A. GEIGER.

COVERING FOR FLOORS, WALLS, &c.

APPLICATION FILED FEB. 17, 1909. RENEWED SEPT. 25, 1914.

1,179,088. Patented Apr. 11, 1916.

Fig. 1.

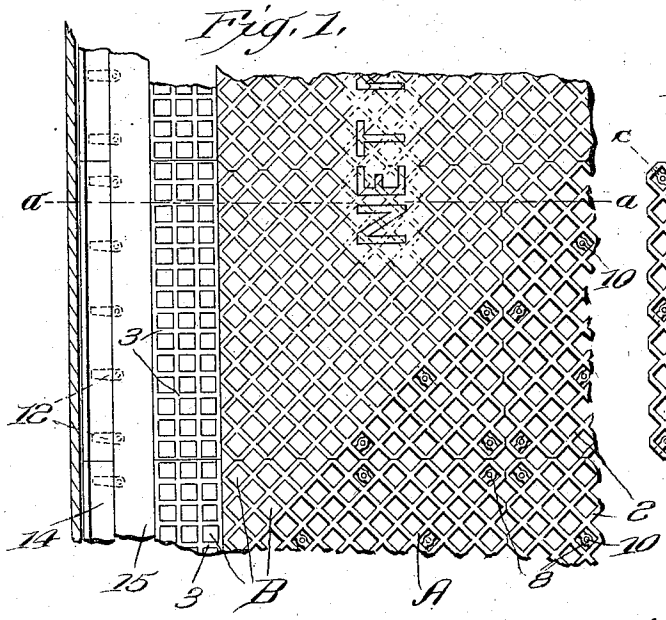


Fig. 5.

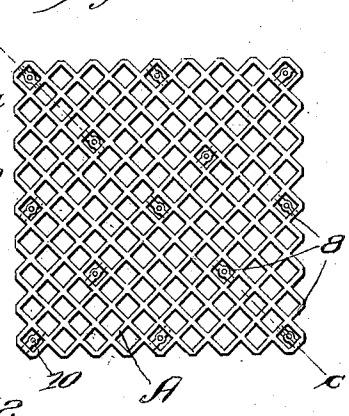


Fig. 6.

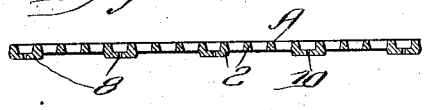
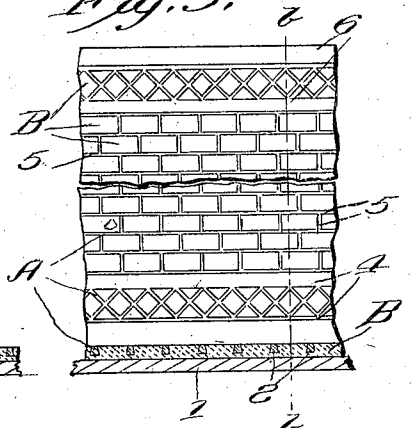


Fig. 3.



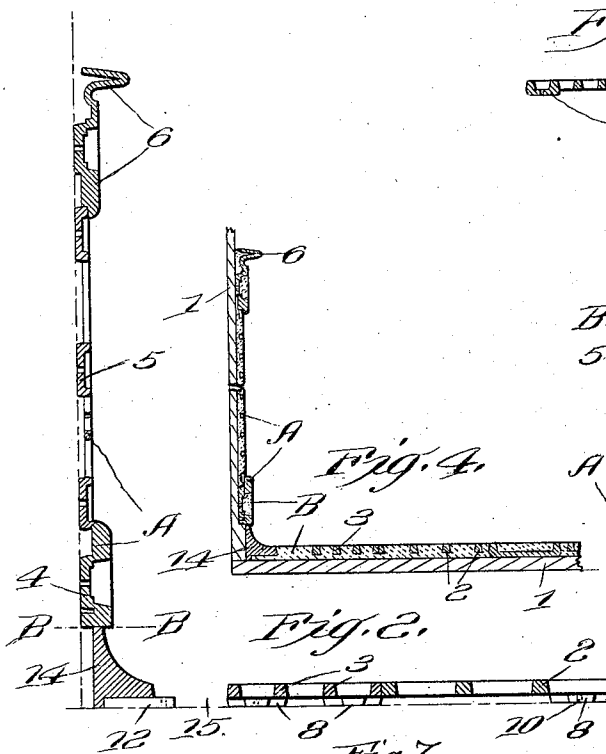
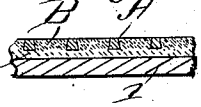


Fig. 7.



Witnesses:

J. W. Millward

M. L. Breslin

Inventor

Adolph Geiger.

By his Attorney

Alfred Wilkinson

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ADOLPH GEIGER, OF BROOKLYN, NEW YORK.

COVERING FOR FLOORS, WALLS, &c.

1,179,088. Specification of Letters Patent. Patented Apr. 11, 1916.

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To all whom it may concern:

Be it known that I, ADOLPH GEIGER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Coverings for Floors, Walls, &c., of which the following is a specification.

My invention relates to a covering for floors, walls or other surfaces and has in view the production of a covering of reinforced construction more successfully to withstand the conditions to which it is subjected and particularly in a form which will be simple, convenient and economical in its application.

My improved covering is composed of a plastic or semi-plastic, material, a desirable material being a magnesia oxychlorid composition which, owing to its compressibleness, is particularly adapted to the preferred form of my invention.

As hereinafter more fully explained, the essential feature of my invention consists of trellis or lattice-work sections adapted to be positioned on the surface to be covered and supported therefrom to provide the plane of the finished surface, after which a suitable filling material is applied to fill the interstices thereof to finish the covering, thus permitting the employment of comparatively unskilled labor. The formation of the sections may be varied to produce any desired design and the material used may be vari-colored and applied to produce various color combinations.

My invention is shown in the accompanying drawing in which the reference numerals of the description indicate corresponding parts in all the figures.

Figure 1 is a plan view of a floor illustrating the employment of my improved covering thereon. Fig. 2 is an enlarged sectional view on line *a*—*a* of Fig. 1 merely showing the assembled sections. Fig. 3 is an elevation of a floor, border, cove, base, wainscot and cap constructed in accordance with my invention. Fig. 4 is a sectional view on line *b*—*b* of Fig. 3. Fig. 5 is a plan view of a trellis or lattice-work section formed according to my invention and Fig. 6 is a cross sectional view of said section taken on line *c*—*c* of Fig. 5. Fig. 7 is a cross sectional view showing a modification thereof.

In the drawings is shown a construction of my improved floor and wall covering illustrating a characteristic form of my invention. On a base or foundation 1 of wood, concrete or other material the trellis-sections A are placed in position to provide the plane of the finished surface after which the filling material B is applied. The sections A may be formed to provide the trim as well as the plane surfaces of walls, floors, etc., without departing from my invention. In the drawings floor-sections 2, border-sections 3, base-sections 4, wainscot-sections 5 and the cap-sections 6 are shown formed to produce the desired designs and desirably offset or elevated from the surface to which they are applied, being provided for this purpose with suitable supports such as the integral lugs 8 shown. A preferable formation of the sections is by compression in suitable molds, where the nature of the material permits, thus rendering the sections of harder and stronger material to reinforce the covering; the resulting resistance to wear of the compressed material being very desirable when the sections are used in flooring. A desirable material is hereinafter described which is adapted to compression and sufficiently elastic to provide a soft tread for flooring.

The method desirably employed to apply my covering is by arranging a row of sections in position; permanently securing them, for instance by nail or screws fitted to the apertures 10 provided therefor in the supporting lugs and by pressing the filling substance through the interstices; repeating the operation until completed. Finally the surface is finished by any suitable means such as a scraper, plane or surfacing machine to produce a clear and smooth surface. If the covering is to be laid upon a foundation not adapted to the use of nails, such as concrete the sections may initially be secured in position by a trowel full of filling material or in any other suitable manner.

The sections as aforesaid are formed by pressing the material into suitable molds after which they are allowed to dry. The molds may be formed to produce sections of various designs but preferably the section ribs should, if desired for a reinforced tread for flooring, be of such a size that the heel of a shoe will always rest on the ribs of a section. As shown the section-ribs forming these figures have a trapeziform or wedge-

shaped section having the smallest side on top so the filling material will hold the net firmly in place if not otherwise secured. The off-setting or elevating of the sections permits the spreading out of the filler under the section-ribs to form a continuous layer or web between the sections and the foundation thus adding the bottom surface of the sections to the adhering area.

The sections, preferably of rectangular shape, are fitted together in any desirable way for instance if of diamond shaped design they may be arranged that the design may be jointed at the corners. Other figures might be jointed by leaving half of rib on one net and half on the other, like the border with squares in this drawing. Fig. 1 is shown containing a section representing a name plate. Other ornamentations to be used for borders or center pieces in parquetting or tile work can be made in accordance with my invention, also other forms or modifications. The size of the sections may be chosen so that when designed for floor covering the farthest opening can be reached and filled by hand.

The cove 14, a continuation of the flooring, may be separated from the base on line B—B to allow the floor-covering to expand. The small space 15 between border and cove sections may be left in order to allow for any existing irregularities at the wall and doing away with fitting the edge of the border-section to the edge of the cove. The cove sections are provided with dovetail-shaped ribs 12 upon which they rest, and the filler spreading between them makes it a jointless connection with the border and body of the flooring. Base, wainscoat and cap carried up on the walls of the room to any given height as shown in Fig. 3 are constructed of trellis-sections in the same manner and if suitable of the same material as the floor covering.

By using templets for filling the section-meshes, filling material of different colors may be applied to produce mosaic designs without waiting until the mass of one color has set. Designs thus produced resemble those laid in tiles, but contain no interstices, and floor covering of the material selected is warm to the feet and soft to the tread. This filling material may be cement or any other plastic substance of the consistency of mortar, preferably a magnesia oxychlorid composition for the reason that such cement has greater adhesive properties than other kinds and is more elastic and more durable and offers a better working surface to the finishing tool than other cement without any crevices or interstices. Besides, flooring of this composition is absolutely water and fire-proof, it is a non-conductor of heat and cold and deadens the sound as well as forming a perfect insulation for electric wires. It is preferred to use the same ingredients for both the sections and the filler thus effecting the most perfect bond between the sections and mosaics.

In Fig. 7 a modification is shown in which the section supporting lugs are omitted, the sections being supported by an initial layer of coarser material than that used for the filling. The sections in this construction may be laid upon this initial layer or sole 16 and the closer grained composition or filler applied thereafter to fill the openings. By reason of the use of an initial sole of this character, a saving in cost may be attained and the covering may be made more elastic which in the case of the foundation cracking would prevent the cracks penetrating the finished surface.

A composition of the nature which I have found to be very well adapted for this use consists of calcined pulverized magnesite mixed with a suitable filling such as wood-pulp, asbestos and coloring matter to which is added a liquid solution of magnesium chlorid. Harder filling materials such as pulverized quartz glass, marble, etc., may be successfully employed.

I have thus produced a covering of simple construction which can be laid fast and easy in any number of colors it being unnecessary to wait for the mass to set. Skilled labor, accompanied by increased cost, is not required to apply my improved covering as the sections are formed to provide the plane of the finished surface while the material used permits the sawing of the section-units to suit the size and shape of the floors, walls, etc., and can be finished with a plane or any other suitable tool. All material laid is permanent and forms a continuous layer, the use of similar materials insuring a perfect bond between the sections and filler, while the compression of the material forming the sections provides a reinforced tread or wearing surface especially suitable for flooring; compression while not essential being particularly effective on the employment of the preferred material described which is tough and elastic.

Having thus described my invention what I claim is,—

1. A homogeneous covering for floors, walls and the like formed of cementitious material and comprising trellis sections suitably supported to leave a communicating space thereunder and determining the plane of the finished covering and filling material molded therewith to secure and unite the sections in a continuous covering and to fill the interstices thereof.

2. A covering for floor surfaces comprising a series of trellis sections formed of compressed cementitious material to fit one against the other, said sections being pro-

vided with short feet to raise them from the surface, leaving a substantially continuous space beneath the sections, and of a filling of similar material completely filling the space under the sections and the interstices level with the upper surface of the sections.

3. A covering for floors, walls and the like consisting of lattice-work sections formed integrally of ribs with interstices between, means for maintaining the sections elevated above the surface to which they are applied, leaving a continuous space beneath the sections, and of a filling applied completely to fill the continuous space and the interstices up to and level with the upper surface of the sections, said interstices being of such a size that a human foot may rest on a plurality of the ribs.

4. A floor and wall covering consisting of lattice work sections formed integrally of ribs with interstices between, said sections being composed of compressed cementitious material, means for maintaining the sections elevated above the surface to which they are applied, leaving a continuous space beneath the sections and of a filling applied to fill such space and the interstices up to and level with the upper surface of the sections, said filling being of a similar material to the ribs but uncompressed and the interstices being of such a size that the human foot will rest on a plurality of ribs.

5. A floor and wall covering consisting of lattice work sections formed integrally of ribs with interstices, said sections being composed of compressed cementitious material, and of a filling applied to fill the interstices level with the upper surface of the ribs, the filling being of a similar but uncompressed material, and the interstices being of such a size that the human foot will rest on a plurality of ribs.

6. A floor and wall covering consisting of lattice work sections formed integrally of ribs with interstices, means for maintaining the sections elevated above the surface to be covered leaving a continuous space beneath the sections, and of a filling, applied to fill such space and the interstices up to and level with the upper surface of the sections, the sections being formed of compressed magnesia compound mixture and the filling of a similar mixture but uncompressed.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ADOLPH GEIGER.

Witnesses:
J. R. MILLWARD,
ALLAN W. FOOSE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."