July 2, 1929. H. C. RAYNES 1,719,726

WALL BOARD

Filed Aug. 26, 1926

Fig. 1

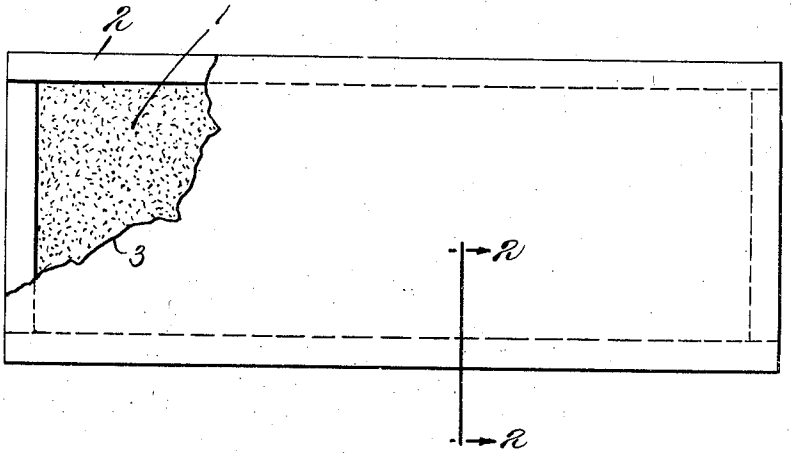
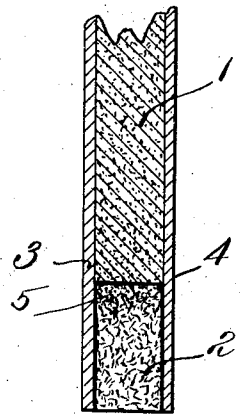


Fig. 2



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UNITED STATES PATENT OFFICE.

HARRY C. RAYNES, OF PORTSMOUTH, NEW HAMPSHIRE, ASSIGNOR TO ATLANTIC GYPSUM PRODUCTS COMPANY, OF PORTSMOUTH, NEW HAMPSHIRE, A CORPORATION OF NEW HAMPSHIRE.

WALL BOARD.

Application filed August 26, 1926. Serial No. 131,661.

This invention relates to wall board construction, and more particularly to an improved wall board usable for a variety of purposes in the building of dwelling houses and other structures.

This type of material has been widely manufactured and is ordinarily of a substantially homogeneous fibrous construction somewhat similar to heavy cardboard, and as such, it has been employed as a substitute for plaster to finish the inside of various types of structures. However, it has not been entirely satisfactory because of its lightness whereby the walls are not sufficiently rigid, and on account of the inflammable nature of the material.

It has also been proposed to make a board from material more nearly the equivalent of plaster. One such material used for this purpose is gypsum. This material is free from various defects present in the former fibre wall boards in that it is heavier and forms a firm substantial wall and in that it is substantially fireproof. However, there are certain disadvantages incident to the use of material of this type, the chief being liability to breakage. Gypsum and analogous substances have very little tensile strength and as a result, when the board is subjected to sharp shocks during handling, shipping or the like, the likelihood of breakage is relatively great. Furthermore such materials are difficult to use, not being adapted readily to receive fastenings such as nails, screws, etc., the process of drilling holes in the sheets and of using only these drilled holes being tedious and unsatisfactory.

It has been attempted to provide a protective edge for such material to prevent breakage or injury during shipment but the results attained have not been satisfactory.

The present invention is designed to overcome these objections and provide a wall board calculated not only to have all the advantages of the old fashioned plaster wall but also to be free from all its disadvantages. Objects of the present invention are to provide a fireproof wall board which is of such durable construction that it will not be damaged in the handling incident to sending it from the factory to the point of use, to provide a wall board having a base of such material as to render it the equivalent of a plaster wall with like advantages, and at the same time to provide a board which may be attached to the usual studding by nails, screws or other fastening means without the possibility of injury by cracking. Other objects and advantages of the present construction will be apparent as the description proceeds and will be particularly pointed out in the appended claims.

Referring to the drawings in which is shown one embodiment of the invention,

Fig. 1 is a plan view of a board constructed in accordance with this invention having a part of the covering paper broken away to show the interior construction; and

Fig. 2 is a section on the line 2—2 of Fig. 1.

The board comprises a body portion 1 which may be of gypsum or some light cementitious or frangible material. One or more of the edges of the body are provided with a strip 2 of fibrous material as, for example, cellulose or animal fibres or any combination thereof. This fibrous marginal portion may be treated in any suitable or desired manner to render the board fireproof or to effect fire-resistant qualities, as for example, by impregnating the fibres with gypsum or other desired material which may be done in any conventional manner. It may at times be desirable to at least partially impregnate the marginal strip with some of the material of which the body portion is made, which may be done through contact with the core or body portion before the setting of the latter as shown at 5, resulting in a certain limited binding action between the material impregnating the fibrous marginal portion and the material composing the body portion.

The body portion and marginal portion are preferably covered on one or both sides with the usual thick paper shown at 3 and 4, which paper has the effect of serving as an additional binder between said portions.

The corners of the board may be made as shown in Fig. 1 with the end of one marginal reinforcement abutting the adjacent side of the adjoining reinforcement, or, if desired, the marginal reinforcements may be beveled so that they abut each other on a line inclined to the sides of the board. In constructing the board, it is preferable first to combine a fibrous edge with the gypsum core or body portion, making the whole somewhat wider than the desired finished width of the board, then to apply the covering papers 3

and 4 to either side, and finally to trim the board to the desired width with saws as it passes on to a gypsum setting belt; but any other method of manufacture may be employed, if desired.

The fibre edge will preferably be about an inch in width to furnish a suitable nailing strip for applying the board to the usual studding, and will serve also as a protecting edge for the gypsum body portions during the shipping or handling of the board, thus preventing the cracking of the cementitious body portion.

While I have described the board as having a gypsum body portion, I intend this merely as illustrative of the type of material which may be used and not as limiting it, as many other specific materials and mixtures might be substituted therefor. I do not wish to be limited, therefore, except by the scope of the appended claims.

I claim:

1. A wall board comprising a body portion of light cementitious material, a marginal portion of loose fibrous material partially bonded with the cementitious material, said marginal portion being impregnated with some of the material of which the body portion is made to bind said portions together, and a covering portion of fibrous sheet material extending over both the body portion and the marginal portion, whereby to bind said portions more firmly together.

2. A wall board comprising a body portion of gypsum, a marginal portion of substantial width extending about at least a part of its periphery, said marginal portion being of loose fibrous material and rendered fireproof by impregnating with gypsum which serves also to bind it to the body portion, and covering portions of heavy paper on either side of the board to bind the portions together more firmly and to present a smooth finished surface.

3. A wall board comprising a body portion of hardened plastic material, a peripheral portion of substantial width extending entirely about the perimeter of the body portion, and a cover sheet overlapping each face of said body and peripheral portion, each cover sheet being formed of fibrous material and being adhesively secured to a flat face of said peripheral portion, said peripheral portion being of loose fibrous material and joined to the body portion by a part of the material of the body portion impregnating the adjoining part of the peripheral portion to provide a bond between said portions.

Signed by me at Portsmouth, New Hampshire this twenty-third day of July, 1926.

HARRY C. RAYNES.