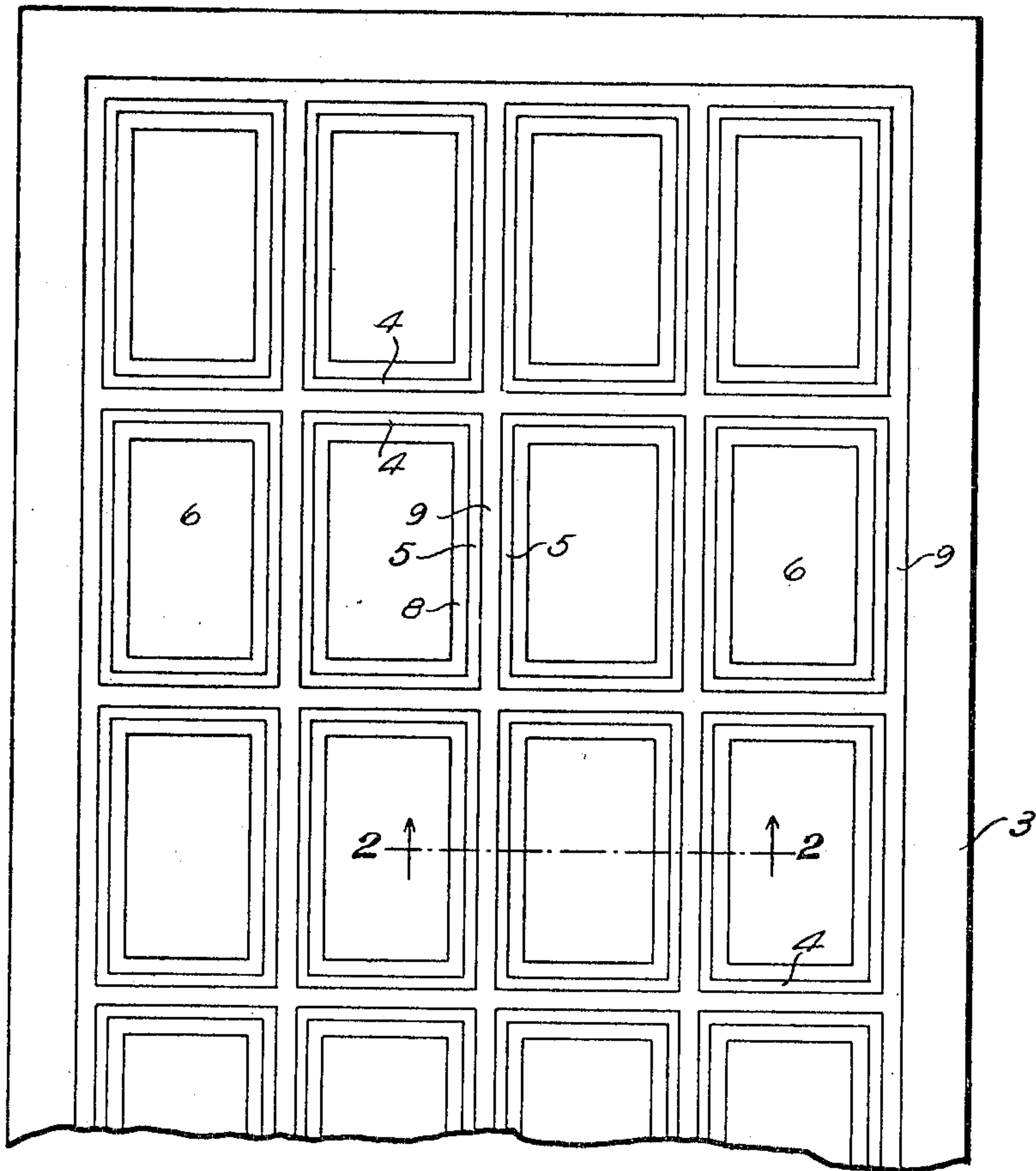


No. 871,793.

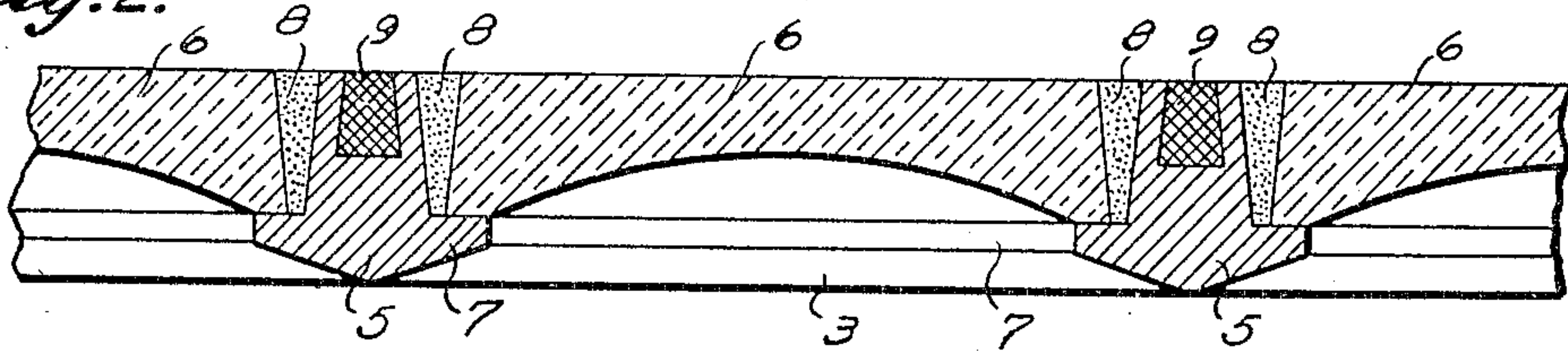
PATENTED NOV. 26, 1907.

J. B. FRENCH.  
ILLUMINATING TILE.  
APPLICATION FILED MAY 19, 1906.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

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# UNITED STATES PATENT OFFICE.

JAMES BARRETT FRENCH, OF CHICAGO, ILLINOIS.

## ILLUMINATING-TILE.

No. 871,793.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed May 19, 1906. Serial No. 317,714.

*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  
5 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  
10 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 which is firmly held in the metal framework, and which is not likely  
15 to have pieces thereof chipped off or broken out as is the case when the friction metal merely forms an inlay in the cement, or loosely rests in the metal frame or is interposed so as to bear both against the metal  
20 frame and the light; and to provide a strong and safe tile of this class having a large proportion of illuminating surface and friction surface. I accomplish these objects by the device shown in the accompanying drawings,  
25 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  
30 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  
35 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  
40 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  
45 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  
50 the glass from cracking on account of 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  
55 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-  
60 known property of preventing slipping and being safe to the tread of persons passing over the same.

The grooves containing the lead filling 9, are made of larger diameter at the base. 65 These grooves extend in continuous intersecting lines, as shown in Fig. 1. The metal framework will be cast with said grooves and the lead will be poured into the same in a molten condition for forming the continuous  
70 strips of lead or friction filling 9.

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 pre-  
75 vents 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  
80 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  
85 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 them to extend over large areas of the grating as is  
90 the case where the filling between individual lights is made entirely of cement at the upper surface, and is merely supported by a grating.

In the structure shown, the cement and 95 hard metal of the framework presented at the surface of the tile are of comparative small area. The width of the layer or strip of cement used is merely sufficient to properly hold the lights in the frame and to pro-  
100 vide for the necessary expansion and yielding, to prevent the glass from cracking. The width of the metal frame presented at the surface is merely sufficient to properly hold the friction filling 9, and to serve as a  
105 guard against excessive wear at the surface of the cement. This device thus presents a structure in which each individual glass light is entirely surrounded first by a comparatively narrow layer of cement, second  
110 by a comparatively narrow layer of hard metal and third by a comparatively wide

layer of friction material such as lead, and in which both the glass and lead are firmly held in position by the shape of the adjoining parts. The rectangular form of the lights  
5 and framework provides for using a comparatively narrow layer or strip of cement.

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

10 An illuminating tile comprising a grating having straight, intersecting cross-bars inclosing light apertures and extending upward and provided with ledges along their lower faces, lights supported by said ledges, spaced from said cross-bars and flush with  
15 the upper surfaces thereof, a filling of ce-

ment between each light and the surrounding parts of the grating, said grating being provided with straight, intersecting grooves in the upper face thereof, said grooves being of increased width below the tops thereof, and a 20 filling of soft metallic friction material entirely filling said grooves and extending in straight, intersecting lines so as to completely surround each of said lights.

Signed at Chicago this 17th day of May, 25 1906.

JAMES BARRETT FRENCH.

Witnesses:

L. A. SMITH,

WM. R. RUMMLER.