

T. HYATT.

Fire-Proof Floors and Roofs.

No. 145,181.

Patented Dec. 2, 1873.

Fig. I.

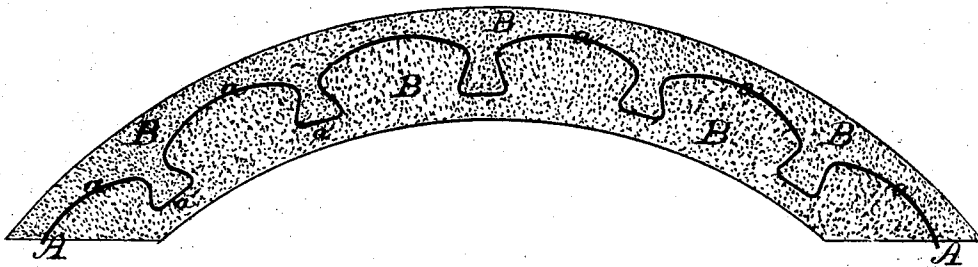


Fig. 2.



WITNESSES.

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UNITED STATES PATENT OFFICE.

THEODORE HYATT, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-PROOF FLOORS AND ROOFS.

Specification forming part of Letters Patent No. **145,181**, dated December 2, 1873; application filed October 8, 1873.

CASE A.

To all whom it may concern:

Be it known that I, THEODORE HYATT, of New York city, in the county of New York and in the State of New York, have invented certain new and useful Improvements in Fire-Proof Floors and Roofs; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a vertical section of a roof constructed by my improved method, and Fig. 2 is a like view of a floor constructed in the same manner.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention is to produce a roof or floor which shall be fire-proof, durable, cheap, and easily constructed; to which end it consists in a floor or roof composed of a corrugated sheet-metal diaphragm, covered with asbestos, combined with earthy material, substantially as and for the purpose hereinafter specified.

In the annexed drawing, A represents a sheet-metal diaphragm, corrugated transversely, so as to form a series of longitudinal ribs, *a*, which ribs have each the general form of an arch of a bridge, with downward and inward inclining abutments, the latter being connected together by means of a horizontal strip, *a'*, that extends between their lower ends. Upon each side of the corrugated diaphragm, and within its grooves, is placed a plastic composition, B, composed of asbestos, combined with gypsum and Portland cement, or other equivalent earthy materials, the proportion used being, preferably, three parts of asbestos, two parts of gypsum, and one part of Portland ce-

ment, said ingredients being mixed with water to a proper consistency to permit of their being applied like mortar.

The sections or tiles thus constructed are placed between and are supported by suitable rafters or girders, which latter are provided within their contiguous faces with rabbets, that correspond to and receive the edges of said tiles. The joints between the edges of the tiles and the beams or rafters are easily made tight by cement, and when used for a roof the entire surface may be coated with the same.

When used for forming mansard roofs, the exterior surface, while in a plastic state, may be molded into any desired ornamental shape or form.

The roof or floor thus constructed possesses great strength from the peculiar form of the corrugated diaphragm, it is entirely fire-proof, has but a fraction of the weight of a floor or roof composed of brick and iron, and can be furnished at a cost materially less than is practicable with other constructions of a fire-proof character.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

A floor or roof composed of a corrugated sheet-metal diaphragm, covered with asbestos, combined with earthy material, substantially as and for the purpose specified.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of October, 1873.

THEODORE HYATT.

Witnesses:

A. P. BROWN,
E. P. STARR.