No. 649,363.

Patented May 8, 1900.

P. RYAN.

FIREPROOF PLASTER BOARD.

(Application filed Jan. 3, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

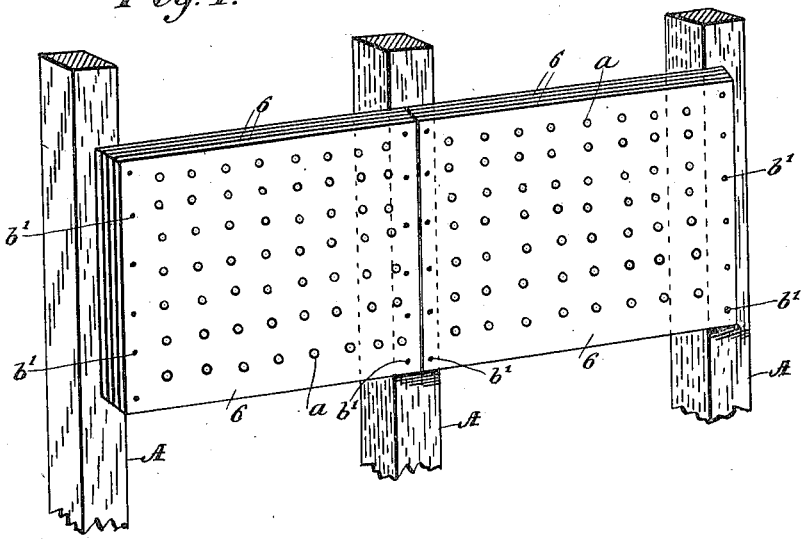


Fig. 2.

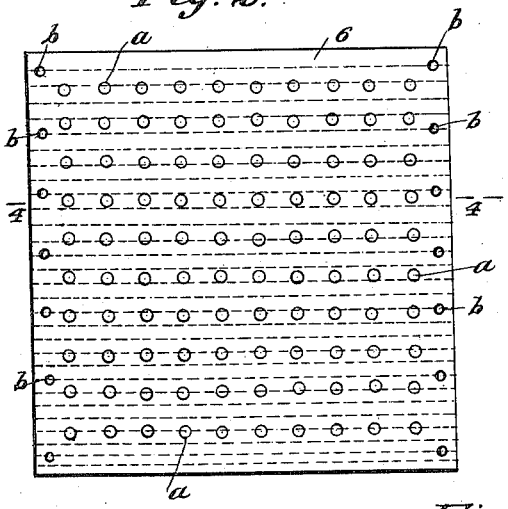


Fig. 3.

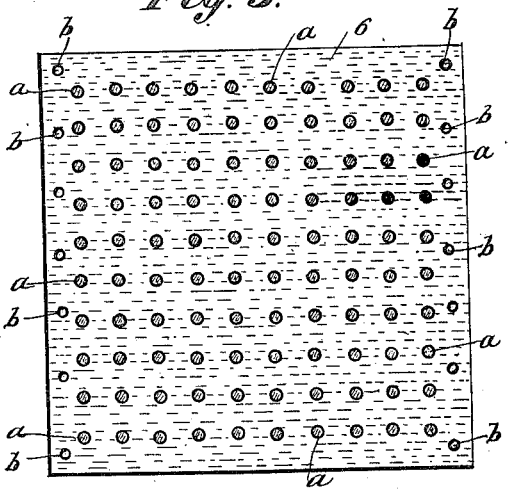


Fig. 4.

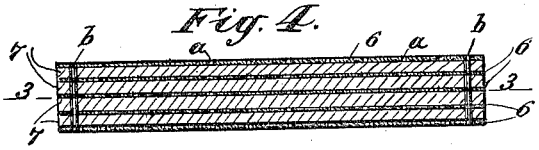
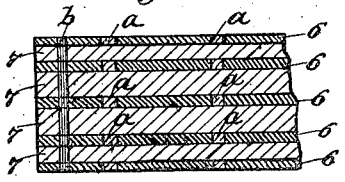


Fig. 5.



WITNESSES:

Wm. L. Patton

B. W. Hanaford

INVENTOR

Patrick Ryan

BY Munn

ATTORNEYS

No. 649,363. Patented May 8, 1900.

P. RYAN.

FIREPROOF PLASTER BOARD.

(Application filed Jan. 3, 1900.)

(No Model.) 2 Sheets—Sheet 2.

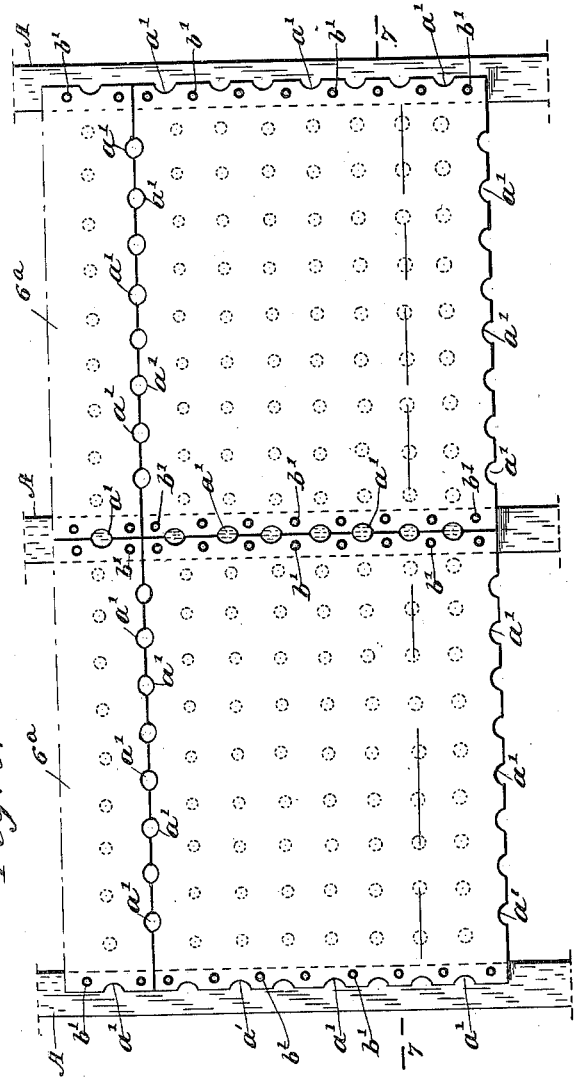


Fig. 6.

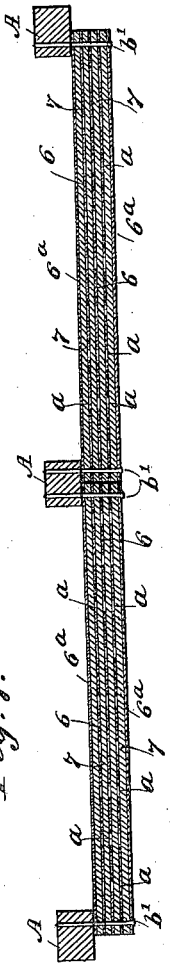


Fig. 7.

WITNESSES:

Wm. P. Patton

L. W. Mansford

INVENTOR

Patrick Ryan

BY Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

PATRICK RYAN, OF NEW YORK, N. Y.

FIREPROOF PLASTER-BOARD.

SPECIFICATION forming part of Letters Patent No. 649,363, dated May 8, 1900.

Application filed January 3, 1900. Serial No. 241. (No model.)

To all whom it may concern:

Be it known that I, PATRICK RYAN, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Fireproof Plaster-Board, of which the following is a full, clear, and exact description.

This invention relates to fireproof coverings for the sides and ceilings of rooms in a building, and has for its object to provide a novel, convenient, and inexpensive heat-resisting substitute for wood or metal laths and plaster commonly employed in the formation of side walls and ceilings of rooms.

The improvement, which is in the form of a rectangular-edged board formed of alternate layers of fireproofed paper or its equivalent and a suitable plaster coated thereon, when applied by nailing the boards in place affords a smooth continuous covering for the joists and studding of a room, is non-combustible, and impervious to air, dust, or vermin.

The invention consists in the novel construction and combination of parts, as is hereinafter described, and defined in the appended claim.

In the drawings forming a part of this specification, and which illustrate the specific construction of the improvement, similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view showing the application of the improvement to studding forming portions of a side wall. Fig. 2 is an enlarged exterior view of one of the improved plaster-boards. Fig. 3 is a sectional side view of the same substantially on the line 3 3 in Fig. 4. Fig. 4 is a transverse sectional view substantially on the line 4 4 in Fig. 2. Fig. 5 is an enlarged transverse sectional view showing interior details of construction of the plaster-board represented in Fig. 4. Fig. 6 is a side elevation of plaster-boards secured in position on studding and having further details of improvement, and Fig. 7 is a transverse sectional view substantially on the line 7 7 in Fig. 6.

Briefly described, the improvement consists in the formation by suitable means of a plate or board which is rectangular in contour and is composed of a suitable number of sheets of paper, cardboard, or fibrous fabric, if this is preferred, and coating the interior sheets of paper with a thin layer of a suitable plastic material, which is preferably a mortar of plaster-of-paris.

The interior sheets of paper or the like have numerous spaced perforations to permit the plastic material or coatings to pass through said perforations during the manufacture of the plaster-board, and thus bind the paper sheets and plaster coatings together, so that when dried the plaster-board will become a hard durable heat-resisting covering, which may be secured by nails or screws in place on the timber-supports that are portions of the framework of a building.

The paper sheets 6, that are coated with the plaster material 7, may be and preferably are five in number, as shown in the drawings; but it is to be understood that this number may be increased or decreased, if desired. The paper sheets 6 may be all perforated, as indicated at *a* and *b* in Figs. 1, 3, 4, and 5, or the exterior sheets 6^a (shown in Figs. 6 and 7) may be devoid of perforations, except at *b*, along the side edges of the same to permit nails *b'* to be readily driven through the plaster-boards when the boards are to be secured in place on ceiling-joists (not shown) or upon studding A, as indicated in Figs. 1 and 6.

The sheets of paper or fabric, if this is preferred, should be thoroughly saturated with any available fireproofing liquid and dried previously to their manufacture into the improved plaster-boards, thus rendering these portions of the composite wall material proof against combustion by accident.

The plastic material used to coat the paper sheets may be a composition of different ingredients; but it must be non-liable to combustion.

In the course of manufacture the edges of each plaster-board are rendered true and at right angles to each other, and preferably the plaster-boards are of similar dimensions.

A series of perforations *b*, previously mentioned, extend along each side edge of a plaster-board and are suitably spaced apart, so that the boards in complete form may be quickly secured in position by use of nails *b'* driven through the perforations *b* and then into the timbers that are to support them.

If desired, the dimensions of the plaster-boards may be increased to engage with more than two of the studs A and be secured thereon; but preferably the size of each plaster-board is such as will permit it to engage with two adjacent studs A and extend half-way across each stud, as indicated in Figs. 1, 6, and 7, so that two plaster-boards may have their adjacent side edges seated upon each stud or joist of a building which they are to cover, and thus afford a continuous side wall or ceiling.

As shown in Figs. 6 and 7, I prefer to form spaced scallops or notches a' at intervals in each side edge of a rectangular plaster-board, these scallops being adapted to oppose each other in pairs, so as to produce openings between adjoining plaster-boards after they are in place, said openings being adapted to receive plaster material that is applied as a finishing coating for the side wall or ceiling of a room, and thus serve to hold the finishing coating bound upon the plaster-boards.

It will be seen that the improved substitute for ordinary side wall and ceiling material provides a smooth side wall or ceiling that is solid and hard as well as impervious to dust, air-currents, or the passage of any kind of vermin from one room to another.

While I give preference to the use of paper in the manufacture of the improved plaster-boards, I do not desire to confine the invention to such material, as I may employ heavy cardboard or use coarse cloth that has been made fireproof; and I may also use asbestos paper or cardboard, and thus dispense with the fireproofing of the paper; but if the paper is not made of a naturally-heat-resisting material it must be rendered so by application of a suitable liquid, as before explained.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

As a new article of manufacture, a building board or block consisting of superimposed layers of plaster and paper of equal size and shape, the paper being formed with perforations therein into which the plaster may extend, and the whole forming a solid block or board capable of being fastened in place in the building.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PATRICK RYAN.

Witnesses:
WM. P. PATTON,
JNO. M. RITTER.