Feb. 2, 1932. N. L. CAMPBELL 1,843,357

PAINT SURFACED FLOORING BODY

Filed July 30, 1926

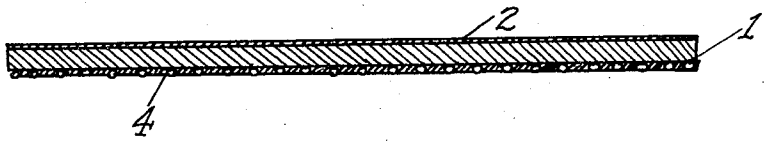


FIG 1

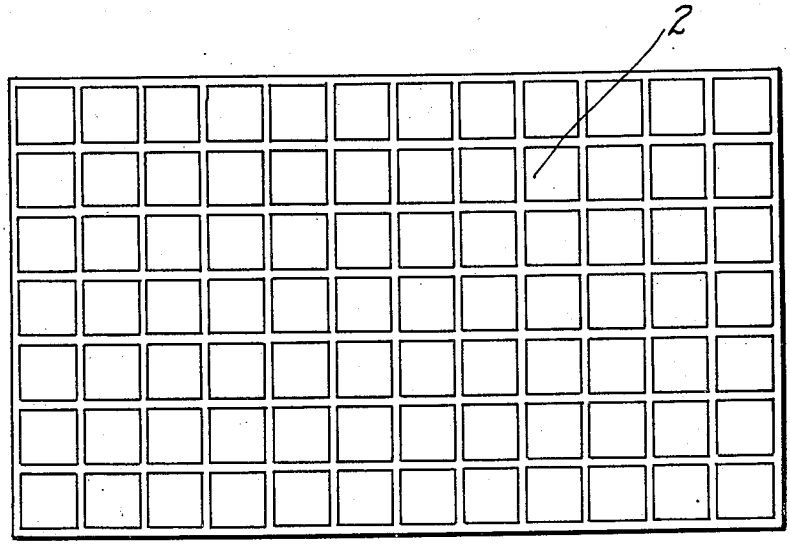


FIG 2

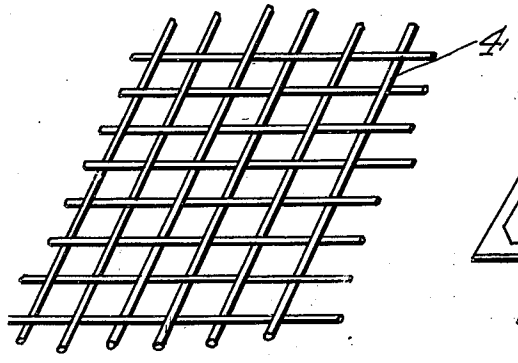


FIG 3

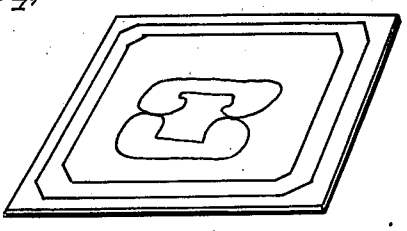


FIG 4

INVENTOR.

Neil L Campbell

BY

Allen & Allen

ATTORNEY.

Patented Feb. 2, 1932 1,843,357

UNITED STATES PATENT OFFICE

NEIL L. CAMPBELL, OF GLENDALE, OHIO, ASSIGNOR, BY MESNE ASSIGNMENTS, TO CARTHAGE MILLS INCORPORATED, OF CINCINNATI, OHIO, A CORPORATION OF OHIO

PAINT SURFACED FLOORING BODY

Application filed July 30, 1926. Serial No. 126,035.

My invention relates to rugs formed of a felt saturated with bituminous substance, and coated on the wear surface with a body of suitable paint, formed into a design which either represents a closed pattern, or is directly made up as a rug design, or has so small and indeterminate a figure repeated throughout the design that any desired section cut from a printed sheet will serve as a rug, as distinguished from printed goods in the piece. As an example of rugs formed without a regular closed border, I refer to a piece of material printed up to represent tiling, for example, which can be cut into rug sizes and used as floor covering, as distinguished from laying the complete floor with strips of the same which covers the floor from base board to base board.

I confine my invention to rugs since one of the requisites of a rug is that it shall be of flat laying qualities, and will not curl at the edges or warp throughout its length while in use, because rugs by custom are laid on the floor to incompletely cover the extent of space between the walls, and are supposed to be movable from place to place, and laid without tacking down or holding down with strips, as is the practice with linoleums, oil cloths, and the like.

In confine my invention to asphalt saturated felts, or felts saturated with similarly acting bitumens for several reasons which will be apparent, one of them being that the effect of the heavy body of somewhat plastic bitumen is to make the rug hug the floor and lay flat thereon.

A great industry has grown up in print surfaced asphalt saturated felt as a rug, in which it has been customary, and believed to be necessary, to have a coat of paint on the back or unexposed side of the body, which coat was thin, and partially absorbed into the felt body. The reason for this coat was to finish the back to simulate linoleum somewhat, and to prevent the asphalt from sticking to the floor in hot weather.

The reason advanced for the thinness of the coat was so that the tendency of the paint coat to shrink or expand differently from the top paint coat would be negatived, and thus the paint surfaced rug would lie flat on the floor.

In the past, due to process requirements linoleums have been backed with burlap. This was because the material making up the linoleum was placed on the burlap as a carrier in the sheet manufacturing process. Burlap has a function of strengthening the linoleum body considerably, and gives a good back appearance when properly colored. It has been supposed, however, to contribute to a tendency of linoleum to curl in use, because the walking upon the top body pressed it outwardly toward the sides in a manner regular or irregular dependent upon the manner of use, with the result that the burlap back of the rug did not stretch and the composition top did stretch, resulting in a curling product.

It is the object of my invention to provide a paint surfaced bitumen saturated felt body, and to back it with a material which is so light or open in texture, and preferably so elastic in weave as to contribute no practical curling tendency to the product during use.

It is the further object of my invention to utilize a colored woven body, which because of its open work nature is such, when adhesively secured to the bitumen saturated felt, to show the black of the asphalt through the colored mesh of the fabric, giving a richness of color, not obtainable otherwise.

It is the further object to use a thin fabric, with a transparent adhesive, of sufficient thickness to imbed the threads of the fabric into the adhesive, thus protecting the fabric itself against deterioration.

It is further an object to use a fabric in which the weave is such as to eliminate a

tying or spinning action between the warp and the woof, so that greatest flexibility is obtained, and so that a liberation of one thread during use will not result in a lifting away of a series of threads, thus exposing a patch of black in the back of the product.

In the drawings, Fig. 1 is a section exaggerated in showing of a piece of material produced in accordance with my invention.

Fig. 2 is a bottom plan view of a section of the rug body much exaggerated.

Fig. 3 is a perspective enlarged of the preferred fabric used as a backing.

Fig. 4 is a perspective of a rug with closed design pattern.

In process of manufacture a strip of felt suitable for flooring purposes is passed through a saturating bath, and filled with bitumen, rendering it black, and retaining some plasticity in the body while making it inert to water, chemicals, and other deteriorating conditions. When the saturant is fixed, the body has applied to it a transparent glue or cementing agent of whatever nature is desired, so long as it is resistant to water, cleaning compounds, and is resilient, and lasting in its character. The fabric is then applied to the surface wet with the glue, and the felt is passed through pressing rollers, resulting in the fabric being imbedded in the glue, and the glue setting and permanently binding a smooth covering of the fabric to the felt.

The piece is then passed through the usual paint decorating processes whereby it is given suitable base or priming color, and suitable design to make a body usable as a rug, in a self-supporting condition on the floor of a building.

Referring now to the product itself, I have indicated a saturated felt body 1, on the top of which is a wear surface of paint 2, which as per Figure 2 will preferably be formed in a closed design pattern. On the back of the felt body, which has a black base color, is the film of glue, in which is imbedded the colored or uncolored fabric 4.

Referring to the fabric, it will be noted that the real essential requirement is that of an open weave so as to expose the black between the crossed threads. A preferred requirement is that the threads be not tied to each other except by mere weaving, of say a basket weave type.

I have illustrated a fabric similar to mosquito netting, in which the warp threads are merely woven in basket weave with relation to the woof threads. Such a fabric is quite elastic except for a direct pull on the warp or woof threads, which is not likely to develop into any curling tendency in the completed body, or at least to contribute insufficiently to any curling tendency, so as to impart this quality to a flooring body not having the same tendency anyhow.

The appearance of the back has a sort of a sheen due to the relatively predominant area of black showing through whatever color is imparted to the fabric threads. The color in the fabric will be imparted by dies.

It is a fact that the usual backing of paint surface felt base rugs, namely the thin coat of paint, partially absorbed in the felt due to being applied before the asphalt has set, does not provide any real protection to the fabric, and little or no strength. The exposure of the usual thin paint coat to water will deteriorate it decidedly, and the glue coating is much more effective in preventing a softening of the back of the felt with water, such as may be present in a kitchen or beneath a stationary washstand or the like.

The strength imparted by the very open weave fabric, while insufficient to contribute to a warping or curling tendency, is still enough to vary substantially the tendency of the felt to crack when bent into a pointed crease, and it gives a fabric appearance to the back when viewed from other than a very close inspection, which is apparently a complete coverage of the back of the rug. There is no stickiness, no requirement that the asphalt saturant be penetrated by the glue, and the rug tends to cling to the floor against lengthwise slippage, much better than the present paint surfaced felt base rugs.

The fabric differs widely from the fabric back of the linoleum art, and formed composite structure of fabric and paper, in that it does not serve as a retaining body for a decorative top coat, is not strong enough to contribute a warping tendency, and is so open in weave as to expose a preponderant blackness that is to the eye a mere enrichening of the color produced, with no black showing to the eye except upon a very close inspection.

The fabric is very cheap, very light in weight, and its strength is increased by imbedding the threads in the glue used to cause it to adhere to the saturated felt.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A body of bitumen saturated felt suitable for floor covering, having a design formed in paints on the wear surface suitable for rug purposes as distinguished from strip goods, and having on its back a coating of transparent glue in which is imbedded a light, open work, fabric, leaving interstices through which the black of the saturated felt will show sufficiently to contribute an enrichment of the color of the fabric, said fabric being insufficient in weight to contribute curling tendency to the rug body.

2. A body of bitumen saturated felt suitable for floor covering, having a design formed in paints on the wear surface suitable for rug purposes as distinguished from strip

goods, and having on its back a coating of transparent glue in which is imbedded a light, open work, fabric, leaving interstices through which the black of the saturated felt will show sufficiently to contribute an enrichment of the color of the fabric, said fabric being insufficient in weight to contribute curling tendency to the rug body, and said fabric being formed of threads woven with relation to each other without tying thereof at the points of crossing of said threads.

NEIL L. CAMPBELL.