfactory and reliable results, it is to be understood that the same is susceptible of modification in various particulars without departing from the spirit or scope of the invention or sacrificing any of its advantages.

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

1. In a sidewalk, vaultlight, skylight, or floorlight construction, primary bars, secondary bars carried thereby, anchoring elements carried by the secondary bars, lens supporting plates, carried by the secondary bars, lenses for said plates, and binding material embedding the lenses and the anchoring elements whereby said plates are prevented from separating from said secondary bars.

2. In a sidewalk, vaultlight, skylight or floorlight construction, primary bars, secondary bars carried thereby, lens supporting plates seated on the secondary bars, anchoring elements, lenses supported by said plates, and binding material embedding the anchoring elements and the lenses whereby said plates are prevented from separating from said secondary bars.

3. In a sidewalk, vaultlight, skylight, or floorlight construction, primary bars, sec-

ondary grooved bars carried thereby, anchoring elements carried by the bars, and extending into the groove thereof, lens supporting plates carried by the secondary bars, lenses for said plates, and binding material embedding the lenses and the anchoring elements and filling the grooves of the secondary bars.

4. In a sidewalk, vaultlight, skylight, or floorlight construction, primary bars, secondary grooved bars carried thereby, anchoring elements carried by the bars, and extending into the groove thereof, lens supporting plates carried by the secondary bars, lenses for said plates, and means for forming an expansible joint in the binding

material in alinement with one of said grooves.

5. In a sidewalk, vaultlight, skylight or floorlight construction, primary bars, secondary grooved bars carried thereby and having integral portions thereof deflected into the grooves of such secondary bars, apertured plates carried by the secondary bars, lenses covering the apertures, and binding material filling the grooves in the secondary bars and embedding the lenses.

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Witnesses:

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