Dec. 21, 1926. 1,611,330

C. S. BIRD

FLOOR COVERING

Filed Dec. 5, 1924

Fig. 1.

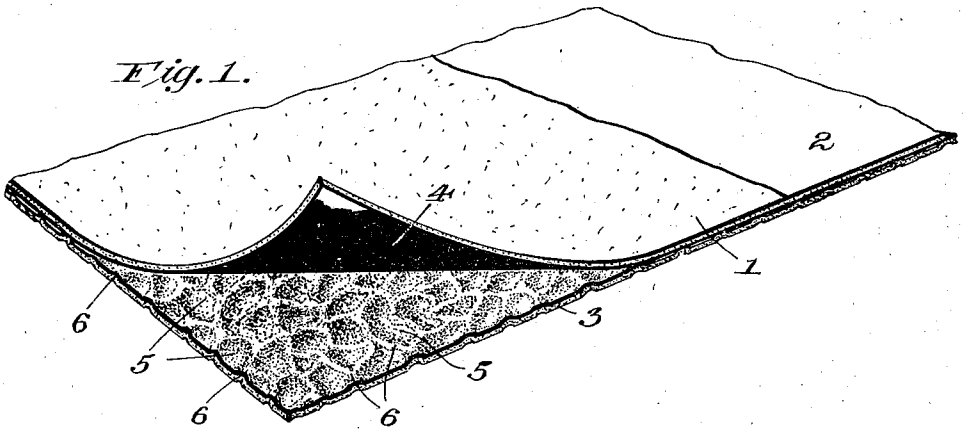


Fig. 2.

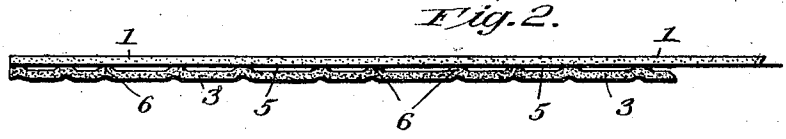


Fig. 3.

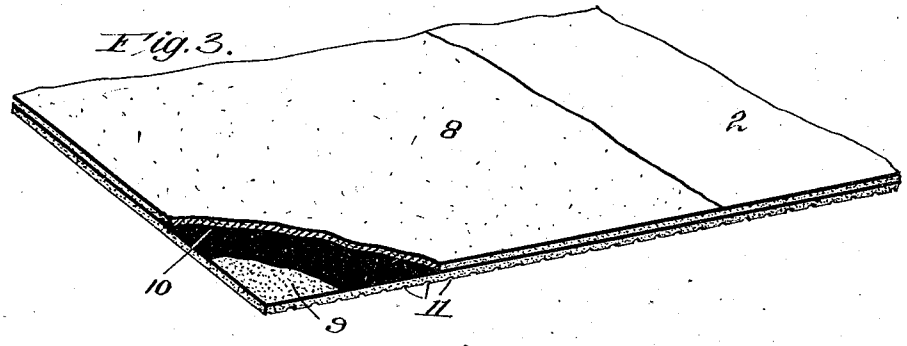
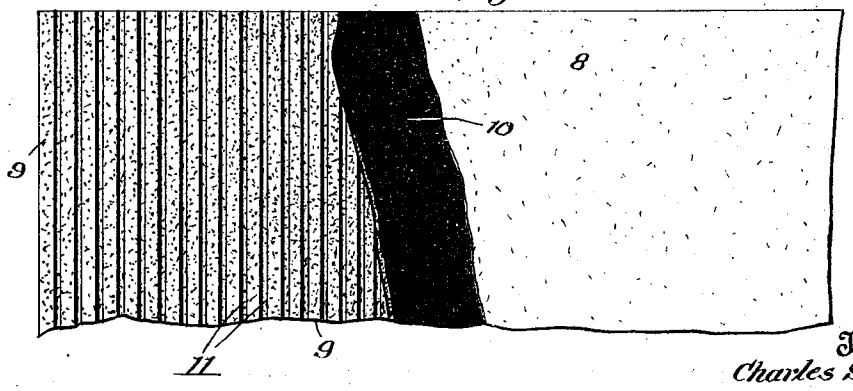


Fig. 4.



Inventor:
Charles S. Bird,

By Dodge and Dodge,
Attorneys.

Patented Dec. 21, 1926. 1,611,330

UNITED STATES PATENT OFFICE.

CHARLES S. BIRD, OF WALPOLE, MASSACHUSETTS, ASSIGNOR TO BIRD AND SON, INC., OF EAST WALPOLE, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS.

FLOOR COVERING.

Application filed December 5, 1924. Serial No. 754,081.

This invention pertains to improvements in floor coverings, and more particularly those wherein a felt base or the like is employed as the main body, treated in one or another manner to render the same durable, and having an outer finish surface, as of paint. A floor covering made up in this general manner, while giving satisfactory results in most cases, does, however, in some instances, where laid upon an uneven floor, or where the edges of the boards are exposed, wear unevenly and the edges of the boards frequently ridge the surface.

The present invention has for its object the production of an underlay for the floor covering which will prevent the deformation of the body and its finish surface when the covering is laid upon an uneven floor; and add to the resiliency of the material.

A further object of the invention is to produce an underlay which while directly attached to the floor covering will, nevertheless, by reason of the construction of the underlay, permit the structure as a whole to be rolled.

A further object of the invention resides in the means employed to secure the underlay to the under face of the body so as to enhance the waterproof quality of the flooring.

With these and other objects in view, reference will be had to the annexed drawings, wherein,—

Fig. 1 is a perspective view of a portion of the floor covering constructed in accordance with one embodiment of my invention, parts being broken away and others separated to more clearly show the structure;

Fig. 2 a sectional view thereof;

Fig. 3 a perspective view showing a further embodiment of my invention; and

Fig. 4 a bottom plan view of a section of such modified form illustrating the underlay as applied thereto.

In the drawings, 1 denotes the body of the floor covering formed of felt or any other suitable material, which will produce a sufficient and stable body structure. In practice, this body is impregnated with asphaltum or other suitable water resisting material, which, in addition to making it waterproof, imparts to the body a certain density and wear-resisting quality. There is usually applied to the outer face thereof one or more coats of paint, as 2, which may have a pattern thereon if so desired.

To the underface or underside of the body 1, I apply an underlay or cushion 3 formed of paper produced from felt or the like, the underlay being secured directly to the underface of the body 1, as by asphalt, which is denoted by 4. While asphalt is preferred as the cementing material by reason of the fact that it has great adhesive qualities and because it is very waterproof in its nature, it will be understood that, in so far as the broad invention is concerned, other adhesive materials may be employed to secure the underlay or cushion element in place. This underlay of felt paper, or similar material, may be waterproofed by any suitable process, such as impregnating with a waterproof material, sizing, or coating the back with a waterproof material; employing one or more or all of the steps as found desirable.

In order that the underlay may more readily conform to the surface upon which it is laid, and in order that the floor covering may, as above specified, be rolled, I preferably treat the felt in such manner as to produce a series of pockets or indentations extending over its entire area. Such pockets are denoted by 5, and are preferably irregular in outline so as to form a series of upstanding ridges, as 6, which contact the asphaltum face 4 of the body 1. The two elements are then brought into contact and light pressure applied thereto, as by the use of rolls, so as to hold the raised or ridged portions of the felt underlay against the impregnated felt 1. This will result in the adhesion of the two elements along lines of contact of the ridges with the body 1. There is thus produced a series of pockets or spaces between the two elements 1 and 3, which readily allows the floor covering to be bent in every direction, that is, it can be rolled up either way and can be folded on its face or on its back without causing a cracking of the underlay.

In the preferred form, the underlay presents the appearance of the hide of an animal, such as an elephant or an alligator, though it is to be understood that the irregular form is not essential, and any form may be employed so long as the underlay is merely attached to the body along a series of lines. This arrangement permits the bulg-

ing or stretching of the underlay so that the material as a whole may be folded over or rolled. The irregular conformation of the backing or underlay may be produced by passing the same between figured rolls, and aside from producing lines for the purpose of adhesion likewise tends to soften the underlay.

In Figs. 3 and 4 a modification of the invention is shown, in so far as the broad underlying principle is concerned; that is to say, the underlay is softened. In this form, 8 denotes the body of the floor covering formed of material as above specified. To the underface of the body I apply an underlay or cushion 9 formed of paper preferably produced from felt or the like, the underlay in this instance being directly secured to the underface of the body 8 by asphalt, which latter is denoted by 10.

In order that such underlay may more readily conform to the surface upon which it is laid, and in order that the floor covering may, as above specified, be rolled, I indent or score the felt as indicated by 11 (see Fig. 4), the scoring preferably extending transversely to the length of the covering. This scoring or indenting may be effected prior to the application of the felt to the covering, or it may be done after the felt is placed in position upon the body, in which instance adhesion between the underlay and the body may take place upon lines only. Such scoring or indenting in a way may be said to soften the felt underlay, and enables it to be more readily rolled.

In the broader aspect of the invention, the underlay may be softened by means other than that just described; thus, the underlay may be passed between rollers, which will tend to bend it first in one direction and then in the other with the effect of softening the same, but it is understood that the construction set forth in Figs. 1 and 2 is preferable in that the adhesion takes place upon lines and not over the entire surface of the underlay.

The material employed to secure the underlay or cushion to the body does not penetrate the underlay but leaves the same flexible and yielding to a certain degree, and, moreover, when asphalt is employed it tends to make the covering waterproof, preventing water from striking up from below into the body and likewise preventing any water which might possibly get through the body from striking down into the underlay.

No specific claim is made herein to the form shown in Figs. 3 and 4, that forming the subject matter of my co-pending application, Serial No. 618,865, filed on or about February 13th, 1923, of which this application is in part a continuation.

What is claimed is:

A floor covering comprising a wear resisting body and a layer of felt secured to the under face thereof by a suitable adhesive, that face at least of said felt layer which lies next to the body being indented so as to produce line contacts between the layer and the adjacent face of the body.

In testimony whereof I have signed my name to this specification.

CHARLES S. BIRD.