

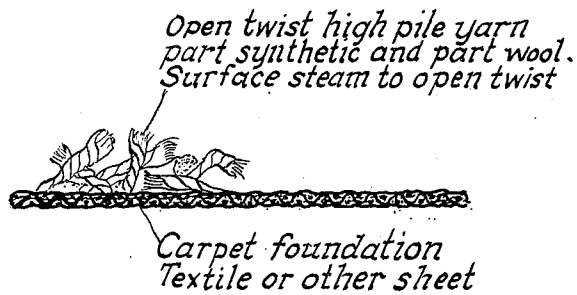
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PILE CARPET OR RUG

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PILE CARPET OR RUG

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1 Claim. (Cl. 139—391)

This invention is a rug or carpet fabric of the pile type.

In the use of fibers other than wool, such for instance as rayon and protein or protein-like substances, difficulty is experienced in providing a suitably appearing pile surface for carpet or rug fabrics because of lack of resilience comparable to that of natural wool fibers; such pile fabrics of the carpet type as have been woven with surfaces of man-made fiber are characteristically lacking in appearance of density of pile, they have a sleazy feel and deteriorate in appearance after a short period of use.

This invention comprehends a carpet or rug fabric structure having a substantially non-wool pile surface co-ordinated with a carpet or rug fabric base in such manner as to present a distinctive appearance of surface density and depth of pile surface as shown in the accompanying specimen and drawing while presenting for wear the most effective portions of the non-wool fibers, and it is to be understood that such fibers may include cotton, and flax, as well as the rayons, proteins, protein-like and vinyl resin man-made fibers.

A feature of the invention is an intermittent arrangement of high luster pile elements of such length with respect to their natural pliability that they topple, as indicated by the drawing into a confusion of contiguous side pile reflecting lengths, the disarray of which provides effective concealment of pileless areas by utilizing the brilliance of light reflection not only from depths in each pile strand but from the depths of one pile strand over another, both the strands and intermingled pile lengths being penetrable by the light to a considerable degree.

This disarray and light reflecting ability of the contiguous side pile surfaces over pileless areas as clearly disclosed in the drawing is such that the phenomena of persistency of vision in the eye roving over the surface imparts a sensation of complete foundation concealment coupled with a perspective in depth which is sufficient to satisfy the most discriminating taste as to the luxurious appearance of the pile.

The invention further comprehends a twisted pile yarn principally of long staple fibers of high luster composition which are constructed and coated to have smooth dirt and water repellent surfaces, and are combined in spinning with not less than 10% or more than 50% by weight of highly resilient fibers which are only in sufficient ratio to the less resilient fibers to cause the cut pile ends to be blown up or expanded in the pile

so that the pockets characteristic of the usual types of yarn are in fact open sufficiently to be incapable of forming dirt retaining ledges or cavities, and the natural working of the pile fiber due to pedestrian pressure and to temperature and humidity changes in the fiber combination loosens and frees itself of any dirt particles which may be temporarily caught or enmeshed in the pile ends.

Dependent upon the physical characteristics of the non-animal and animal fibers employed the percentages by weight in the combination will vary, but in any event the composition always contains by weight at least 50% of non-animal fibers which are of high luster and rendered water repellent, and alkali resistant, by such treatment as a urea resin coating or absorption while preserving and enhancing the permanency of the luster; the animal or other highly resilient fiber content is combined with the non-animal fiber in a ratio not to substantially diminish the brilliancy of the fibers as contributing to the brilliancy of the finished yarn, but to interlock and permeate the same in such manner as to impart a degree of resiliency far in excess of such type of product if made with the non-animal fibers alone; the spun and twisted product has an overall ability to retain its twisted form while expanding and contracting with moisture and temperature changes to a degree much superior to that of any similar product of non-animal fibers alone, and such as to cause a working of the constituent fibers in a manner to produce a constantly changing contour and volume of the interstices between the fibers; the surfaces of the fibers per se being, as stated, of a type to repel dirt, the working of the fibers changing the size and shape of the interstices between fibers serves to loosen and free any dirt which may have temporarily become enmeshed and thus there is provided a dirt freeing carpet structure easily maintained by the usual vacuum cleaning. Furthermore the water repellent non-animal fibers in combination with naturally water resistant fibers, such as wool, permit of the washing of the carpet or rug at the infrequent intervals necessary to preserve adequate cleanliness of the foundation structure without destroying the original luster and resistance characteristics of the pile.

Carpet and rug material which has been manufactured in accordance with this invention has a high luster, non-wool fiber content in the twisted pile warp of at least 50% viscose rayon content by weight treated with urea resin wa-

ter-repellent composition and combined with a sufficient percentage of natural wool fibers such that the resulting warp yarn twist is of substantially the same brilliance as the fibers and is of open resilient formation in considerably greater degree than the same twist made from all viscose.

These fabrics, a sample and drawing of one of which accompanies this application, were woven on a single frame Wilton loom with the customary carpet foundation of warp, weft and stuffers, the ends of the pile warp not being brought to the surface for certain intervals in a small repeat pattern; the weave was seven rows to the inch warpwise with two hundred sixteen pitch, and the height to which the pile ends were raised was such that any pile end, of its own weight, and natural pliability, would topple and substantially span any adjacent unraised pile area. The resultant effect is a complete disarray of pile ends in contiguous and overlapping relation and presenting side surfaces having a luster-creating a brilliance such that overlapping pile strands not only substantially conceal the pileless surfaces quite effectively, but to the roving eye catching the light reflected from the many angularly disposed side pile surfaces the persistence of vision imparts the sensation of unusual pile density and depth, thereby contributing a luxuriousness of pile appearance heretofore unattainable with man-made or plant fibers.

As a preferred embodiment of the invention there is accompanying this application for patent a drawing of a carpet fabric embracing the present invention from which the physical characteristics of the invention in its preferred form are perceivable by suitable examination in connection with this specification.

While we have herein described and the invention has been reduced to practice in a com-

pletely woven fabric, it is nevertheless to be understood that a satisfactory carpet or rug structure within the scope of this invention may be made with an impregnated locked base, or by embedding, or otherwise combining the brilliant pile of the required height with a latex air foam base of the character described in the United States Patents 1,777,945 issued July 7, 1930, to F. H. Untiedt; 1,852,447 issued April 7, 1932, to W. H. Chapman et al.; and 1,845,688 issued February 16, 1932, to F. H. Untiedt, and in which material or modification thereof brilliant pile according to the present invention may be attached at infrequent intervals with a length, pliability and resiliency to achieve upon a non-woven base a substantially similar effect to that which we have attained with a woven base.

We claim:

A pile surface carpet structure comprising a woven foundation, pile ends composed of a plurality of different kinds of fibers twisted together, some having higher lustre and less resiliency than others to provide light reflecting surfaces while the remainder have higher resiliency to expand the twisted pile ends to add light penetrability for each pile end, said ends woven with the foundation in a repeat pattern leaving pileless areas of larger total area than the total pile area, the pile ends being of a length and flexibility to fall in disarray over the pileless areas whereby the light reflecting surfaces of the sides of the pile twist fibers combines with the disarray to produce an illusion of greater pile depth and surface concealment than is attainable in a structure having more numerous pile ends per unit of area for an equivalent repeat pattern.

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