No. 867,650. PATENTED OCT. 8, 1907.

J. B. FRENCH.

ILLUMINATING TILE.

APPLICATION FILED MAY 20, 1905.

Fig. 1.

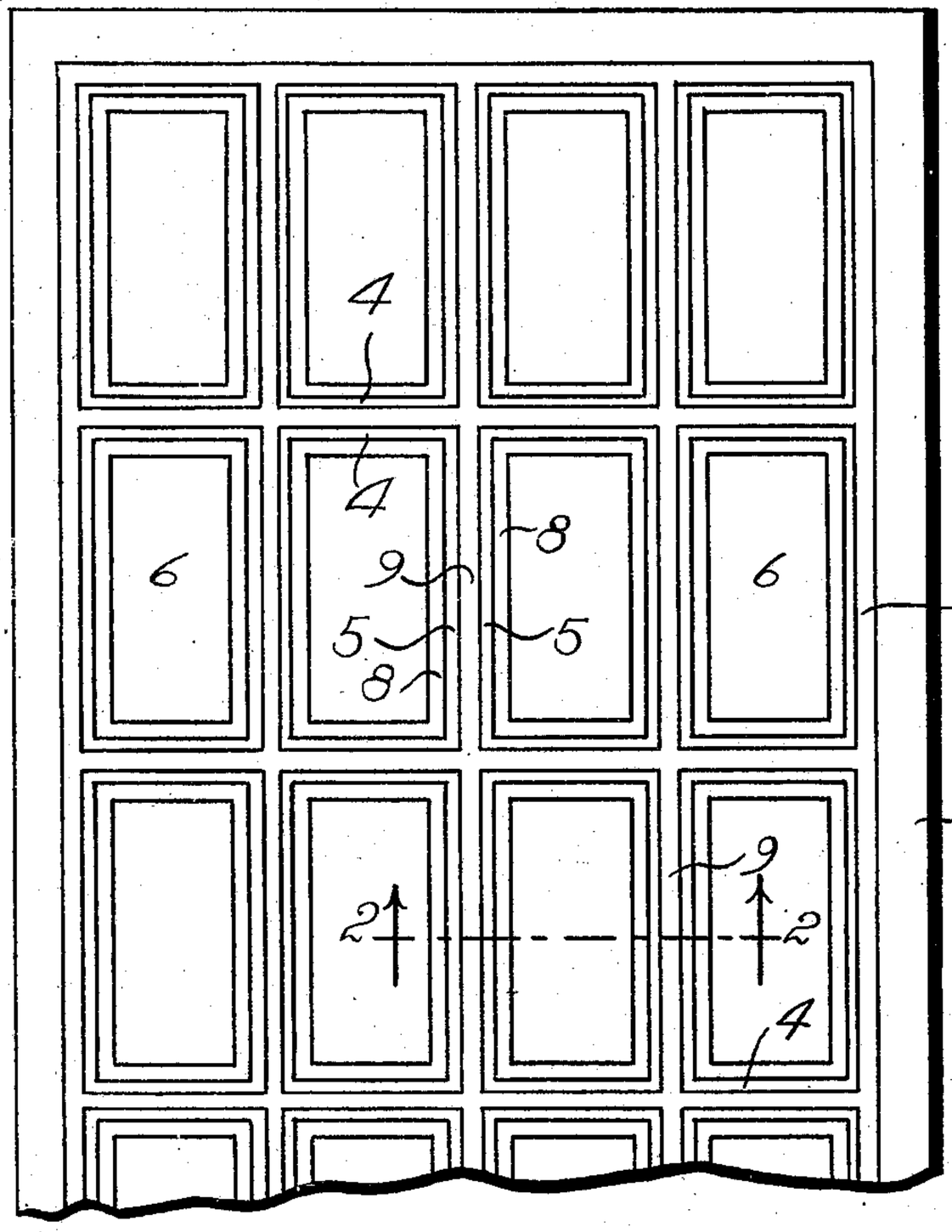
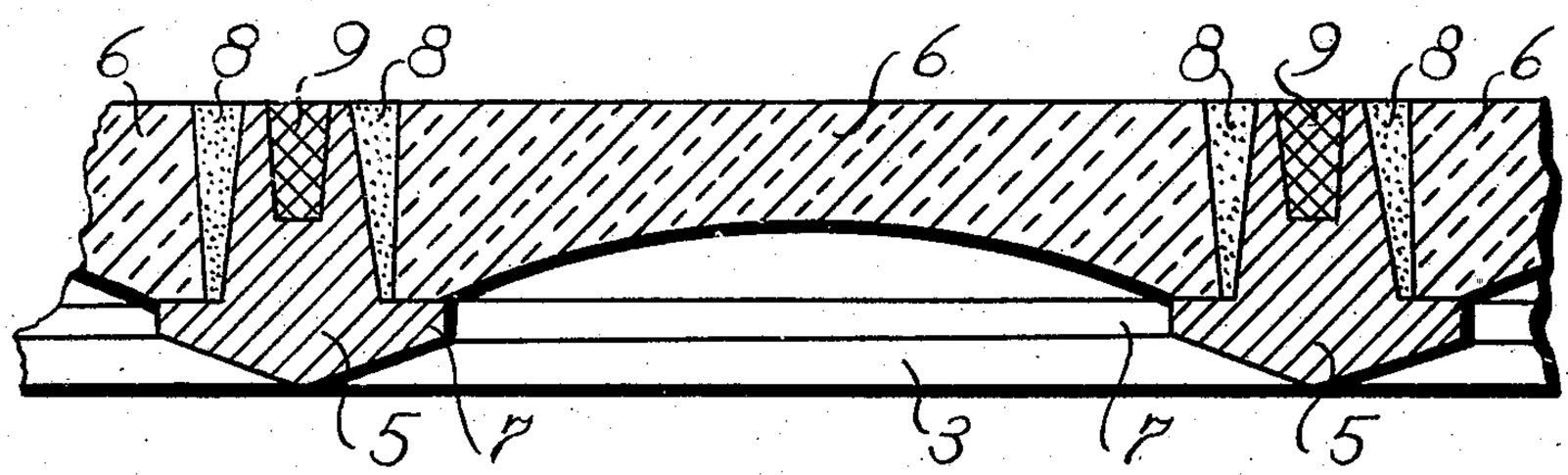


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES BARRETT FRENCH, OF CHICAGO, ILLINOIS.

ILLUMINATING-TILE.

No. 867,650 Specification of Letters Patent. Patented Oct. 8, 1907.

Application filed May 20, 1905. Serial No. 261,451.

To all whom it may concern:

Be it known that I, JAMES BARRETT FRENCH, a citizen of the United States of America, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Illuminating-Tiles, of which the following is a specification.

The main objects of this invention are to provide an improved form of illuminating tile for floors and sidewalks in which each light of glass will be individually surrounded by a friction surface in such manner as to render the same safe to the tread of persons passing over it; and to provide an improved construction for devices of this class whereby through the use of a minimum amount of safety tread material a proportionately large area of illuminating surface may be had and whereby injury to the glass, through unequal expansion of said glass and the supporting frame, is prevented. I accomplish these objects by the device shown in the accompanying drawings, in which:

Figure 1 is a top plan partly broken away, of an illuminating tile constructed according to my invention. Fig. 2 is an enlarged transverse section of the same on the line 2—2 of Fig. 1, also partly broken away.

In the construction shown in the drawings, the supporting frame or grating 3 consists of a rectangular cast iron frame subdivided by means of a plurality of integral intersecting cross-bars 4 and 5 forming a plurality of rectangular light apertures. Each of the light apertures is surrounded by an inwardly extending ledge or shoulder 7 near the lower surface of the grating for supporting the lights of glass 6. Each light of glass is preferably somewhat smaller than its individual frame and has inclined sides. The lights are placed in their frames with their large end downward. The inner bounding sides of the individual frames are inclined, the opening being widest at the top. The glass lights 6 are securely fastened in their frames by means of a surrounding layer of cement 8. This cement is adapted to yield and prevents the glass from cracking due to the unequal expansion of the glass and the metal of the grating, under changes of temperature. The upper surface of the side and end bars of the frame 3 and the upper surface of each of the cross-bars 4 and 5 is grooved, and said grooves are filled with lead 9 which forms a strip or boundary of lead extending individually around each light. This lead is softer than either the metal frame, the glass lights, or the surrounding cement, and has the well-known property of preventing slipping and being safe to the tread of persons passing over the same.

The glass, cement, and metal frames become worn smooth by the passing of pedestrians, but each smooth surface is separated from the others by a strip of lead which prevents slipping as soon as the foot of the pedestrian comes in contact therewith. The cement which is used for securing the glass within the frames has the property of yielding and compensating for strains on the glass due to unequal expansion. The side bars and cross-bars of the grating are all integral with each other and all extend flush with the upper surface of the glass, so that in case the cement surrounding any light of glass should become cracked for any reason, the cracks will be confined to the particular band of cement. This prevents water from entering such cracks and causing the cracking to extend over large areas of the grating as is the case where the filling between the individual lights is made entirely of cement, with a mere supporting grating. Other features of advantage of the structure shown will readily appear from the drawings.

It will be seen that some of the details of the construction shown may be altered without departing from the spirit of my invention.

What I claim as my invention and desire to secure by Letters Patent, is:—

An illuminating tile comprising a plate having light apertures therein, intersecting cross bars formed integral with the plate and extending upwardly therefrom in the spaces between the light apertures, said cross bars being narrower than said spaces so as to provide ledges at each side of the bars, lights supported on said ledges, being spaced therefrom and flush with the upper surface thereof, each of said cross bars having a groove extending along its upper face and entirely around each light, a filling of cement in the spaces between said lights and cross bars, said cement completely surrounding each light, and a filling of friction material in said grooves, said friction material being softer than said lights and cross bars, and extending completely around the cement inclosing each light.

Signed at Chicago, this 18 day of May, 1905.

JAMES BARRETT FRENCH.

Witnesses:

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