Oct. 14, 1930. H. A. CUMFER 1,778,145

PLASTER BOARD

Filed March 15, 1926

Fig. 1.

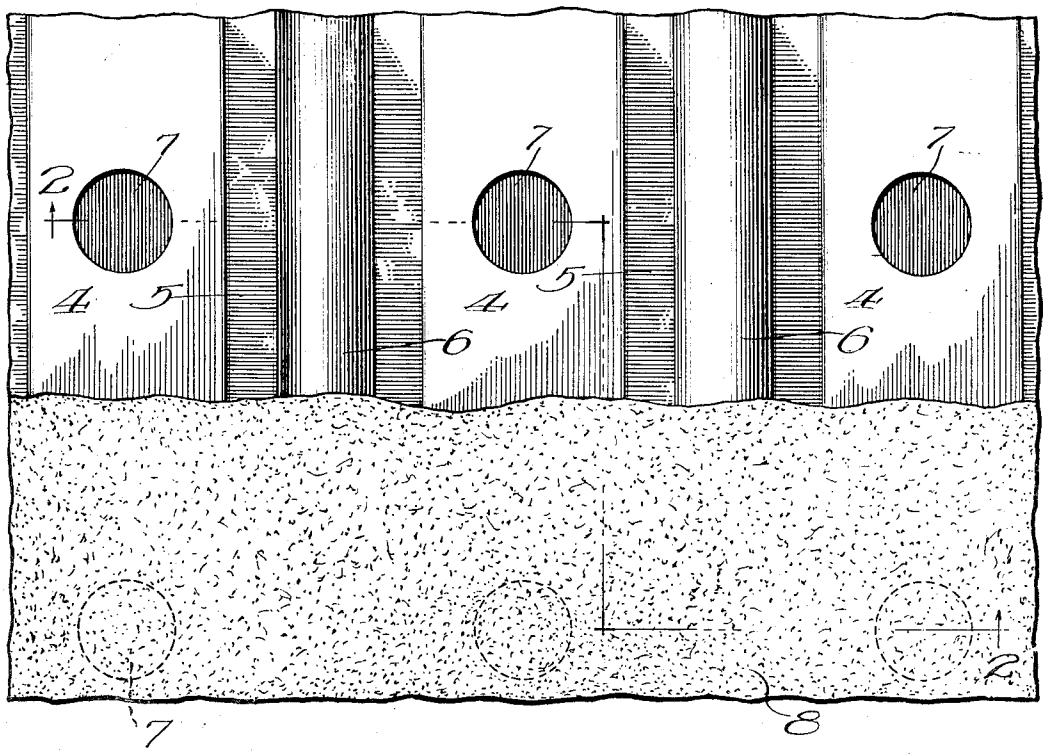
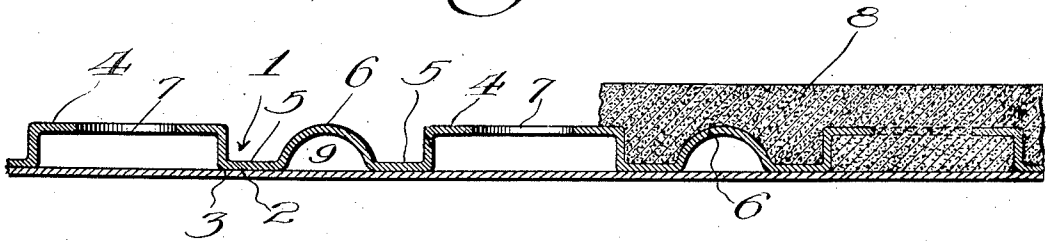


Fig. 2.



Witness:
Stephen T. Rebora

Inventor:
Harry A. Cumfer
By Frank L. Belknap
Atty.

Patented Oct. 14, 1930 1,778,145

UNITED STATES PATENT OFFICE

HARRY A. CUMFER, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO WILLARD J. MASON, OF GREENWICH, CONNECTICUT

PLASTER BOARD

Application filed March 15, 1926. Serial No. 94,685.

This invention relates to plasterboard, and refers more particularly to a plasterboard built up of felted fibrous material. The preferred embodiment of the invention comprises a corrugated surface sheet united to a flat imperforate base sheet.

The plasterboard of the present invention may be used as a plaster-receiving board or as plaster lath, or as a sound deadener between floors, walls, or the like, and for moisture-proofing solid frost-transmitting walls such as brick, stone, or the like, upon the inner side of which plaster is to be applied.

The board of the present invention possesses, among other properties, the advantage of functioning as insulation against transmission of both heat and cold in addition to its sound-proofing and weather-proofing properties.

The plasterboard may be made in continuous elongated flexible sheets and rolled into convenient shipping rolls as asphaltic roofing material is manufactured and rolled for shipment.

The plasterboard of the present invention may be nailed directly to studs, solid walls, rafters, and the like, and may be used as a lining for refrigerators, cold storage rooms, or the like, to exclude heat and moisture from such enclosures.

In the drawings,

Fig. 1 is a face view of a plasterboard manufactured in accordance with the present invention, and

Fig. 2 is a cross sectional view taken on the staggered line 2—2 of Fig. 1.

Referring more in detail to the drawings, 1 designates as a whole a corrugated surface sheet, and 2 a flat, imperforate base sheet which may be united thereto by means of the adhesive 3. This adhesive 3 may simultaneously function as a waterproofing or moisture-proofing medium, or a moisture-proofing medium may be incorporated directly into the felt. The base sheet 2 may be a sheet of porous fibrous felt saturated with a waterproofing medium, such as asphalt, or the like. The corrugated sheet 1 may be made of a relatively cheap material, such as chip board or similar substances, and may be provided with the alternate ribs 4, valleys 5, and ribs 6. The ribs 4 are preferably self-supporting and rectangularly shaped in cross-section, thus obviating the necessity for any reinforcing elements. The area between the exterior side walls of each of the ribs 4 is substantially the same as the width of these ribs 4. Each of the rectangularly shaped ribs 4 may be provided with holes 7 through which the plaster 8 will key, as shown clearly at the right hand side of Fig. 2.

When this built up structure is installed, the nails will pass through both the corrugated sheet 1 and base sheet 2 and serve as auxiliary means to firmly hold the corrugated and flat sheets in contact, in addition to the cementitious material 3.

As a feature of the present invention, to provide a corrugated sheet suitable for plaster as described herein which will be sufficiently reinforced and of the required stiffness and rigidity, I have conceived the idea of providing ribs 6, preferably rounded in form and of much less width than the ribs 4, in the valley spaces 5 between the exterior side walls of the rectangularly shaped ribs 4. These auxiliary ribs 6 are preferably not provided with holes for keying plaster but serve as reinforcing ribs or areas for the sheet.

The board of the present invention serves as an insulator to prevent the transmission of heat and, possessing moisture-proofing properties, it prevents frost from passing therethrough. The structure may be made in a continuous sheet in much the same manner as roofing material is made, being rolled into convenient form for shipment. The sheet may be severed subsequently into suitable lengths and properly secured to a wall to be plastered.

In addition to acting as a reinforcement, the ribs 6, having a closed surface (that is, not apertured), will provide dead air spaces 9 between these ribs and the flat base sheet. These dead air spaces 9 will effectively function to prevent the transmission of heat and cold through the wall and will also effectively deaden the transmission of sound. By forming the ribs 4 in substantially rectangu-

lar shape and making them self-supporting, I am able to dispense with any other supporting or reinforcing elements.

I claim as my invention:

1. A plasterboard, comprising a sheet of fibrous material corrugated to form self-supporting interspaced ribs and alternate channels between said ribs, alternate ribs being rectangularly shaped in cross-section, the spaces between the exterior walls of the rectangularly shaped ribs being provided with smaller auxiliary reinforcing ribs, the faces of the rectangularly shaped ribs on the upper surface only being perforated at intervals to permit keying of plaster, and a flat base sheet cemented to the lower flat imperforatable faces of the corrugated sheet, said smaller auxiliary reinforcing ribs being of relatively less width than the width of the enlarged rectangularly shaped ribs.

2. A plasterboard, comprising a sheet of fibrous material corrugated to form self-supporting interspaced ribs and alternate channels between said ribs, alternate ribs being rectangularly shaped in cross-section, the spaces between the exterior walls of the rectangularly shaped ribs being provided with smaller auxiliary reinforcing ribs, the faces of the rectangularly shaped ribs on the upper surface only being perforated at intervals to permit keying of plaster, and a flat base sheet cemented to the lower flat imperforatable faces of the corrugated sheet, said smaller auxiliary reinforcing ribs being of relatively less width than the width of the enlarged rectangularly shaped ribs and presenting a closed surface to form air spaces between the auxiliary ribs and said base sheet.

3. A plasterboard, comprising a sheet of fibrous material corrugated to form self-supporting interspaced ribs and alternate channels between said ribs, alternate ribs being rectangularly shaped in cross-section, the spaces between the exterior walls of the rectangularly shaped ribs being provided with smaller auxiliary imperforate reinforcing ribs, the faces of the rectangularly shaped ribs on the upper surface only being perforated at intervals to permit keying of plaster, and a flat base sheet cemented to the lower flat imperforatable faces of the corrugated sheet, said smaller auxiliary reinforcing ribs being of relatively less width than the width of the enlarged rectangularly shaped ribs, the area between the exterior side walls of each of the rectangular ribs being substantially the same as the width of said ribs.

HARRY A. CUMFER.