July 10, 1928.

1,677,073

G. COHEN

BUILDING MATERIAL

Filed Sept. 10, 1926

Fig. 1.

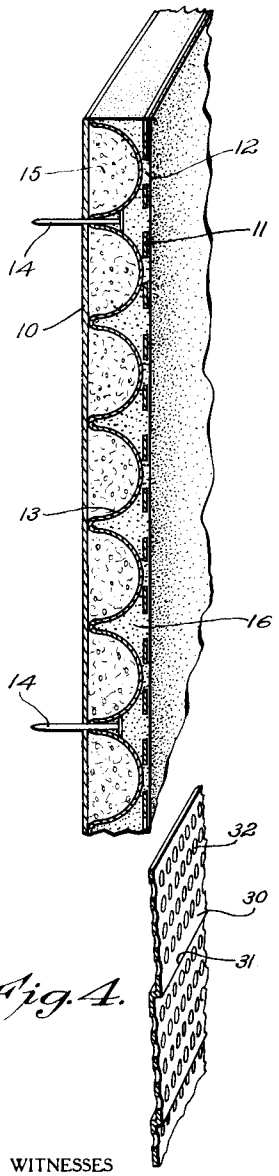


Fig. 2.

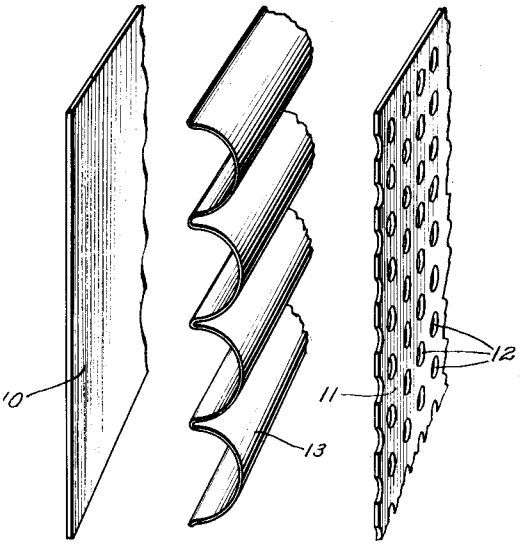


Fig. 3.

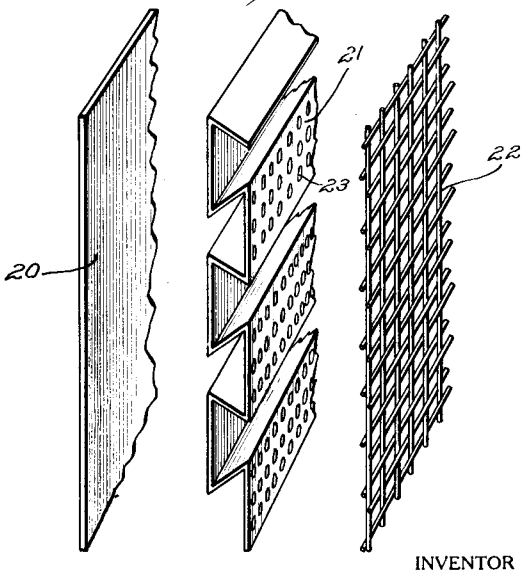


Fig. 4.

WITNESSES

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Patented July 10, 1928. 1,677,073

UNITED STATES PATENT OFFICE.

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BUILDING MATERIAL.

Application filed September 10, 1926. Serial No. 134,710.

The present invention is concerned with the provision of a building material adapted to be made up either as a wall board or as a metal lath.

An object of the invention is to provide a material of this character which will be light in weight, easy to handle, fire-proof, and rugged and durable in use.

Another object of the invention is to provide a material of this character so constructed that plaster applied to one face thereof will be actually keyed to the material so that there will be no danger of the plaster cracking or dropping.

Still another object of the invention is to provide a material of this class which lends itself readily to the application of heat-insulating material.

A further object of the invention is to provide a metal wall board so constructed that when it is nailed in place the nail heads will be sunk below the surface of the board and will be entirely concealed after a coat of paint has been applied.

All types of wall board now on the market which involve the use of nails as securing means, are subject to the common disadvantage of exposing the nail heads when in place. Fifty per cent saving of plaster will be obtained with the use of the device and inferior plaster will be prevented from falling down.

With the above noted and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter set forth and pointed out in the claims. The invention may be more fully understood from the following description in connection with the accompanying drawings, wherein

Figure 1 is a fragmentary perspective view showing a small section of a metal wall board embodying the invention;

Fig. 2 is a fragmentary perspective view showing the three metallic laminations which constitute the board, disassembled;

Fig. 3 is a view similar to Fig. 2 but illustrating a modification.

Fig. 4 is a similar view illustrating a further modification.

Referring first to Figs. 1 and 2 of the drawings, it will be noted that the wall board of the present invention is built up of three laminations of relatively thin gage metal; the inner lamination 10 is in the nature of a flat unapertured sheet of metal capable of being readily pierced by a nail. The outer lamination consists of a similar metallic sheet 11 having apertures 12 therein of greater diameter than the heads of the nails with which the board is to be secured. The intermediate lamination comprises a sheet of corrugated metal 13 having the ridges of its corrugations secured alternately to the sheet 10 and the sheet 11. The manner of securing the sheet 13 to the inner and outer sheets is subject to considerable variation, but I prefer to spot-weld or use any other well-known welding process to unite the sheets.

It will be noted that apertures 12 in the sheet 11 are arranged immediately above the bottom of grooves in the sheet 13, so that nails 14 driven through the openings 12 to secure the wall board against studding or other suitable supports, will pass through the openings and be stopped by the confronting walls of the bottom of the groove in the plate 13. It will be noted in the illustrated embodiment of the invention that the corrugations are somewhat irregular providing relatively capacious grooves or pockets facing the rear plate and relatively restricted grooves or pockets facing the forward plate 17. The purpose of this is to permit a relatively large amount of insulating material 15 to be accommodated between the plates 10 and 13, and also to economize on the paint or mastic 16 which fills the space between the plate 11 and the plate 13.

The insulating material may be of any desired character and applied in any convenient manner preferably before the plates are secured together. The paint or mastic is applied after the plates are in position. It flows through the openings 12 interlocking around the nail heads and in the openings and effectively concealing the heads of the nails as well as presenting a smooth finished exposed surface to the board.

In Fig. 3 I have illustrated a modification of the invention in which the board consists of three metallic laminations 20, 21 and 22, the inner lamination 20 being in the nature of a metal sheet similar to the sheet 10. The intermediate lamination 21 comprises a corrugated metal sheet and the outer lamination 22 comprises an ordinary wire screen, preferably of about ¼-inch mesh. These three laminations are secured together by welding or in any other convenient manner,

and insulating material or paint or mastic may be applied as above described. Attention is called to the peculiar cross-sectional configuration of the intermediate lamination 21. This sheet is corrugated to provide alternate keys and keyways so that if plaster is applied through the screen 22 it will be effectively keyed to the plate 21. The particular cross-sectional shape of the plate 21 is also very effective when the building material is made up in the form of a lath instead of a wall board. The plaster when applied to such a lath will not only be keyed to the member 21 but will completely embed the screen 22 so that the danger of the plaster falling or cracking is practically nil.

The lamination 21 of Fig. 3 may if desired be provided with apertures 23 in the portion which lies against the wire screen.

In Fig. 4 I have illustrated a modification in the form of a plate 30 adapted to be substituted for the plate 12 or the screen 22. It will be noted that the plate 30 is shouldered at 31 and apertured at 32. The plate is adapted when covered with paint or plaster, to simulate an ordinary clapboard formation, the shoulders giving the appearance of overlapping clapboards. This form of the device is of course primarily intended for use in constructions where the plate 30 will be presented at the exterior of the building.

Obviously various changes and alterations might be made in the general form and arrangement of parts described without departing from the invention. Hence I do not wish to limit myself to the details set forth but shall consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

What is claimed is:

1. A building material adapted to be made up in plate or lath stock, including only three overlying connected metallic laminations, the intermediate lamination being corrugated and the outer laminations being approximately flat, one of said outer laminations comprising a wire screen through which plaster may be forced into the grooves of the corrugated lamination.

2. A building material adapted to be made up in plate or lath stock, including three overlying connected metallic laminations, the intermediate lamination being corrugated and the outer laminations being approximately flat and one of them being reticulated, said corrugated lamination being shaped to provide alternating undercut keys and keyways in which plaster is adapted to lock.

3. A building material adapted to be made up in plate or lath stock, including three overlying connected metallic laminations, the intermediate lamination being corrugated and the outer laminations being approximately flat, one of said outer laminations being foraminous, the corrugations in the central laminations being arranged to provide relatively restricted grooves between said laminations and the foraminous sheet and relatively capacious grooves between said central lamination and the other sheet.

4. A device as set forth in claim 3, wherein nails are adapted to be driven through the holes in one sheet and a filler in the restricted grooves embeds and conceals the nail heads.

5. A device as set forth in claim 3 wherein heat insulating material fills the capacious grooves.

6. A three-ply metal lath including flat outer plies one of which is foraminous and an intermediate ply corrugated to produce alternate undercut grooves and ribs adapted to serve as key anchorages for plaster forced through the foraminous ply.

7. An all-metal lath for building constructions comprising a corrugated sheet of metal and a foraminous sheet of metal secured together, the corrugated sheet comprising alternate undercut keys and keyways for the reception of plaster forced through the foraminous sheet.

8. An all-metal lath for building constructions comprising a corrugated sheet of metal and a foraminous sheet of metal secured together, the corrugated sheet comprising alternate undercut keys and keyways for the reception of plaster forced through the foraminous sheet, the keys being also foraminous to interlock with the plaster.

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