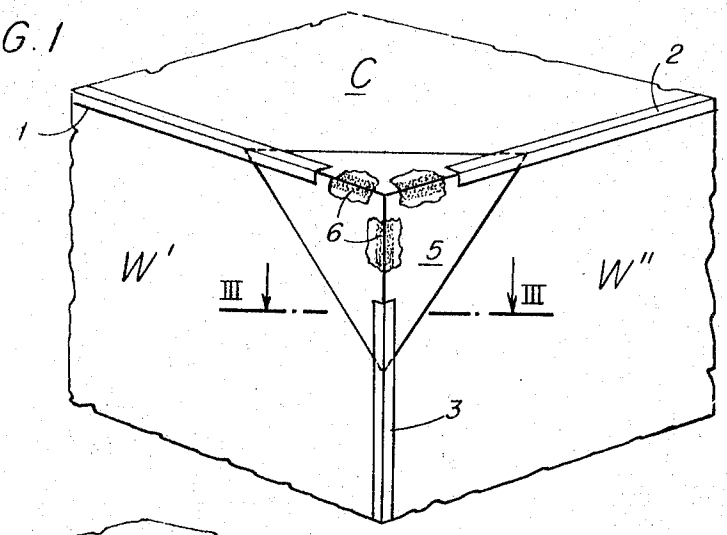
Nov. 7, 1967 N. J. RILLO 3,350,825

WALLBOARD CORNER CONSTRUCTION AND METHOD

Filed Aug. 7, 1964

FIG. 1



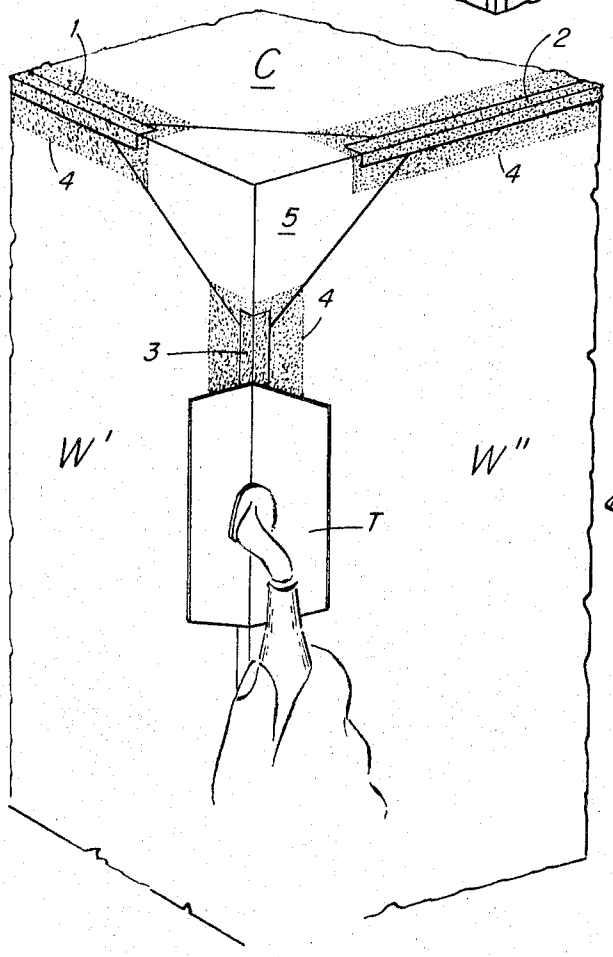


FIG. 2

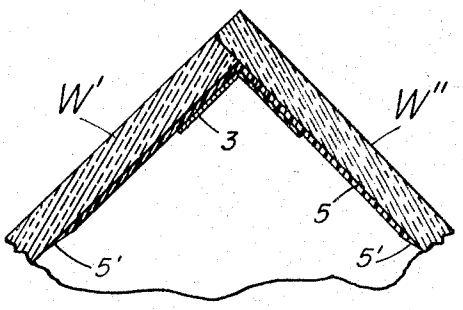


FIG. 3

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WALLBOARD CORNER CONSTRUCTION AND METHOD

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This invention relates to wallboard corner construction in a building and particularly to the formation of inside corners where three surfaces of wallboard (such as "Sheetrock") intersect, as at the upper inside corners of a room.

Rigid paper-covered sheets of "Sheetrock" wallboard can be fitted, either along a flat surface such as a wall or ceiling or at inside or outside corners, so that the "crack" at the joint is very narrow, but a finished job requires that the joints be sealed or covered by paper tape adhesively secured to the wallboard surfaces and covered by one or two thin applications of a coating material which must be smoothed on with a single pass of the taping tool. The adhesive, tape and coating material are applied by means of a tool which may be flat, like a putty knife, for use on flat surfaces or channeled to form a V-shaped edge for use in corners. The application of the adhesive, tape and coating along a two-sided corner (as between two walls or a wall and the ceiling) involves no difficulty so long as there is room to manipulate the tool, but a three-sided corner (at the intersection of a ceiling and two walls) present a serious problem. Each of the three tapes must be measured and cut so that it will run to the end of its joint and no further; enough adhesive must be worked into place along each joint without using too much; and the smoothing of the coating material is particularly difficult since the three tapes overlap and a stroke of the tool along one tape necessarily passes over parts of the adjoining tapes. In actual practice, for a clean, smooth job, it is common to finish only one tape at a time, letting the coating dry while other work is done and returning later (twice) to finish the coating of the other tapes.

The difficulties, inconveniences and delays of the operation just described are overcome, according to the invention, by the provision of a prefabricated trihedral corner piece, economically made by vacuum forming or stamping from a sheet of thermoplastic material such as high impact polystyrene, polyethylene, polypropylene, or the like, each of the three surfaces being shaped as a right triangle the sides of which may suitably be about five or six inches in length. The material may have a basic thickness of only .005" to .010" with the edges tapered or feathered, and the piece is flexible but stiff enough to maintain its shape while being installed. When such a corner piece is to be used, the usual adhesive is applied along at least the three outside corners of the corner piece, which is then pressed into place in the corner formed by converging ceiling and wall surfaces. The tapes are cut to extend only slightly over the edges of the corner piece, the amount of overlap being not critical so long as the tapes are spaced from each other. The coating material now needs to be applied only along the separate tapes—not all the way into the corner—and the smoothing on of the coating along one tape does not affect at all the area adjacent the other tapes. Thus all three converging joints can be finished in the same operation, with no heed to wait for the first one to dry and return later to do the others. Every corner so constructed is perfect, with clean sharp angles and smooth surfaces.

Since the corner piece is thin, with feathered edges, any surface treatment thereafter applied to the walls, ceiling, tapes and corner piece will easily obliterate all

the margins, leaving only the three apparently smooth and unbroken surfaces of the walls and the ceiling.

A practical embodiment of the invention is shown in the accompanying drawing wherein:

FIG. 1 represents a perspective view, looking slightly upward, of an upper corner of a room with the corner piece installed therein, parts being broken away;

FIG. 2 represents a similar view of the corner showing how the coating material is spread on by a corner taping tool; and

FIG. 3 represents a horizontal section, on the line III—III of FIG. 1, on an enlarged scale, the thickness of the corner piece and of the paper tape being exaggerated for purposes of illustration.

Referring to the drawings, it will be seen that a corner is formed by the intersection of a ceiling C, and two walls W' and W", the respective surfaces being assumed to lie at right angles to each other, as is customary. Said ceiling and walls are assumed also to be formed by sheets of wallboard, of the "Sheetrock" type, having a surface designed to be finished without plastering. Although the abutting edges of the wallboard sheets may be fitted closely together, the joints must still be sealed by applying paper tapes to cover completely every crack. Such tapes **1**, **2** and **3** are affixed to the wallboard surfaces by an adhesive (not shown) and are then covered by a thin quick-setting coating **4** (FIG. 2) which effectively obliterates the edges of the tapes, leaving a smooth and unbroken surface for further treatment, as by painting. The tapes are about two inches wide.

According to the present invention, a trihedral plastic corner piece **5** is adhesively secured in the corner formed by intersection of the surfaces C, W' and W", the three angular points of the corner piece extending preferably about five or six inches from the apex, and the adhesive **4** being applied at least along the three outside corners of the piece **5**. All edges of the corner piece are feathered down from the basic thickness of the plastic (e.g., .005" to .010") to the thinnest practicable edge, as indicated at **5'** in FIG. 3. When such a corner piece has been installed, the tapes **1**, **2** and **3** can be cut to overlap it only by an inch or so and the coating material **4** (FIG. 2) can be smoothed on to the tape and adjacent surfaces of the corner piece and wallboard by a single pass of a corner taping tool T. The coating material is spread to a width of two to four inches (preferably about three inches) from each joint and so may seal a substantial portion of the free edges of the corner piece.

From the foregoing it will be apparent that the apex of the finished corner and all surfaces within about three or four inches of same, remain clean and perfect, as made, while each of the three tapes can be applied, coated, and made substantially invisible quite independently of the others; i.e., the cornering tool is manipulated to smooth the coating onto the end of tape **1** without having to come anywhere near the ends of tapes **2** and **3**, which, in turn, can each be taken care of in the same independent manner. Thus all three joints and edges can be finished in rapid succession and left to dry in completed condition.

An example of an adhesive suitable for securing the corner piece in place (**6** in FIG. 1) is Bondmaster G297, a synthetic rubber-resin base general purpose adhesive produced by Pittsburgh Plate Glass Company.

A high percentage of all inside corners are right-angled, as shown and described, so that the single corner piece of corresponding form can be produced in large quantities to fill almost all requirements. However, if the architecture of a particular building includes enough corners of some different angularity to make it worth while, small runs of other shaped corner pieces could be produced. If a corner has two 90° angles and one that

is more than 90°, the standard corner piece can be adapted to this situation by slitting one side (from straight edge to apex) so that the opposite angle can be enlarged as required. When corner pieces are molded from circular blanks their free edges are somewhat arcuate, but the straight edged form uses less material and has certain other advantages.

What I claim is:

1. A wallboard corner construction comprising three intersecting wallboard surfaces, a prefabricated trihedral unitary corner piece of thin sheet material having the free edges thereof feathered fitting the intersection of said surfaces and adhesively secured thereto, a sealing tape adhesively secured along at least one joint between intersecting wallboard surfaces, said tape extending over a portion of the feathered edge of the corner piece and terminating at a point spaced from the apex thereof, and a coating material covering said tape and adjoining areas of the corner piece.

2. A corner piece according to claim 1 in which the sheet body has a basic thickness of approximately .005" to .010".

3. The method of finishing an inside corner of a building room formed by the intersection of three wallboard surfaces consisting of a ceiling and two walls which includes, fitting into said corner a prefabricated trihedral sheet corner piece, adhesively securing said piece to said surfaces, applying sealing tapes along the joints formed by the intersection of each two wallboard surfaces extending from points on said corner piece and spaced from the apex thereof to points beyond said corner piece, and spreading over said tapes and adjacent surfaces of the corner piece and wallboard a finishing coating material over an area appurtenant to each tape and spaced from the areas appurtenant to each other tape.

4. The method according to claim 3 which includes the steps of applying the second and third tapes and coatings while the first and second coatings, respectively, are still too wet to be touched.

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