J. H. MUNRO.

COVERING.

APPLICATION FILED NOV. 12, 1910.

1,173,678. Patented Feb. 29, 1916.

Fig. 1

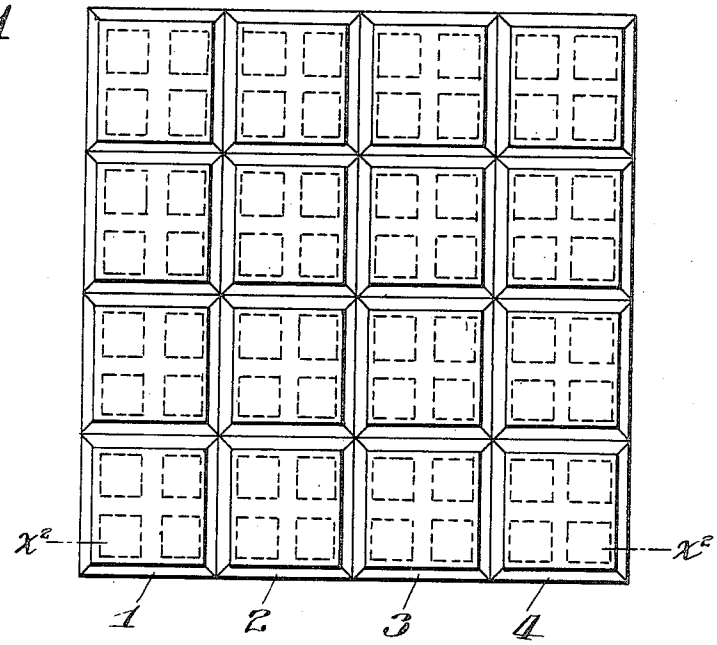
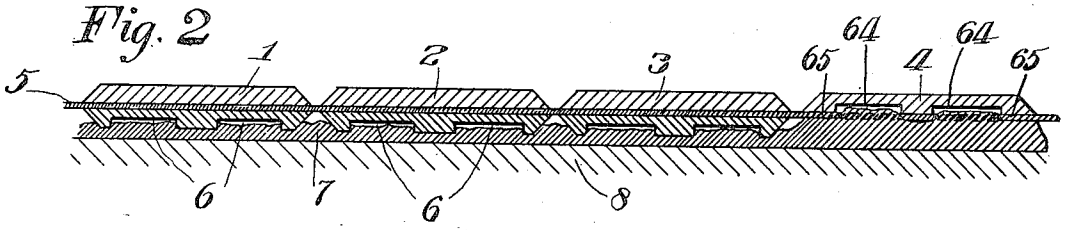


Fig. 2



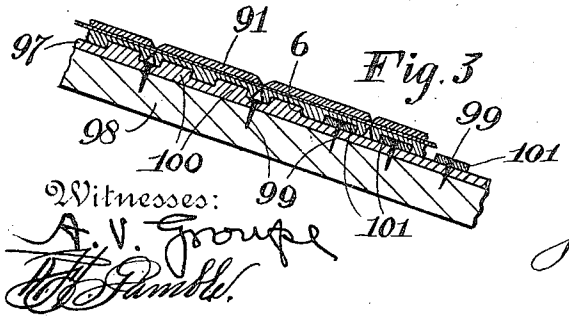
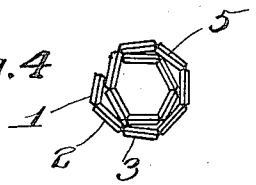


Fig. 3

Fig. 4



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES H. MUNRO, OF NEWARK, NEW JERSEY.

COVERING.

1,173,678. Specification of Letters Patent. Patented Feb. 29, 1916.

Application filed November 12, 1910. Serial No. 592,090.

To all whom it may concern:

Be it known that I, JAMES H. MUNRO, of Newark, New Jersey, have invented certain Improvements in Coverings, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings designating like parts.

This invention relates to coverings for surfaces such as floors, walls, ceilings, roofs and pavements, and is of particular utility when applied to floors or pavements requiring an effective and permanent covering of inexpensive original cost and upkeep, although I contemplate the use of my invention in any field for which it is adapted by its nature.

An important object of my invention is to provide tessellæ with recesses, to be embedded in suitable material such as pitch, the latter oozing up into the recesses instead of exuding between the tessellæ, this opening up to a new use the well-understood pitchy cements which are in such general use with other forms of covering, of a less permanent character.

Heretofore, on account of the tendency of pitch to become soft at relatively low temperatures, and to ooze up through the joints of the covering units, pitch has not been available for floors, pavements and similar situations where the dark color of the pitch would mar the appearance of the surface and cause objects to adhere thereto.

Among other important objects of my invention is the formation of these tessellæ of cement in sheets on flexible material, such as burlap, which join the tessellæ and permit them to be laid in unit sheets of several feet in length.

Still other important objects of my invention comprise the provision of means to hold the covering of recessed tessellæ in place upon inclined surfaces; and also means to permit the units to be rolled up for transportation and storage, as well as to adapt them to curved or warped surfaces.

The various features of my invention will be illustrated and described fully in the accompanying drawings and specification and pointed out in the claims.

In the drawings, Figure 1 is a plan view of portion of a covering in the construction of which my invention has been embodied; Fig. 2 is a view of a portion of a similar covering in vertical section, on an enlarged scale, taken on the line x^2—x^2, Fig. 1, and showing the covering in place. Fig. 3 is a view in vertical section showing a portion of my covering in place upon a roof, and illustrating the preferred mode of support in such installations; Fig. 4 is a view in end elevation of a unit of covering rolled up for storage or transportation.

In the embodiment of my invention selected for illustration and description to permit ready and complete understanding of my improvements, the parts designated by the reference numerals 1, 2, 3 and 4 are tessellæ of cement, formed in place upon a vehicle 5 of suitable fabric, such as burlap, the tessellæ having in accordance with an important feature of my invention, recesses 6, to receive the cementitious substance 7, in which the tessellæ are embedded, and which may be of any suitable material, preferably pitch, as that is cheap and its qualities are well understood by those skilled in the art of laying such coverings.

When the tessellæ are pressed into the bedding, the pitch 7 finds access to the recesses 6 which may be of the same general contour as that of the individual tessellæ, or may be of any suitable contour.

The recesses 6 will preferably be of suitable area and depth, and so located as to insure their reception of enough cement to avoid any undue tendency of the latter to exude to the surface of the covering at the joints between the tessellæ.

The thickness, composition and proportions of the tessellæ may vary with the requirements of individual installations and as one convenient arrangement I have shown the tessellæ 1, 2 and 3 as formed by compressing the cement on both sides of the layer of burlap 5, the meshes of that material being usually sufficiently coarse to permit an integral union of the upper and lower parts of the tessellæ, which may if desired be formed as indicated of somewhat finer material in the part exposed, and below the burlap of a material of coarse character which will unite readily with the bed 7 of such material as pitch, the latter being laid on any suitable support 8.

As one variation from the above form of tessellæ, they may be formed substantially as shown at 4 in Fig. 2, somewhat dished to form the recess 64 and joined peripherally to the burlap as at 65, so that the pitch will ooze up through the burlap into

the recess, and the burlap will aid in the retention of the tessellæ in place.

Fig. 3 illustrates a modified form of attachment for the covering 91 which is of particular utility when laid upon a slanting surface—such as the roof shown at 98, and to hold the covering from sliding down, I prefer to provide a suitable form of foundation 97 which may be secured to the roof, as by nails 99 and furnished with projections such as the integral knobs or strips 100, or separately formed disks 101 may be utilized, being transfixed by the nails 99, these projections, whatever their character, being constructed and arranged to enter the recesses 6, the tessellæ being of any suitable construction, herein shown as similar in essential respects to the tessellæ shown and described with reference to Fig. 1.

By forming the cement tessellæ 1, 2, 3, etc., upon a flexible connecting material 5 such as burlap I am enabled to roll up the sheets or strips of tessellæ as indicated in Fig. 4, for storage and transportation, thus affording a very convenient form of package.

Having illustrated and described my invention thus fully, and suitable means for carrying the same into effect, I wish it to be understood that I do not limit myself to the specific materials or construction shown and described by way of example, nor in general do I limit myself otherwise than as set forth in the claims, read in connection with this specification.

That I claim as new, and desire to secure by Letters Patent of the United States of America, is:—

1. A cement covering for floors, walls, roofs, pavements and similar surfaces; said covering comprising a sheet of refractory cement molded and cured as a unitary structure upon both sides of a flexible vehicle, and laid in a plastic bedding, said covering being molded superficially to form a wear-resisting surface presenting the effect of a multiplicity of tessellæ, and said tessellæ having their lower margins beneath said vehicle beveled away from their proximate edges to form cross channels to receive the bedding material and distribute it to said edge junctures, the lines of fracture, both lateral and transverse, being predetermined by said molding.

2. The novel method of forming a cement covering for floors, walls, roofs, pavements and similar surfaces; said method comprising the steps of molding a sheet of refractory cement superficially upon a flexible vehicle to form a wear resisting surface presenting the effect of a multiplicity of tessellæ, with the lower margins beneath said vehicle beveled away from their proximate edges to form cross channels; curing said sheet; and laying said sheet in a plastic bedding; said cross channels serving to receive the bedding material and distribute it to the edge junctures of said tessellæ, the lines of fracture of said sheet both radial and transverse being predetermined by said molding.

Signed at Newark in the county of Essex and State of New Jersey this 22nd day of October, 1910.

JAMES H. MUNRO.

Witnesses:
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