March 23, 1943. A. S. SPEER 2,314,523

WALLBOARD JOINT STRUCTURE

Filed July 10, 1941

Fig. 1.

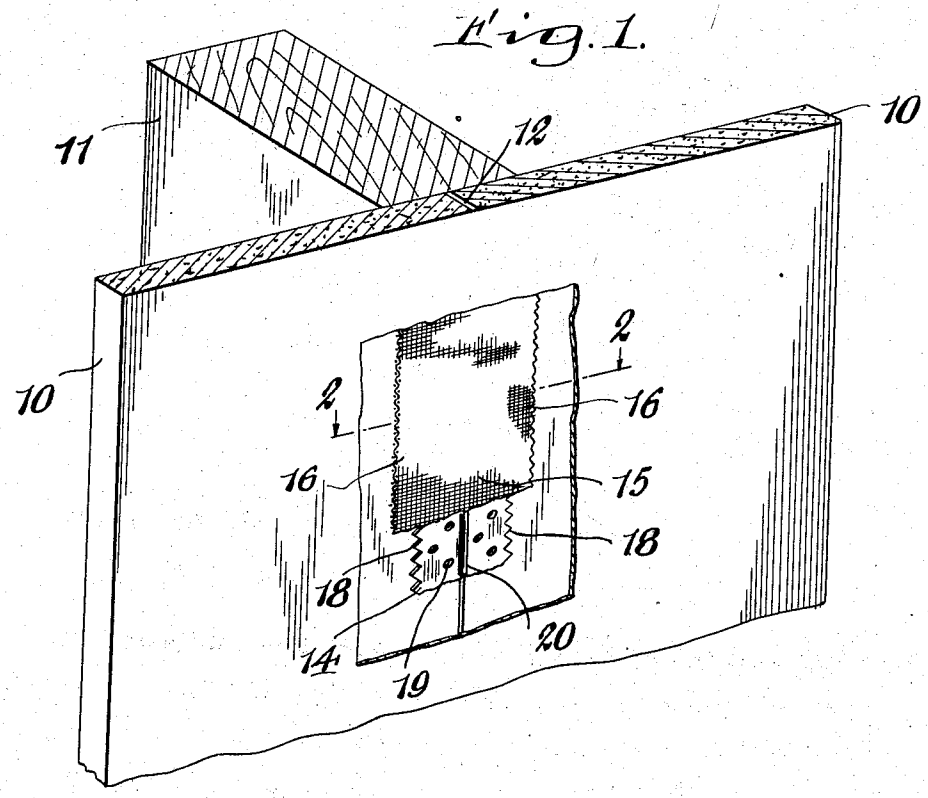


Fig. 2.

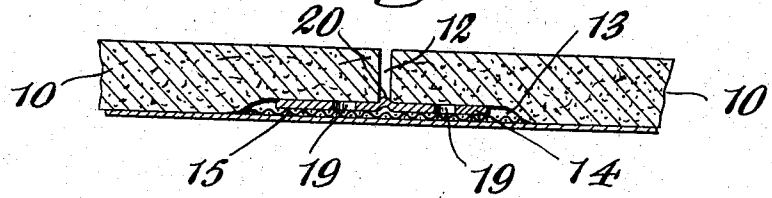


Fig. 4

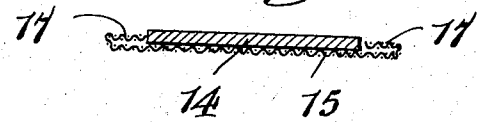
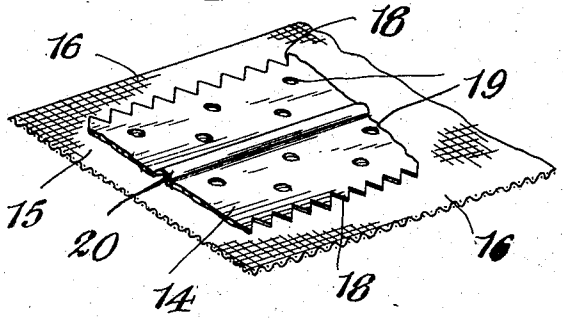


Fig. 3.



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WALLBOARD JOINT STRUCTURE

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6 Claims. (Cl. 72—16)

This invention relates generally to the art of building construction, but more particularly to a novel means for concealing the joints between wallboards and like unit or sectional wall structures.

It has for one of its objects to provide an improved tape for application over the abutting joints of wallboards which, while of a minimum thickness, possesses maximum strength to resist rupture and prevent the formation of cracks, and which provides a smooth, flat, non-bulging surface across the joints which can be effectually concealed by any of the usual coatings or surface coverings applied to such wallboard for decorative purposes.

Another object of the invention is to provide a jointing means of this character which is so designed as to render its application simple and permit its installation in a minimum period of time, and which is further so constituted that air pockets and wrinkling are eliminated.

A further object is to provide a concealing or treating tape for wallboard joints which consists of a composite fibrous structure of paper and cloth fabric so disposed in overlying relation as to form a smooth and strong, yet yieldable, joint which is crackproof under all climatic conditions, and wherein the cloth prevents the creeping and expansion of the paper and the paper prevents the cloth from wrinkling, both elements being adhered to each other and the joint filler employed over the tape acting on the composite structure to effectually secure it over the joint in a firm, flat condition and as an integral part of the joint filler when set or dry.

A still further object of the invention is to provide a composite paper and cloth tape for sectional wall structures wherein the cloth forms a protective and reinforcing shield for the margins of the paper, and wherein the paper as well as the cloth has perforations therein which not only prevent the formation of air pockets between the tape and the wall structure but which also add to the holding qualities of the joint filler in securely anchoring the tape in place.

Another object of the invention is to provide a tape of this character which is so designed that it can be not only applied to surface joints but with equal effectiveness to corner joints.

Other features of the invention reside in the construction and arrangement of parts hereinafter described and particularly pointed out in the appended claims.

In the accompanying drawing:

Figure 1 is a fragmentary perspective view showing my improved wallboard joint concealing structure or tape. Figure 2 is an enlarged cross section thereof taken on line 2—2, Figure 1. Figure 3 is an enlarged fragmentary perspective view of a portion of the tape. Figure 4 is a cross section of a slightly modified form of the tape structure.

Similar characters of reference indicate corresponding parts throughout the several views.

Referring now to the drawing, 10 indicates sections of wallboard secured to a stud 11 and disposed in abutting relation to form the joint 12 to which my improved joint structure is adapted to be applied. This joint concealing structure is in the form of a tape or ribbon and by preference, the opposing, marginal faces of the wallboard paralleling its joint edges may be slightly recessed or indented, as indicated at 13, and the joint-concealing tape is applied in registering relation over this recess.

In the preferred construction of my joint-treating or concealing tape, it consists of a composite fibrous structure composed of paper and cloth strips 14 and 15, respectively, which are disposed in overlying relation to each other by gluing or otherwise. These strips are comparatively thin, the paper strip being calendered down to about .006 or .007 of an inch and the combined thickness of both strips not exceeding .012 of an inch. The cloth strip 15 is made of a wide mesh cloth, such as cotton, and it is somewhat wider than the companion paper strip 14 so that the cloth extends beyond the marginal side edges of the paper strip to prevent its cracking and to provide protective and reinforcing margins 16 for such paper strip. The cloth strip, furthermore, is preferably starched or otherwise treated to stiffen and give it body and cause it to lie flat and smooth when applied to the joint being treated. To prevent the cloth strip unraveling at the edges, it may be suitably impregnated along the margins thereof or it may be folded over along its side edges, as indicated at 17, in Figure 4. As shown in Figure 2, the tape-receiving recess 13 across the wallboard joint is substantially the same width as that of the cloth strip, and the latter provides a feather edge for the tape.

The paper strip 14, which underlies the cloth strip and lies face down when applied to the joint, is made of a kraft or manila paper having a transverse tensile strength of at least 45 pounds to the inch and may be serrated at its edges, as indicated at 18. This paper strip is also provided with perforations 19 and these perfora-

tions are preferably larger than the mesh openings of the cloth strip so that certain of the strands of the cloth strip span or intersect the paper perforations and function as keys or interconnecting webs in securing the tape to the joint in the manner hereinafter described. These perforations permit the escape of air from between the tape and the wallboard and eliminate the formation of air pockets.

This tape is designed not only for application to the surface joints of wallboards but also to corner joints, and for this purpose the paper strip 14 is provided with a pre-formed crease or folding bead 20 which extends lengthwise and substantially centrally thereof to facilitate the folding of the tape when applying it to corner joints. This folding bead has its convex side down, as shown in Figure 2, and in the application of the tape to the joint, this bead registers with the slight gap between the abutting edges of the wallboard and thereby functions as a guide in applying the tape centrally along and in proper register with the joint.

In applying this tape to a wallboard joint, a strong casein filler is applied by a trowel directly to the wallboard across the joint thereof, after which the tape is applied over the joint and in register with the recess 13 provided for receiving it. As the tape is applied, the filler oozes or protrudes through the holes and notched edges in the paper as well as the interstices of the cloth in a more or less mushroom fashion to thereby firmly and effectually secure the tape over the joint with the tape itself embedded in and constituting a unitary part of the filler. The protruding portions of the filler may be then smoothed over by troweling. The cloth strip is rendered soft under the influence of the filler and not only makes for a good bond across the joint but also causes the cloth to flatten down and in effect forms an integral part of the joint filler. After the tape is set a light filler is then applied thereto. The tape-receiving recess 13 in the wallboard is comparatively shallow and after application of the tape the same is free from bulges and is substantially flush with the surface of the wallboard so that when the latter is treated with any of the usual surface coverings for decorative purposes the joint as well as the joint-treating tape is effectually concealed.

While manifestly simple, strong, and inexpensive in construction, this improved tape can be applied in a minimum period of time, and when applied it is free from wrinkles and blisters and is crack-proof. Furthermore, the same can be applied in dry or moist weather and its composite structure overcomes the many objections and disadvantages to the tapes heretofore used in wallboard construction.

I claim as my invention:

1. A tape for concealing the joints of wallboards, comprising a composite fibrous structure composed of overlying, adhering strips of perforated paper and wide mesh cloth, the cloth strip being disposed over and being wider than the paper strip to provide reinforcing and protecting margins for the edges of the paper.

2. A tape for concealing the joints of wallboards, comprising a composite fibrous structure composed of overlying, adhering strips of perforated paper and wide mesh cloth, the paper strip being disposed beneath the cloth strip for direct engagement with the joint and having serrations at its edges, and the cloth strip overhanging the edges of said paper strip to provide protective margins therefor.

3. In a wallboard construction, the combination with the wallboards arranged in abutting relation to form a joint, of a jointing element extending along said joint and composed of overlying strips of paper and cloth, the paper strip lying next to the joint and the cloth strip extending over and beyond the marginal edges of the paper strip.

4. In a wallboard construction, the combination with the wallboards arranged in abutting relation to form a joint, of a jointing element extending along said joint and composed of overlying strips of paper and cloth, the paper strip lying next to the joint and having perforations therein and the cloth strip extending over and beyond the marginal edges of the paper strip to protect its edges against curling and to provide a feather edge for the jointing element.

5. In a wallboard construction, the combination with the wallboards arranged in abutting relation to form a joint, of a jointing element extending along said joint and composed of overlying strips of paper and cloth arranged in adhering relation, the paper strip lying next to the joint and having a pre-formed folding bead extending lengthwise thereof, and the cloth strip extending over and beyond the marginal edges of the paper strip.

6. In a wall structure, the combination of wallboards having abutting edges to form a joint and having a shallow recess in the face thereof paralleling its joint edges, and a tape applied to said joint in register with said recess and composed of an overlying strip of perforated paper and cloth, the paper lying next to the joint and the cloth extending over and beyond the marginal edges of the paper to protect such edges against curling and provide a feather edge for the tape, some of the strands of the cloth strip intersecting the perforations of the paper strip, the tape being secured to the wall by a filler and being embedded in the filler and forming an integral part thereof.

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