Nov. 13, 1928. 1,691,708

J. E. A. EGLESON

FLOOR COVERING

Filed Aug. 17, 1927

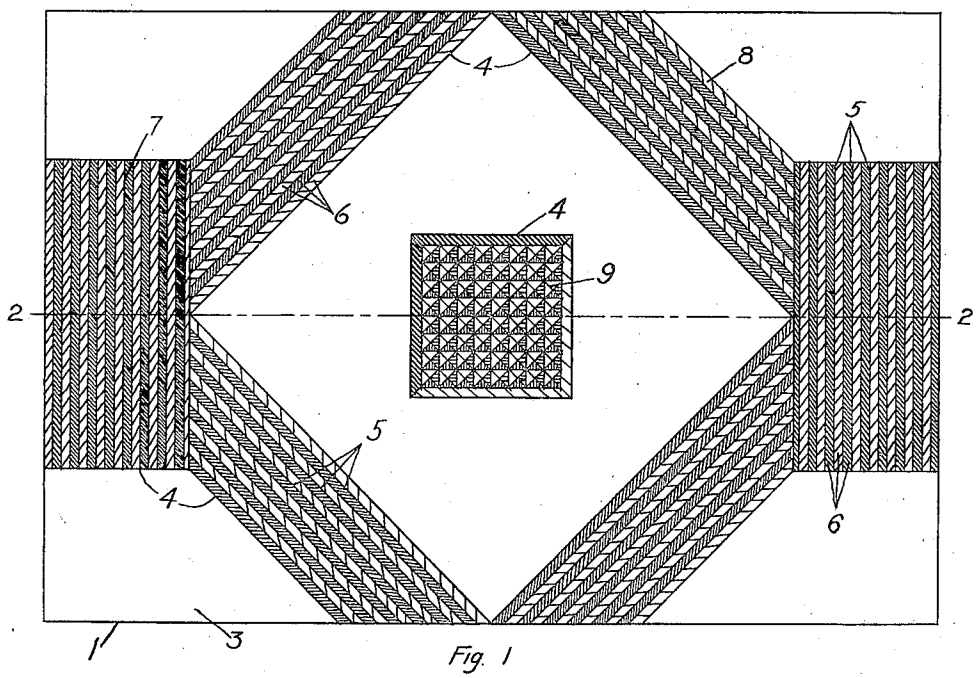



Fig. 1

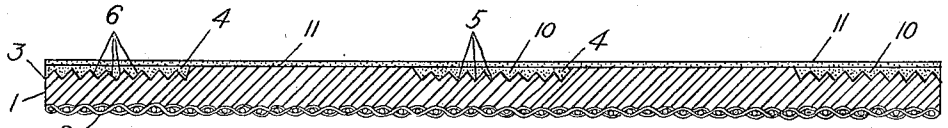



Fig. 2

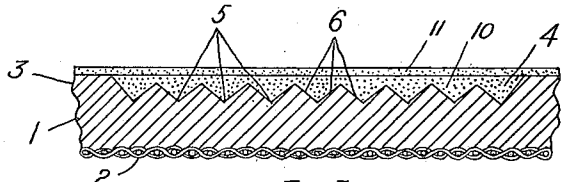



Fig. 3

*INVENTOR*

JAMES EARNEST A. EGLESON

BY Gordon C Willard

*ATTORNEY*

Patented Nov. 13, 1928. 1,691,708

# UNITED STATES PATENT OFFICE.

JAMES ERNEST A. EGLESON, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO CONGOLEUM-NAIRN, INC., A CORPORATION OF NEW YORK.

## FLOOR COVERING.

Application filed August 17, 1927. Serial No. 213,484.

This invention relates to floor coverings, and more particularly to a method of ornamenting floor coverings such as linoleum or the like, and to the product thereby produced.

The principal object of my invention is to provide a floor covering of the linoleum type having a smooth wearing surface, free from indentations or depressions, and at the same time to provide in visual effect these very characteristics in a manner to cause the smooth surface of the floor covering to possess the appearance of having a pattern embossed thereon, in relief.

Broadly, my invention consists in embossing or depressing any desired configuration upon single-colored or vari-colored linoleum or the like, forming a multiplicity of light-reflecting surfaces within the embossed or depressed areas, and thereafter filling such embossed or depressed portions with a transparent coating whereby a smooth wearing surface is produced.

In the drawings:—

Figure 1 is a plan view of a piece of linoleum embodying my invention.

Figure 2 is a sectional view on the line 2—2 of Figure 1.

Figure 3 is an enlarged sectional view showing in detail the construction of a floor covering produced according to my invention.

Referring to the illustrated embodiment, reference numeral 1 indicates a sheet of linoleum having the usual burlap or felt backing 2, and having a layer of linoleum composition 3 applied thereto. The linoleum sheet may be formed by any of the well-known methods. It may be produced by calendaring single-colored or vari-colored linoleum composition directly upon the burlap or felt backing, or vari-colored tesseræ of preformed sheets of linoleum composition may be applied to a suitable backing according to the so-called "straight-line process," or the linoleum sheet may be formed with any desired color pattern by the moulded inlay process.

The smooth surface linoleum sheet thus produced, either of a single color as shown, or having a desired color pattern formed therein, is then embossed or indented, to form thereon, in relief, any desired pattern or decoration 4. When a color pattern is formed within the linoleum sheet, the embossed pattern may coincide therewith or may be independent thereof. According to the present invention, however, the surface of the embossed or depressed area is not of smooth contour, but in contradistinction is uneven and rough, being formed to provide a multiplicity of light-reflecting surfaces within said embossed area. As illustrated in the accompanying drawings, the embossed or depressed areas 4 are lined or ribbed with fine V-shaped grooves 5, to provide a multiplicity of light-reflecting surfaces 6. A particularly artistic and novel appearance is presented when the depressed surface of certain of the embossed figures is lined or ribbed with fine V-grooves to provide a multiplicity of surfaces which reflect light in one direction, as at 7, while the depressed surface of certain other figures is lined or ribbed with V-shaped grooves to reflect light in another direction as at 8. Another form of roughened or uneven, depressed surface which is especially advantageous in carrying out the present invention is produced by cross-lining the surface of the embossed pattern with a plurality of fine V-grooves to form a multiplicity of pyramidal light-reflecting surfaces, as shown at 9.

Both the embossed pattern 4 and light-reflecting surfaces 6 within the depressed areas may be formed simultaneously upon a plane-surface linoleum sheet by means of an embossing roll or embossing plate having the desired raised configuration thereon. The raised portions of the roll or plate, which are to serve to indent or depress the surface of the linoleum, instead of having a smooth contour, will be roughened, such portions being lined or cross-lined with fine V-shaped grooves. The embossing operation is advantageously carried out independently of the sheet forming operation, although in some cases it may become desirable to combine these operations, in which case the embossing plate or roll serves not only to depress portions of the linoleum below the general surface level, but also to compact and consolidate the entire linoleum composition into the form of a sheet. The linoleum

sheet, having thereon the desired pattern embossed according to my invention, is cured in the usual manner.

The embossed linoleum floor covering thus prepared and cured is then further treated by filling the embossed or depressed areas with a transparent coating 10, to produce a smooth and even wearing surface, free from all indentations. According to the preferred form of my invention, not only are the depressed areas completely filled with such transparent material, but a film thereof is applied over the entire surface of the sheet, thereby forming a uniform wear-resisting outer coating. Preferably, the coating comprises cellulose ester lacquer, such as the well-known pyroxylin lacquer or cellulose nitrate, although I have found that a tough, clear varnish is also satisfactory. In fact, any tough, transparent coating having properties similiar to cellulose esters or varnishes will be found suitable. This transparent coating 10 is preferably applied by means of the well-known spreading machine containing as one of its essential elements a knife or doctor blade which is adapted to spread the coating material uniformly, whereby not only the depressed areas are filled with such transparent material, but a thin film thereof is applied over the entire linoleum sheet. The coating operation may be carried out in other ways if desired, as for example, by spraying the transparent coating upon the linoleum sheet. Likewise, it may be found advantageous, particularly when applying a coating comprising a cellulose ester, to form the complete coating by successive applications of a plurality of thin coatings, whereby a smooth, tough, wear-resisting, but transparent surface is ultimately formed. Whatever method is chosen, however, the essential feature of this part of my invention is to completely fill the embossed or depressed areas of the linoleum sheet with the transparent coating, thereby providing a floor covering which possesses a smooth wearing surface, free from all depressions or indentations.

By providing a multiplicity of light-reflecting surfaces formed within the depressed or indented areas and beneath the transparent coating, the embossed pattern is made to stand out strikingly in contrast with smooth-contour embossed patterns. Furthermore, floor coverings thus produced have the attractive appearance of possessing a decoration formed thereon in relief, while in fact the surfaces of such coverings are smooth and free from all indentations.

It will be obvious that numerous modifications may be made in the manner of carrying out my invention, without departing from the spirit thereof, and I do not wish to limit its scope, except as defined in the appended claims.

Claims:

1. As a new article of manufacture, a linoleum floor covering having embossed or depressed areas forming a pattern thereon, a multiplicity of light-reflecting surfaces formed within said depressed areas, and a transparent coating material filling such depressed areas.

2. As a new article of manufacture, a linoleum floor covering having embossed or depressed areas forming a pattern thereon, a multiplicity of light-reflecting surfaces formed within said depressed areas comprising fine V-shaped grooves, and a transparent coating material filling said depressed areas and forming with the unembossed portions a smooth wearing surface.

3. As a new article of manufacture, a linoleum floor covering having embossed or depressed areas forming a pattern thereon, a multiplicity of light-reflecting surfaces formed within said depressed areas, certain of said light-reflecting surfaces adapted to reflect light in one direction, certain other light-reflecting surfaces adapted to reflect light in another direction, and a transparent coating material filling said depressed areas and forming with the unembossed portions a smooth wearing surface.

4. As a new article of manufacture, a linoleum floor covering having embossed or depressed areas forming a pattern thereon, a multiplicity of light-reflecting surfaces formed within said depressed areas, and a transparent coating material filling said depressed areas and forming a thin film over the entire linoleum surface.

5. As a new article of manufacture, a linoleum floor covering having embossed or depressed areas forming a pattern thereon, a multiplicity of light-reflecting surfaces formed within said depressed areas, and a transparent coating material comprising a cellulose ester filling said depressed areas and forming a thin film over the entire linoleum surface.

6. A method of ornamenting floor covering of linoleum or the like, which comprises the steps of forming a sheet of linoleum composition, embossing or depressing portions of the surface of said sheet to form a pattern thereon, in relief, forming a multiplicity of light-reflecting surfaces within said depressed areas, and thereafter filling the embossed or depressed areas with a transparent coating material to provide a smooth wearing surface.

In testimony whereof, I affix my signature.

JAMES ERNEST A. EGLESON.