April 23, 1929. J. M. TAYLOR 1,710,595

FIBER FLOOR COVERING

Filed May 27, 1924

Fig. 1.

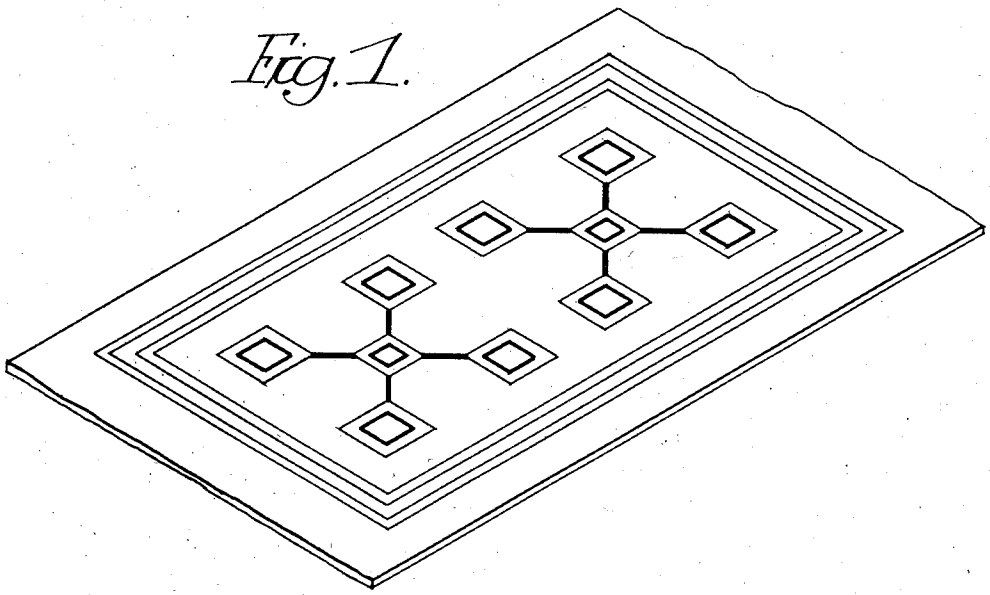


Fig. 2.

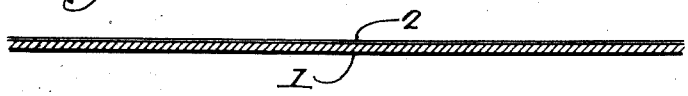
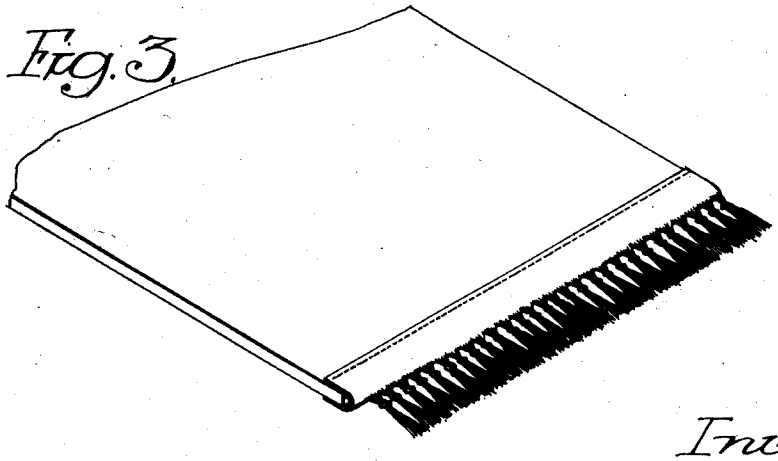


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FIBER FLOOR COVERING.

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This invention has for its primary purpose to provide a novel and extremely durable as well as ornamental floor covering.

A further object of the invention is to provide a floor covering of vulcanized fiber or the like having inlaid patterns.

A still further object of the invention is to provide a floor covering of vulcanized fiber which will have a natural tendency to hug the floor and lie flat.

The invention further resides in certain novel details hereinafter fully set forth.

In the attached drawings:

Figure 1 shows in perspective a section of floor covering made in accordance with my invention;

Fig. 2 is an elevation of a section of the floor covering, and

Fig. 3 is a view in perspective of a section of floor covering showing an attached edging.

My floor covering may comprise a sheet of vulcanized fiber of suitable thickness, the fiber being manufactured by the usual process, which involves the impregnation of fibrous sheets with zinc chloride or other vulcanizing or parchmentizing substance and the superimposing of the impregnated sheets to form a laminated homogeneous structure, the laminations being thoroughly compressed and the excess of the vulcanizing or parchmentizing material being expressed by the usual pressure methods, and the fiber bodies being finally dried.

The designs or configurations may be applied after the body has been completed by means of printing or in any other manner that may be found satisfactory, and the printed surface then preferably covered with a suitable drying oil, wax, paint or varnish, which will tend to protect the design.

Although the above method of forming the figured floor covering may give satisfactory results, I prefer to so form the markings that they will be a homogeneous part of the fiber body extending in some instances an appreciable distance into the body of the fiber. Such markings will not be subject to erasure by wear to the same extent as the covering previously described.

The fiber webs employed in the manufacture of vulcanized fiber are ordinarily of an absorbent nature, and it is very desirable in forming the floor covering by the method hereinafter described to employ sheets having this marked absorptive characteristic. Prior to the treatment of these webs in the vulcanizing or parchmentizing material, I print or otherwise mark upon one or more of the outer webs of the material or, if desired, on all of the webs the desired design or configurations. By reason of the absorbent nature of the webs, the marking medium will pass into those webs which are marked. The marked webs are then treated with a vulcanizing chemical, such as zinc chloride, in the usual manner and the webs laid together, pressed and dried to form the vulcanized fiber body.

Ordinarily, it will be desirable to allow the printed or otherwise formed marks or pattern to dry before the sheets are treated with the vulcanizing chemical, although where the vulcanizing material is of such nature as to have no effect upon the ink, which ordinarily is desirable, or where the effect of the vulcanizing material is desired, the treatment may follow immediately after the printing or marking operation. A surfacing of wax, drying oil, varnish or like substance may be applied if desired. In this manner, I provide a floor covering of vulcanized fibre having a pattern which to all intents and purposes is inlaid and extends to an appreciable distance into the body of the fiber and constitutes a homogeneous part thereof, the depth of the inlay depending, of course, upon the depth to which the marking medium enters the webs or, where the markings pass completely through the webs, upon the number of webs marked or printed. As a rule, it will be sufficient to mark one or both of the outermost webs in the usual manner prior to the treatment thereof with the parchmentizing or vulcanizing medium, and with no material absorption by the marked webs of the marking medium, the markings under the circumstances become a homogeneous part of the body.

I have also found it desirable under some circumstances, in order to insure that the floor covering shall lie flat, to render the fiber flexible by suitable processes, such as saturating it with glycerine solution or a solution of calcium chloride, or by impregnating the fiber with oils in accordance for example with the U. S. patent of James McIntosh, No. 1,236,461, dated August 14, 1917. Sufficient flexibility may be given the

material in this manner to insure its normally lying flat upon the floor.

This characteristic of the fiber body to lie flat may also be obtained or improved, even in fiber bodies which have not been subjected to the aforedescribed treatment to make them flexible, by coating either one or both surfaces with a drying oil, wax or paint. For example, the inlaid or printed fiber, either hard or flexible, may be coated on the printed or inlaid side with a coat of say 1/64" more or less of transparent varnish or drying oil; and by differing the thickness or consistency of coatings applied to the opposite sides of the floor covering, the material may be made to naturally curl or warp slightly toward the side next to the floor, which tendency with the weight of the material itself will insure its lying close to the floor.

In some cases also it will be found desirable to incorporate the pattern or design in a coating material using the fiber as a base, in which case the covering, while possessing the high tensile strength of the vulcanized fiber, may present the general appearances of linoleum and similar floor coverings now in common use. In Fig. 2, 1 indicates the fiber base, and 2 the coating or facing.

The natural strength and toughness of the vulcanized fiber also permits of stitching or otherwise securing to the edges a cloth or other binding with or without tassels, fringe or similar decorations calculated to add to the ornamental appearance of the floor covering, as shown in Fig. 3. Obviously where both sides of the covering are provided with a pattern, the article is capable of giving double service, and the patterns may be different on the opposite sides to lend variety. The fiber also lends itself readily to embossing, and this also may be resorted to to enhance the effects.

A floor covering made in accordance with this invention not only possesses very much higher tensile strength than the ordinary composition floor coverings now on the market, but can be bent double without cracking if properly made. This floor covering is also capable of standing very hard wear, and where the inlaid patterns are employed would retain the pattern even after being worn to a considerable extent.

I claim:

1. The method of forming a floor covering of vulcanized fiber having a durable design, which consists in taking a plurality of fiber webs at least one of which carries the markings or design of the desired pattern, treating the webs with a vulcanizing substance such as zinc chloride, and superimposing said treated webs to form a sheet of vulcanized fiber showing the said pattern on at least one face.

2. A floor covering consisting of a laminated sheet of vulcanized fiber having markings appearing at the surface and extending into the sheet at least to a depth corresponding to the thickness of the individual laminations.

3. A floor covering consisting of a laminated sheet of vulcanized fiber, an outer and adjacent laminations thereof having similar markings which extend completely therethrough, and the laminations being so relatively placed that the said markings register to afford a visible design extending continuously from the surface of the sheet to a depth corresponding to the joint thickness of the marked laminations.

4. The method of forming a floor covering of vulcanized fiber having a durable design, which consists in taking a plurality of fiber webs a plurality of which carry markings or designs of the desired pattern, treating the webs with a vulcanizing substance such as zinc chloride, and superimposing the treated webs with the markings thereof in registration to form a sheet of vulcanized fiber showing the said pattern on at least one face and with the pattern extending continuously into the sheet to a depth corresponding to the joint thickness of the marked webs.

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