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CARPET SEAMING TAPE

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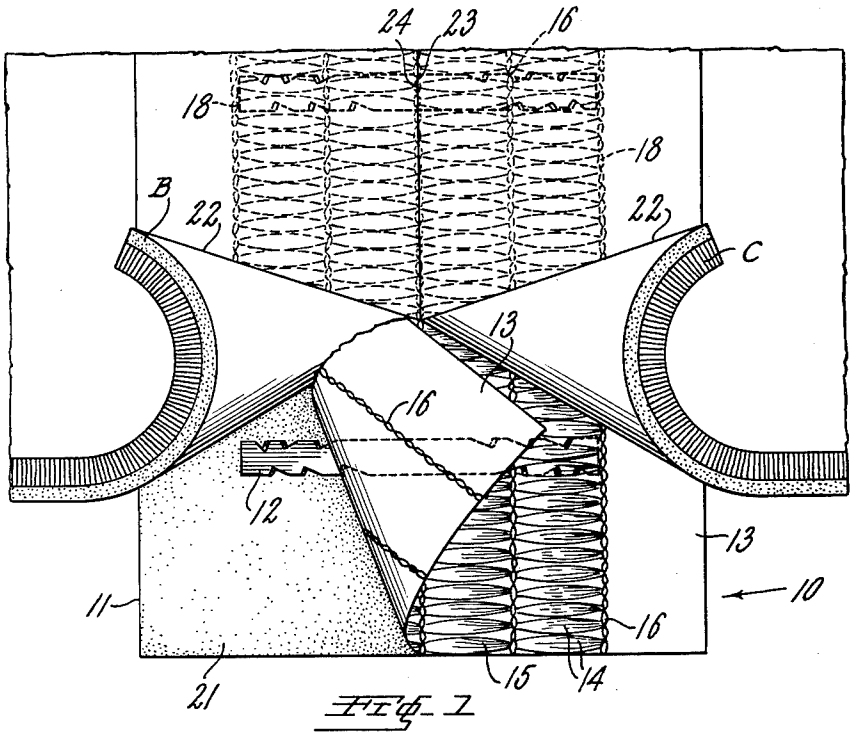


FIG. 1

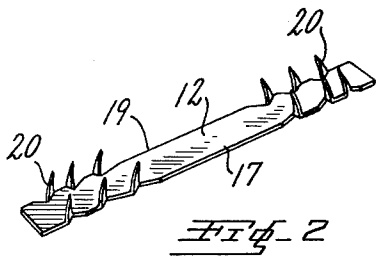


FIG. 2

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CARPET SEAMING TAPE

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This invention relates to carpet seaming tapes and more particularly to carpet seaming tapes comprising an extensible paper backing strip to which transversely extending lengths of untwisted continuous filament yarns are attached by means of longitudinally extending rows of stitches.

A carpet-seaming tape of this general type was disclosed in U.S. Patent No. 2,727,295, issued to Paul D. Wright on December 20, 1955. This patent disclosed a tape in which untwisted yarns of low extensibility and high strength and formed of long or substantially continuous fine filaments are mechanically attached to a longitudinally extensible strip of paper by parallel rows of stitches. Such a tape is well suited to seaming the lighter weight carpets, where the use of metallic gripping elements is not necessary.

For heavier carpeting, however, some sort of mechanical gripping element has been found necessary. A means of adding such mechanical gripping elements to a carpet seaming tape of this general type was thus disclosed in U.S. Patent No. 2,890,145, issued to Kenneth B. Milnes on June 9, 1959. In that tape the metallic gripping elements are superimposed over the transversely extending, continuous filament yarns and are anchored to the paper backing by means of depending tongues which grip the various parallel lines of stitches.

In using a tape as disclosed in the Milnes patent, however, it has been discovered that the presence of the metallic gripping elements often interferes with sewing or binding the carpet at its edge. The carpet tapes contemplated in all these disclosures are used to seam carpeting in place on the floor. When this is done, it often happens that one of the gripping elements occurs immediately at the edge of the carpeting and interferes with the final binding operation. It is necessary to remove this last gripping element before the edge of the carpet can be bound satisfactorily. It has been the experience of the carpet installing trade that it is extremely difficult to remove such an interfering gripping element when it is attached to the tape in the manner disclosed in the above-mentioned Milnes patent.

Furthermore, it has been found that the gripping elements in the Milnes tape often interfere when cutting carpet to fit in wall-to-wall installations. Since it is difficult to remove the interfering element, as above mentioned, this is a further disadvantage of this type of tape.

Accordingly, it is an object of the present invention to provide a carpet seaming tape of this general type that is reinforced with metallic gripping elements which are so attached that they may be easily and conveniently removed as the occasion demands.

It is a further object of this invention to provide a tape so reinforced, which is simple and inexpensive to manufacture.

In accordance with these objects I have invented a carpet-seaming tape of the type described comprising a first strip of longitudinally extensible transversely crimped paper, a plurality of spaced parallel transverse cleats or gripping elements overlying this first strip of paper, and a second strip of longitudinally extensible transversely crimped paper overlying the cleats and being adhered to the first strip, whereby the cleats are maintained in position between the two layers of longitudinally extensible paper. The upstanding points of the cleats pierce the second strip of paper, thus to protrude and grip the carpet backing. The untwisted yarns, which are characteristic of this class of carpet seaming tapes, are disposed on the upper face of the second strip of paper, being secured to this second strip by the usual longitudinal extensible parallel rows of stitches.

The nature and characteristic features of the present invention will be more readily understood from the following description, taken in connection with the accompanying drawings forming part thereof, in which:

FIG. 1 is a top-plan view, with parts broken away, of a piece of carpet seaming tape made in accordance with this invention and showing the mode of use thereof; and

FIG. 2 is a perspective view of a type of metallic gripping element or cleat found suitable for the practice of this invention.

Referring to FIG. 1, the tape 10 comprises a first or bottom strip of paper 11, over which lie a plurality of spaced parallel metallic gripping elements or cleats 12. Overlying these gripping elements or cleats 12, and effectively forming a "sandwich," is a second or upper strip of paper 13, to which latter strip transversely extending lengths 14 of yarns 15 are attached by longitudinal rows of stitches 16.

The yarns 15 are made in the form of an untwisted ribbon of long or substantially continuous filaments, which may, for example, be rayon, nylon, glass or silk. The term "untwisted yarn" is used herein to include a slight twist to permit greater ease in handling. For example, the twist may be about one turn per inch. The individual filaments are not twisted together, however, but are formed into a thin flat ribbon-like band which provides the high tensile strength and low stretch required to resist the transverse forces to which the tape may be subjected when used to seam a carpet.

Kraft paper transversely creped is preferred for both the bottom strip of paper 11 and the upper strip of paper 13. This type of paper provides the tape with the required elasticity in the longitudinal direction. It has been found that a 40 to 60 pound weight of kraft paper is satisfactory, but of course heavier or lighter weights may be used depending upon the purpose for which the tape is required. In any event the paper should be sufficiently heavy to retain the rows of stitches 16 that secure the lengths 14 of yarns 15 to the upper strip of paper 13. The strips 11 and 13 can, of course, be of any desired width, although an average embodiment will be in the order of four inches wide. The upper strip 13 should be equal in width to the lower strip 11 to provide a neatly finished product, as will be readily understood.

The transversely extending lengths 14 of yarns 15 are attached only to the upper strip of paper 13 by the longitudinal rows of stitches 16. The method of attachment is similar to that disclosed in the above-mentioned U.S. Patents Nos. 2,727,295 and 2,890,145. It is important to note that the rows of stitches 16 pierce only the upper strip of paper 13, as clearly shown in FIG. 1. This construction permits the bottom strip of paper 11 to be easily detached, thus to provide ready access to the individual gripping elements 12.

The gripping elements or cleats 12 are spaced at intervals between the two strips of paper 11 and 13 and are preferably made of thin resilient sheet metal. A typical cleat is shown in FIG. 2. The cleat 12 will typically have a body portion 17, which will be in the order of two to two and one half inches in length, or approximately equal in length to the distance between the outer rows of stitches 18. The cleats 12 are provided along their side marginal edges 19 with sharp protruding struck-up points 20. The points 20 are preferably inclined slightly inwardly, as shown in FIG. 2. The cleats 12 are disposed so that the points 20 pierce the upper strip of

paper 13 and the lengths of yarns transversely disposed thereon. Thus, the points 20 are able to grip the backing B of the carpeting C that is to be seamed.

The bottom strip of paper 11 is adhered to the upper strip of paper 13 by a suitable adhesive 21, such as a rubber latex adhesive, so that the two strips of paper 11 and 13 may be separated by pulling them apart and resealed by pressing them together after removing any desired cleat 12. Thus, the two strips of paper 11 and 13 form a "sandwich," in which the individual transversely disposed gripping elements or cleats 12 are the "filler." The cleats 12 are held in position only by the adhesive 21. This permits the two strips of paper 11 and 13 to be easily separated, as shown in FIG. 1, thus to provide ready access to any particular cleat, which it may be necessary to remove.

FIG. 1 illustrates the use of the tape 10 in securing the edges 22 of two pieces of carpet C together. In this operation the tape 10 is placed on the floor and a flexible adhesive, such as latex, is coated onto the lengths 14 of yarns 15. The edges 22 of the carpet C are abutted together and folded down onto the tape 10 along the center line 23 thereof, so as to hold together the seam 24 of the carpet C along such line. After the cement has dried, the carpet may be stretched into place. The longitudinal extensibility of the two strips of paper 11 and 13, as well as the extensibility of the rows of stitches 16, permit the carpet C to be stretched lengthwise without danger of rupturing the tape 10. If one individual gripping element or cleat 12 occurs at the edge of the carpeting at the side of the room and appears to interfere with the final binding or cutting operation, the construction of the tape 10 is such as to facilitate easy removal thereof.

While the preferred form of this invention has been described herein, it will be understood that changes may be made without departing from the spirit of the invention, and it is intended to cover any such changes coming within the scope of the following claims.

Having thus described my invention, what I claim and desire to protect by Letters Patent is:

1. A carpet-seaming tape comprising a first strip of longitudinally extensible paper having crimps extending transversely thereof; a plurality of spaced parallel transverse metallic cleats overlying said first strip of paper, said cleats having body portions with upstanding points; a second strip of longitudinally extensible paper co-extensive with said first strip and having crimps extending transversely thereof, said second strip overlying said cleats and being adhered to said first strip, said second strip being pierced by said upstanding points of said cleats; and untwisted yarns made of relatively fine, substantially continuous filaments disposed on the upper face of said second strip and extending transversely of said second strip, said yarns being secured to said second strip by longitudinal extensible parallel rows of stitches.

2. A carpet-seaming tape as described in claim 1, in which said untwisted yarns extend transversely of said second strip in a back-and-forth path, making loops near the margins of said second strip.

3. A carpet-seaming tape as described in claim 1, in which said second strip of paper is adhered to said first strip of paper by an adhesive which permits said strips to be easily separated by pulling them apart and subsequently resealed by pressing them together after removing a cleat therefrom.

4. A carpet-seaming tape as described in claim 3, in which said adhesive is a rubber latex adhesive.

5. A carpet-seaming tape as described in claim 3, in which said cleats are held in relative position by said adhesive.

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