C. W. UTZMAN.
plaster board.
APPLICATION FILEE AUG. $13,1918$.
1,383,249.
Patented June 28, 1921. 2 shets-sheet 1 .


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# UNITED STATES PATENT OFFICE. 

# CLARENCE W. UTZMAN, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO UNITED STATES GYPSUM COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS. 

PLASTER-BOARD.
1,383,249.
Specification of Letters Patent. Patented June 28, 1921.
Application filed August 13, 1918. Serial No. 249,630.

To all whom it may concern:
Be it known that I, Clarence W. Utzman, a citizen of the United States, residing at Chicago, in the county of Cook and State of
5 Illinois, have invented certain new and useful Improvements in Plaster-Board, of which the following is a description.

My invention belongs to that general class of manufactures known as plaster board, and suitable body inclosed with suitable covering material. The invention has among its objects the production of a board of the kind described that is simple, durable; ornawherever found applicable. It has particularly as an object the production of a board that may be easily applied, but when so applied will present a neat, uniform and fin0 ished appearance. Many other objects and advantages of the construction herein shown and described will be obvious to those skilled in the art from the disclosures herein given.
To this end my invention consists in the 25 novel construction, arrangement and combination of parts herein shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference 30 characters indicate like or corresponding parts-

Figure 1 is a perspective view of one form of my board;

Fig. 2 is a perspective view of another
Fig. 3 is a perspective view illustrating another form;

Fig. 4 is an enlarged view illustrating a step in the construction of the board;
Fig. 5 is a similar view illustrating the construction of a slightly modified board;

Fig. 6 is a view illustrating still another modified form ;
Fig. 7 is a perspective view illustrating a 5 step in the applying of the board;

Fig. 8 is a similar view illustrating a preceding step;

Fig. 9 is a view illustrating the finished product applied; and
Fig. 10 is a view somewhat similar to Fig. 8 , illustrating an additional method of applying and securing the board in place.

Referring first to Fig. 1, 1'and 2 represent cover sheets of fibrous material, such as
paper or the equivalent, between which is 55
arranged a body 7 , preferably of plaster Paris or the equivalent, which may be placed upon one sheet in a plastic state, covered with the other sheet and allowed to harden. The plaster board is ordinarily made in long continuous sheets in a suitable machine, and then cut off into the desired lengths, thence placed through a kiln if desired, and shipped as required. Heretofore in making plaster board of this kind it has been difficult to secure side edges that will conform to a desired specification. In the preferred form of board, one of the sheets is turned up at the edges and over the body so as to inclose the edges, protect the material and prevent its crumbling out, as well as to provide' a good uniform edge and a pleasing appearance. The covering sheets when of paper are somewhat stiff, and the plastic material over which the same is turned being in a plastic condition, the edges frequently turn out to be round or irregular. In my improved board, I prefer to score one sheet, for example the bottom sheet 2 , so that the same may be folded to inclose the edge and provide the desired style of edge. As shown in Fig. 4, I score, cut or indent the sheet 2 at each edge (only one edge being shown in Fig. 4) as at 5 and 6 , so as to divide the same into the face portion 2, edge portion 3 and overlying portion 4 . The desired thickness of the board will of course determine the distance between 5 and 6. When a straight edge is to be formed, as shown in Figs. 1 and 4 , the scoring is made uniform at 5 and 6 so that as the board passes through the machine in the course of manufacture, parts 3 and 4 . may be turned up as shown in Figs. 1 and 4, forming a straight and perfect edge. If it is desired to form the edge at an angle, I vary the scoring as shown in Figs. 5 and 6, as well as illustrated in Fig. 3. Referring to Fig. 5,9 represents the sheet 2 with the edge portion 10 and overlying portion 11, and 12 and 13 the scoring. It will be noted, however, that the scoring at 13 is deeper than that at 12, the edge at the juncture of the side part 10 and the overlying portion 11 being sharper. This permits the sheet to be turned to a sharp edge, as indicated in Fig. 3. In Fig. 6, in which 14 represents the face portion, 15 the edge portion and 16 the overlying portion, the scoring at 17 is deeper
than the scoring at 18 , so that it permits the forming of an edge as is also shown in Fig. 3. I do not consider it necessary to describe in detail the manufacture of the board, as 5 this may vary. I have preferred, however, to secure the sheet 1 and part 4 together by using the plaster as a securing means at $7^{\prime}$. Obviously glue or any equivalent may be employed. Obviously, when a continuous 10 board is constructed as described, while the side edges will be inclosed, the edges at the ends at the cutting off points will not be inclosed but the plaster will be exposed. If it is desired to inclose these edges, strips 8 may
15 be secured thereon, the same being of paper, fabric or any equivalent material for the purpose, which may be secured in place in any suitable manner. The strips 8 are, of course, applied after the board is cut off.
20 In Fig. 1 the top sheet 1 is shown spaced back at each edge of the board so that the outer side edges of the top sheet are protected and are not apt to be peeled back. It is frequently desirable, however, in ap25 plying the board to have the cracks at the juncture of the boards as tight as possible, so far as can be, to conceal the juncture of adjacent boards so that when the same is painted, decorated or otherwise finished, a 30 pleasing appearance will be secured. Referring to Fig. 2, in which 22 represents a face covering sheet turned as at 23-24 at the edges, 21 represents a covering sheet arranged over the plaster 27 or its equivalent, 35 and-secured by the plaster $27^{\prime}$ or equivalent at the edge. The edges at 23 may of course be formed as desired as previously described. In this construction, one edge of sheet 21, as shown at 26 , is spaced back from
40 one edge of the board, while the other edge, as shown at 25 , extends beyond the edge of the board. While the width of the extending portion 25 may be equal to the distance which 26 is spaced from the edge of the
45 board on the other edge, I prefer to have the same extend a greater distance than the space at the opposite side, so that when two boards are placed edge to edge as illustrated in Fig. 7 ,the portion 25 of one board
50 will overlie the cover sheet 21 of the adjacent board. As shown in Figs. 7 and 8, 29 represents studding or the equivalent, which is to be covered by and support the plaster board. One board is applied as
55 shown in Fig. 8, and secured in place by nails 30 or the equivalent. The other board may then be positioned as shown in Fig. 7 with its edge abutting the edges of the board secured in place. The second board
60 may then be fastened to the studding 29 or after trimming. When the board is/placed in position as shown in Fig. 7; the extending portion 25 is then trimmed as shown at 28 , by means of a sharp 65 knife or other suitable tool, and usu-
ally with a straight edge. The trimming point, however, is such that in trimming 25 a portion of the cover sheet 21 is trimmed off adjacent edge 26. In cutting both edges at the same time they will match perfectly, so that the extending portion of 21 will lie flat against the face of the adjacent board. Of course, before the extending portion is secured in place, the portion adjacent 26, which has been trimmed, is peeled off. The result is that the joining of the two boards is disclosed only by a line where the parts were trimmed, as shown in Fig. 9. The extending part of 25 remaining, may of course be secured in place by glue, paste, or any equivalent material for the purpose.

In Fig 10, 32, 33, 34 and 31 represent the inclosing material for the body 37, the same being secured in place by nails 36 or the equivalent. In this case the nail 36 also secures in place a small plate 35 of metal or the equivalent, which projects beyond the edge of the board. The next board may be secured in place by pushing the edge of the board under the plate and forming the juncture of the top sheets of the two boards as previously described. In this case it will be obvious that no nails whatever or other fastening means will show at the front of the board, all fastening means being entirely concealed, producing a very attractive appearance. In the board shown in Fig. 3, the edges are at an angle, it being immaterial as to which angle is which. In Fig. 3 I have shown by dotted lines how the edges may be inclined in the opposite direction. When constructed as shown in the full lines, one board will maintain the other in place, giving the same results as the construction shown in Fig. 10.
It will be obvious from the preceding that the edges of the boards may be accurately made in a predetermined manner, so that when they abut they will fit tight together, affording a construction in which air will not easily pass through. This is particularly the case where the extending cover sheet is employed. With any of the constructions an attractive and neat finish is secured. Obviously, the ends of the boards 115 may be covered by the covering $8-8$ should this be desired, or a strip. 8 ' (see Fig. 9) may be arranged to cover the crack at the juncture of the two boards. In this case extremely thin paper may be employed, or its 1 equivalent, so that the same is not readily noticed.

Having thus described my invention, it is obvious that various immaterial modifications may be made in-the same without departing from the spirit of my invention; hence $I$ do not wish to be understood as limiting myself to the exact form, construction, arrangement and combination of parts herein shown and described or uses mentioned. 130

What I claim as new and desire to secure by Letters Patent is:-

1. A plaster board of the kind described comprising a body of suitable material provided with corering sheets on the faces thereof, one of the covering sheets being scored and thence folded to inclose the side edge and overlying the other face of the board.
2. A plaster board of the kind described including a body of suitable material provided with a covering sheet on one face thereof, said covering sheet being scored adjacent one edge of the body and folded at said scoring to extend over said edge.
3. In a plaster board construction, the combination of a plurality of plaster boards each consisting of a suitable body having a covering sheet of fibrous material arranged 0 on one face thereof and folded to inclose the side edges and overlie a portion of the opposite face of the board, and a second covering sheet arranged on the last mentioned face of the board with one edge of 5 the covering sheet spaced from the edge of the board and the other end extending beyond the edge of the board, said boards being adapted to be placed together in edgewise relation, and the extension portion of 0 the covering sheet of one board adapted to lap over and conceal the adjacent abutting edges of the boards and to overlie that portion of the adjoining board from which its top covering sheet is spaced. combination of a plurality of plaster boards each consisting of a suitable body a covering sheet arranged on one face of the body, a second covering shect arranged on the op-
posite face of the body with one edge of the covering sheet spaced from one edge of the board and the opposite edge of the covering sheet extending beyond an edge of the board, said bourds being adapted to be placed in edgewise relation and the extension portion of the covering sheet of one board being adapted to lap over and conceal the adjacent abutting edges of the boards, and to overlie that portion of the adjacent board from which its top covering sheet is spaced.
4. In a plaster board construction, a plaster board consisting of a body, a covering sheet arranged on one face of said body, a second covering sheet arranged on said body, a second board having a suitable body with a covering sheet on one face thereof, and provided with a second covering sheet arranged on the opposite face of the body and of a length to extend over and overlie one of the cover sheets of the adjacent board, 6 whereby the adjacent edges of the two sheets may be simultaneously trimmed and accurately matched.
5. A mlaster board of the kind described including a body of suitable material, and a 65 covering sheet portion for the body extending over two adjoining angularly related face portions of the board, satid covering sheet portion being scored adjacent the meeting edge of the angularly related face 70 portions and folded at said scoring.
In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

CLARENCE W. UTZMAN.
Witnesses:
Jonis W. Hill,
Charles I. Cobb.

