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Bascom et al.

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[54] **METHOD OF FACE SEAMING CARPET WITH A HOT MELT ADHESIVE CARPET SEAMING TAPE**

[75] Inventors: **Hollis H. Bascom; John J. Greci,** both of Livermore; **Merle R. Hoopengardner,** Oakland, all of Calif.

[73] Assignee: **Orcon Corporation,** Hayward, Calif.

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[52] **U.S. Cl.**..... **156/157,** 156/184, 156/304, 156/313, 206/59

[51] **Int. Cl.**..... **B31f 5/00,** B29c 27/00, B65h 69/02, B65h 75/02, B65h 81/00, C09j 5/06

[58] **Field of Search**..... 161/149, 49; 156/157, 184, 156/304, 306, 505, 313; 206/59 R

[56] **References Cited**

UNITED STATES PATENTS

3,415,703	12/1968	Burgess	156/304
3,455,077	7/1969	Long	161/149 X
3,533,876	10/1970	Burgess	156/304

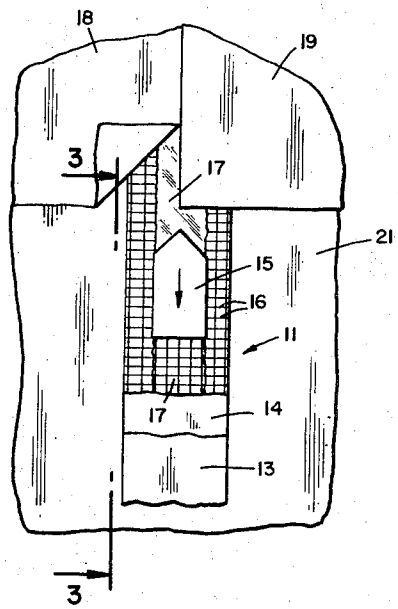
Primary Examiner—Philip Dier
Attorney, Agent, or Firm—Owen, Wickersham & Erickson

[57] **ABSTRACT**

A strip of tissue wrap paper of the same width and same length as a strip of hot melt carpet seaming tape is wound into the roll of tape in a manner such that when the tape is unrolled the tissue paper is unrolled with the tape and underneath the tape. Then when the tape is positioned on the carpet underlay pad ready for face seaming with the tissue paper beneath it, any melting of the pad (resulting from the heat produced in the face seaming operation) will cause the pad to stick to the tissue, rather than to the tape. During the stretching of the carpet, the seam is free to move over the pad and cannot cause wrinkling.

The tissue paper may be lightly fastened to the back of the hot melt tape by dots of adhesive on the center line of the tape of about ⅛-inch diameter at about 3-inch intervals to insure better registration of the hot melt tape and the tissue paper. After the tissue adheres to the surface of the pad during seaming, the hot melt tape readily breaks loose from the tissue during stretching of the carpet, effectively preventing wrinkling of the pad.

3 Claims, 3 Drawing Figures



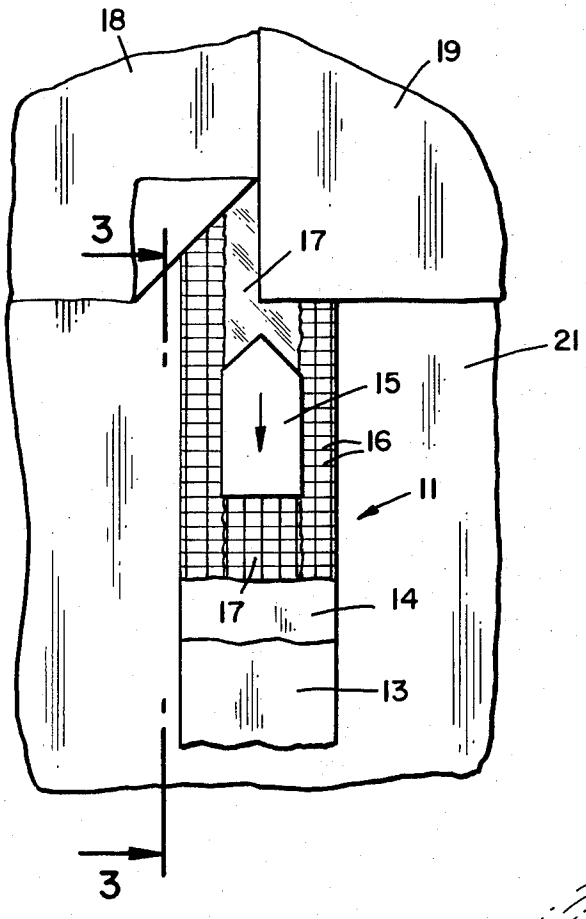


FIG_1

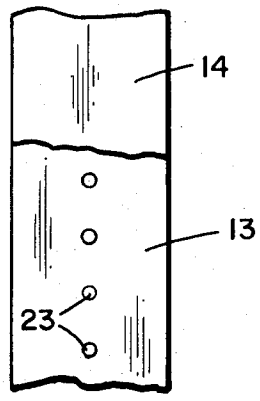


FIG_2

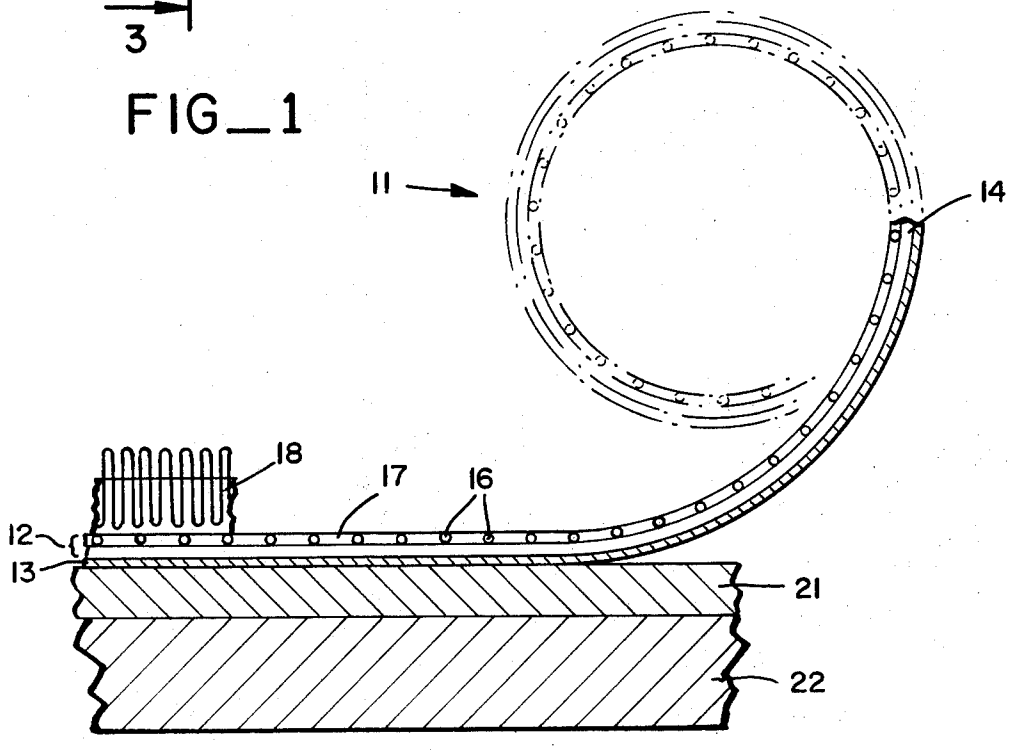


FIG_3

METHOD OF FACE SEAMING CARPET WITH A HOT MELT ADHESIVE CARPET SEAMING TAPE

FIELD OF THE INVENTION

The present invention relates to a tape for face seaming a butt-joint between two pieces of carpet.

The present invention relates more particularly to a tape of this kind in which a hot melt adhesive is carried in solid form on a tape and is made tacky by the application of heat from an iron just prior to the seaming operation.

THE PRIOR ART

In the face seaming process using a hot melt carpet seaming tape a sadiron is placed in contact with the hot melt adhesive on the face side of the tape to heat the adhesive to about 400° F.

With plastic or rubber foam carpet underlay pads enough of the heat from the sadiron can be transmitted through the tape to melt the surface of the pads. This in turn can cause the pad to stick to the back of the tape and can prevent stretching or movement of the carpet with respect to the pad. The restriction on movement shows up as wrinkling in the locality of the seam.

Tissue paper has been used as a shield by carpet layers to prevent the problem of sticking of the carpet to the underlay. The practice has been to unroll a roll of tissue paper, such as a roll of toilet tissue, beneath the edges of the carpet to be joined.

The hot melt carpet seaming tape was then unrolled and placed on the top of the tissue strip. The sadiron was then used to heat the hot melt adhesive to make the seam. This prior art procedure involved a number of separate operations, was time consuming and awkward, and presented problems of maintaining the necessary alignment between the tissue paper, the tape and the edges of the carpet to be joined.

SUMMARY OF THE INVENTION

In accordance with the present invention a strip of tissue wrap paper of the same width and the same length as the strip of hot melt carpet seaming tape is wound into the roll of tape in a manner such that when the tape is unrolled, the tissue paper is unrolled with the tape and underneath the tape. Any melting of the pad (resulting from the heat produced in the face seaming operation) will then cause the pad to stick to the tissue, rather than to the tape. Thus, after the face seaming operation, the seam is free to move over the pad. The melting of the underlay pad, because it is shielded from the tape by the tissue paper, cannot cause wrinkling.

In a preferred form of the present invention the tissue paper may be lightly fastened to the back of the hot melt tape by dots of adhesive. The dots of adhesive are of small area (about one-eighth inch in diameter) and are widely spaced (at about 3-inch intervals). This insures proper registration of the hot melt tape and the tissue paper during the unrolling of the tape and tissue and also during the seaming operation. Because the connections between the tissue paper and the back of the tape are of small area and are widely spaced, the hot melt tape readily breaks loose during stretching of the carpet. This effectively prevents any wrinkling.

Other and further objects of the present invention will be apparent from the following description and claims and illustrated in the accompanying drawings which, by way of illustration, show preferred embodiments of the present invention and the principles thereof and what are now considered to be the best modes contemplated for applying these principles. Other embodiments of the invention embodying the same or equivalent principles may be used and structural changes may be made as desired by those skilled in the art without departing from the present invention and the purview of the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a plan view showing how a tape product constructed in accordance with one embodiment of the present invention is used in a face seaming process;

FIG. **2** is a bottom plan view of a portion of a strip of a tape product constructed in accordance with a specific embodiment of the present invention and illustrates how small dots of adhesive at widely spaced intervals can be used to releasably connect the tape and the paper to maintain registration during installation and yet permit ready release after installation;

FIG. **3** is a side elevation view taken along the line and in the direction indicated by the arrows **3—3** in FIG. **1** illustrating how the tape product of the present invention can be wound into a roll form for convenient dispensing in connection with the face seaming operation.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A tape product constructed in accordance with one embodiment of the present invention is indicated generally by the reference numeral **11** in FIG. **1** and FIG. **3.**

The tape product includes a tape indicated generally by the reference numeral **12** and a tissue wrap paper strip **13.**

The tape **12** includes a barrier sheet **14,** a fabric reinforcement **16** and a layer of hot melt adhesive **17.**

In the drawings the fabric reinforcement **16** is illustrated as a non-woven fabric having parallel spaced fill strands extending across the width of the tape and parallel spaced warp strands extending along the length of the tape. The fill strands overlay the warp strands and are adhesively connected to the barrier sheet **14.**

An adhesive, such as a polyvinyl acetate, connects the fill strands to the barrier sheet.

Other forms of fabric reinforcement, such as a woven fabric, may also be used.

In making the face seam to join the pieces of carpet **18** and **19,** the edges of the carpet are turned upward, and a sadiron **15** is moved along the layer of adhesive **17** (in the direction indicated by the arrows in FIG. **1**) to heat the adhesive to a molten, tacky condition.

The edges of the carpet **18** and **19** are then pressed downward onto the heated adhesive, and the seamed butt joint is made as the adhesive cools.

A considerable amount of heat is developed in this face seaming operation. The sadiron heats the adhesive **17** to a temperature of about 400° F.

While the barrier sheet **14** prevents the hot melt adhesive **17** from contacting the carpet underlay **21** and also serves to provide a limited amount of insulation between the iron and the upper surface of the carpet underlay, still the carpet underlay surface does receive considerable heating.

With plastic or foam rubber underlays the heating is sufficient to melt the surface of the underlay pad. When this happens the melted surface of the underlay pad can stick to the backside of the tape **12** if adequate precautions are not taken.

The roll form of the tape product of the present invention quite effectively prevents problems of this kind.

As illustrated in FIG. **3** the product is rolled in a way such that the face side of the tape is on the inside and the tissue paper strip **13** is on the back side of the tape. When the tape product is unrolled the paper strip **13** is thus automatically positioned between the backside of the tape **12** and the upper surface of the carpet underlay pad **21.**

Also, as the tape product is unrolled the tape **12** and the paper strip **13** are automatically unrolled in registry so that it is not necessary to shift the tape sideways or lengthwise to line up the paper strip **13** and the tape **12.** In one form of the present invention the paper extends across the entire width of the barrier sheet and is wound onto the roll without any connection between the paper and the barrier sheet.

FIG. **2** illustrates a preferred form of the present invention in which a series of adhesive dots **23** are printed on the center line of the back of the tape to releasably connect the paper strip **13** to the backside of the tape. The dots **23** are about ⅛ inch diameter dots spaced at about 3 inch intervals to connect a paper strip of BS 11.25 menu tissue wrap paper to the backside of a barrier sheet of 50 pound crepe kraft paper of 0.009 inch to 0.010 inch thick.

The hot melt tape readily breaks loose from the paper strip **13** during any stretching of the carpet after the hot melt seaming operation. The paper **13** sticks to the pad **21.** The tape **12** and spliced carpet sections are free to move with respect to the pad **21.** This effectively prevents wrinkling of the pad.

While we have illustrated and described the preferred embodiments of our invention, it is to be understood that these are capable of variation and modification, and we therefore do not wish to be limited to the precise details set forth, but desire to avail ourselves of such changes and alterations as fall within the purview of the following claims.

We claim:

1. A method of face seaming carpet with a hot melt adhesive carpet seaming tape (of the kind having a barrier sheet, yarn reinforcement on the face side of the barrier sheet and a layer of hot melt adhesive on the face side of the barrier sheet) to prevent sticking of the tape and carpet to surfaces of plastic and rubber foam underlay pads which can be melted by the heat produced during the face seaming of the carpet with the tape, said method comprising, winding a strip of paper and a strip of the tape into a roll with the paper on the backside of the barrier sheet and with the paper aligned with the tape, raising abutting carpet edges from a top surface of an underlay pad composed of a material that melts and becomes sticky at temperatures near the melt temperature of the hot melt adhesive, unwinding the roll to dispense the tape face side up beneath the edges of the carpet to be seamed and simultaneously to position the paper beneath the tape between the underlay pad and the back face of the tape, heating the layer of hot melt adhesive, and pressing the edges of the carpet down on the heated hot melt adhesive to make a face seamed carpet and to cause any melted surface of the pad to stick to the paper rather than to the backside of the tape, so that the seamed carpet is free to move over the paper and the surface of the pad without wrinkling.

2. A method as defined in claim **1** including connecting the paper to the backside of the barrier sheet by a series of widely spaced adhesive connections of small area which are readily breakable in the event of any shifting of the carpet with respect to the underlay pad.

3. A method as defined in claim **1** wherein the paper extends across the entire width of the barrier sheet and is wound into the roll without any connection between the paper and the barrier sheet.

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