J. E. MEEK.

WATER TIGHT, SANITARY FLOOR FOR CARS AND SIMILAR STRUCTURES.

APPLICATION FILED NOV. 16, 1912.

1,091,073. Patented Mar. 24, 1914.

Fig. 1.

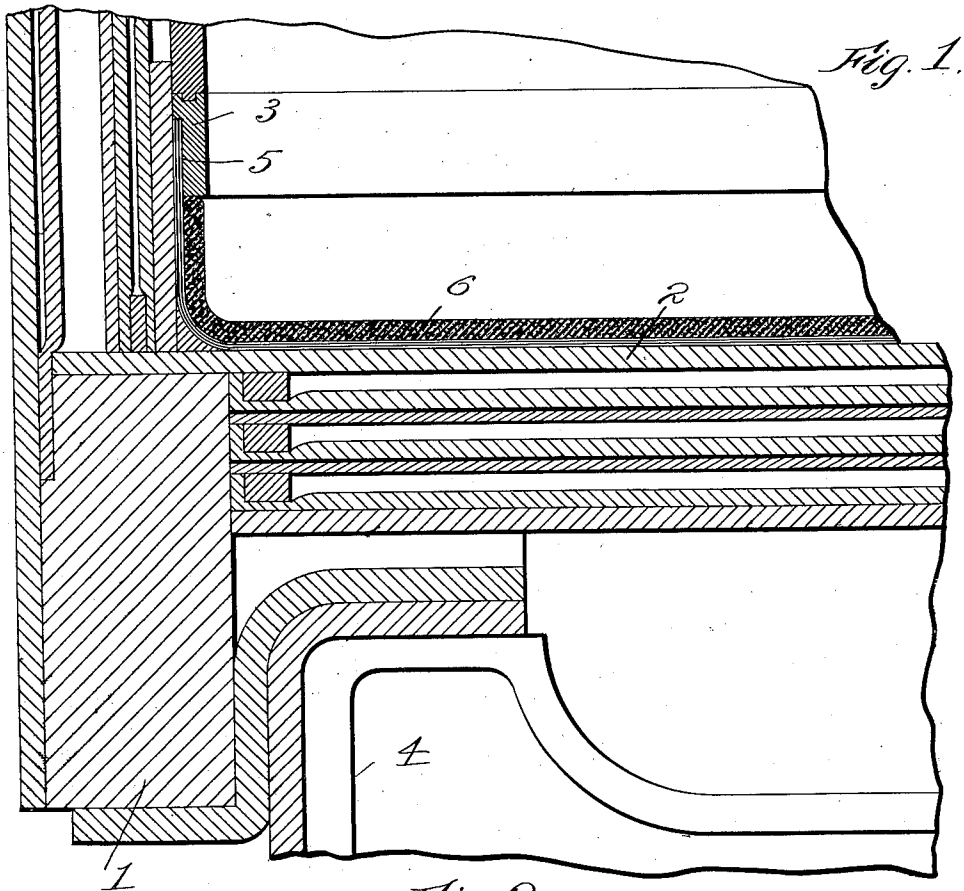
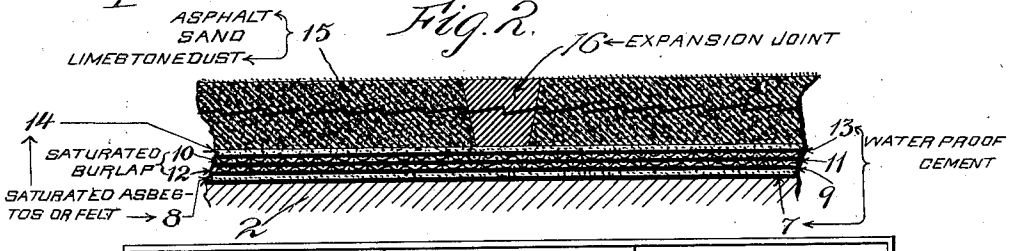


Fig. 2.



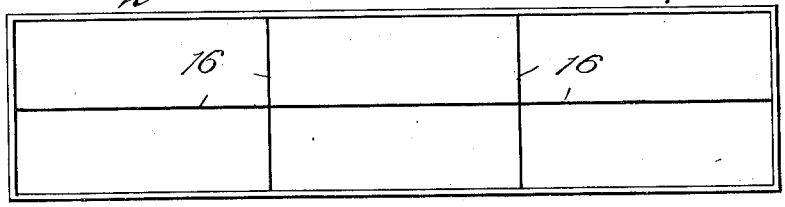


Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE.

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WATER-TIGHT, SANITARY FLOOR FOR CARS AND SIMILAR STRUCTURES.

1,091,073. Specification of Letters Patent. **Patented Mar. 24, 1914.**

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To all whom it may concern:

Be it known that I, JOHN E. MEEK, a citizen of the United States of America, residing at New York city, county and State of New York, have invented certain new and useful Improvements in Water-Tight, Sanitary Floors for Cars and Similar Structures, of which the following is a specification.

My invention relates to built up structures suitable for serving as surfacing for floors and the like and comprises a tough, water tight composite structure particularly adapted to serve as a floor covering for refrigerator, produce, dairy, beef, express, or passenger cars, etc., which would otherwise tend to rot rapidly from the effects of accumulated moisture.

The best form of construction embodying my invention at present known to me is shown in the accompanying sheet of drawing, in which,

Figure 1 is a detail cross section through a part of the floor and one side of a car provided with my improved floor covering. Fig. 2 is an enlarged detail cross section of said floor covering, and Fig. 3 is a diagram in plan showing the expansion joints.

Throughout the drawings like reference characters indicate like parts.

1 is a sill, 2 the top floor board, and 3 the inner side lining of a car, and 4 represents one of the bolsters supporting same. As shown, the lowest course of the inner lining 3, of plank is removed, and the lower edge of the lining undercut as at 5. Under this are inserted and securely fastened courses of flexible fabric and asbestos or other insulating felts, as well as the waterproofing compound which covers the lower portion of the walls and stretches across the floor of the car, forming a partially flexible waterproof fabric 6. This floor covering 6 is built up of asphalt or bituminous mastic, layers of textile fabric, asbestos or other saturated felts and a skeleton metallic reinforcement such as expanded metal or other suitable material, to produce a hard, tough, waterproof and water tight sheet that will not crack or leak under the severest conditions of use.

Preferably, as shown in Fig. 2, the structure is built up of a layer 7, of waterproofing cement, usually Trinidad asphalt or bituminous product, a sheet 8 of asbestos or other felt, saturated if desired with asphalt or other bituminous composition, another layer of the same cement 9, a layer of textile fabric 10 such as burlap which may be saturated with a bituminous compound, another layer 11 of cement and another layer 12 of the textile material, followed by a layer 13 of cement and a second layer 14 of asbestos or other saturated felts. On top is placed a thick layer 15 of reinforced mastic composed of asphalt or bituminous composition, sand and limestone dust, with a metal reinforcement embedded therein. The top surface of this mastic is finished off with fine sand which produces a hard surface on which racks may be laid without indenting it. Preferably I insert in the layer of mastic 15, one or more strips 16 of bitumen of a consistence different from that of the mastic, and much more elastic. Preferably I arrange these lengthwise and crosswise of the floor, as shown in the diagram, Fig. 3, and make them tapering in cross section, as shown in Figs. 1 and 2. These form expansion joints with the layer of mastic and permit it to twist with the twisting of the car floor when running over an uneven track, and also permit the mastic to expand or contract slightly without cracking. The structure so produced is tough and will not crack with the twisting of the car body. It is water tight and protects the sills and stringers of the car beneath it from the rotting effects of water produced by melting ice, etc. It has a hard finished surface which can be swept and scoured, and has the sanitary curve at the corners so that no filth can escape the cleansing action when the hose is turned on for washing out the car and the broom or scrubbing brush is plied.

Having, therefore, described my invention, I claim:

1. A hard, but flexible waterproof covering for floors of railroad cars and the like comprising in combination a bottom layer of cement, a top layer of hard mastic containing a metal reinforcement embedded therein, and an intermediate layer of fibrous fabric saturated with bituminous material.

2. A floor covering for railroad cars and the like comprising in combination a bottom layer of bituminous cement, a top layer of hard mastic, with strips of elastic bitumen

inset therein, and an intermediate layer of fabric saturated with bituminous material.

3. A floor covering for railroad cars and the like comprising in combination a bottom layer of bituminous cement, a top layer composed of panels of hard mastic with a skeleton metal reinforcement embedded therein and strips of elastic bitumen between said panels, and an intermediate layer comprising asbestos fabric saturated with bituminous materials.

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