

E. VACHER.
Fire-Proof Buildings.

No. 145,700.

Patented Dec. 16, 1873.

Fig. 1.

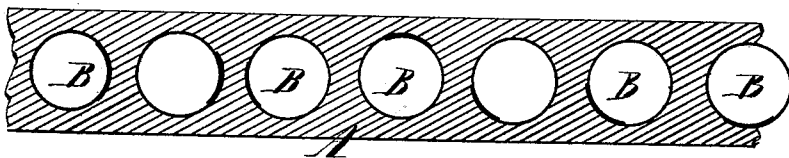


Fig. 2.

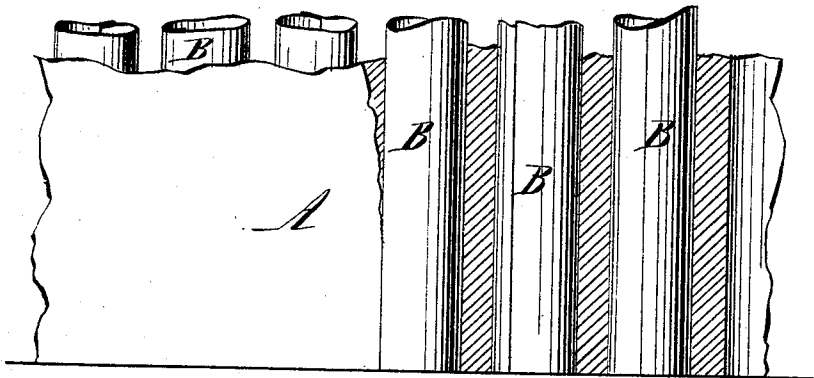
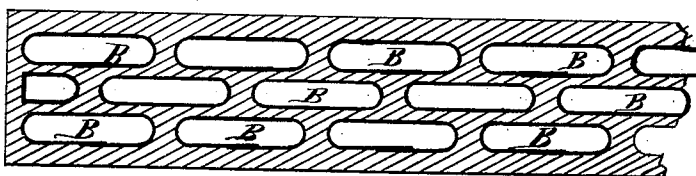


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

ERNEST VACHER, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-PROOF BUILDINGS.

Specification forming part of Letters Patent No. **145,700**, dated December 16, 1873; application filed August 28, 1873.

To all whom it may concern:

Be it known that I, ERNEST VACHER, of the city, county, and State of New York, have invented a new and useful Improvement in Fire-Proof Building; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a horizontal section of my invention. Fig. 2 is a sectional front view of the same. Fig. 3 is a horizontal section of a modification of the same.

Similar letters indicate corresponding parts.

This invention consists in a partition-wall or ceiling cast in one or more pieces around a series of ventilating-flues, set into their places before the material composing the partition or ceiling is applied, in such a manner that a cheap, light, and durable partition or ceiling is obtained, which is capable of resisting fire, and which is dry, and a bad conductor for sound.

In the drawing, the letter A designates my partition-wall or ceiling, which I produce in the following manner: I take a series of tubes, B, of strong card-board or any other suitable material, and made in any desirable form or shape, and place them in such a position that they will occupy the middle of the partition or ceiling to be produced. I then provide a mold composed of two parts, which can be closed up from opposite sides over the tubes B, and after the mold has been closed I cast into it a mixture of sand and cement or other compound for artificial stone suitable for this purpose. When the compound has set I remove the mold, and the partition-wall or ceiling is ready.

The tubes B can be made either round or oval, or in any desired form or shape, and, if desired, two or more rows of such tubes can be arranged in the partition-wall or ceiling side by side, as shown in Fig. 3 of the drawing.

By means of these tubes the partition-wall or ceiling is thoroughly ventilated and kept perfectly dry, and by the cement the tubes are perfectly protected against fire, so that they can be made of card-board or other light and cheap material, and that a partition-wall or ceiling constructed as above described will be superior in lightness to partition-walls or ceilings constructed on the usual plan. My partition-wall or ceiling has also the great advantage that it deadens the sound, which is a great desideratum, particularly in densely-populated dwelling-houses.

If the partition-wall or ceiling is of great extent it can be cast in several sections, each section being made in the manner heretofore described, and in this case the several sections will be united by suitable cement after the mold used in casting them has been removed.

The cement which I use, by preference, in constructing my partition-walls or ceilings is made of plaster-of-paris mixed with sawdust, and sometimes I also use pulverized coke.

What I claim as new, and desire to secure by Letters Patent, is—

A partition-wall or ceiling cast in one or more pieces around a series of ventilating-flues, set into their proper places before the material composing the partition-wall or ceiling is applied, substantially as set forth.

ERNEST VACHER.

Witnesses:

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