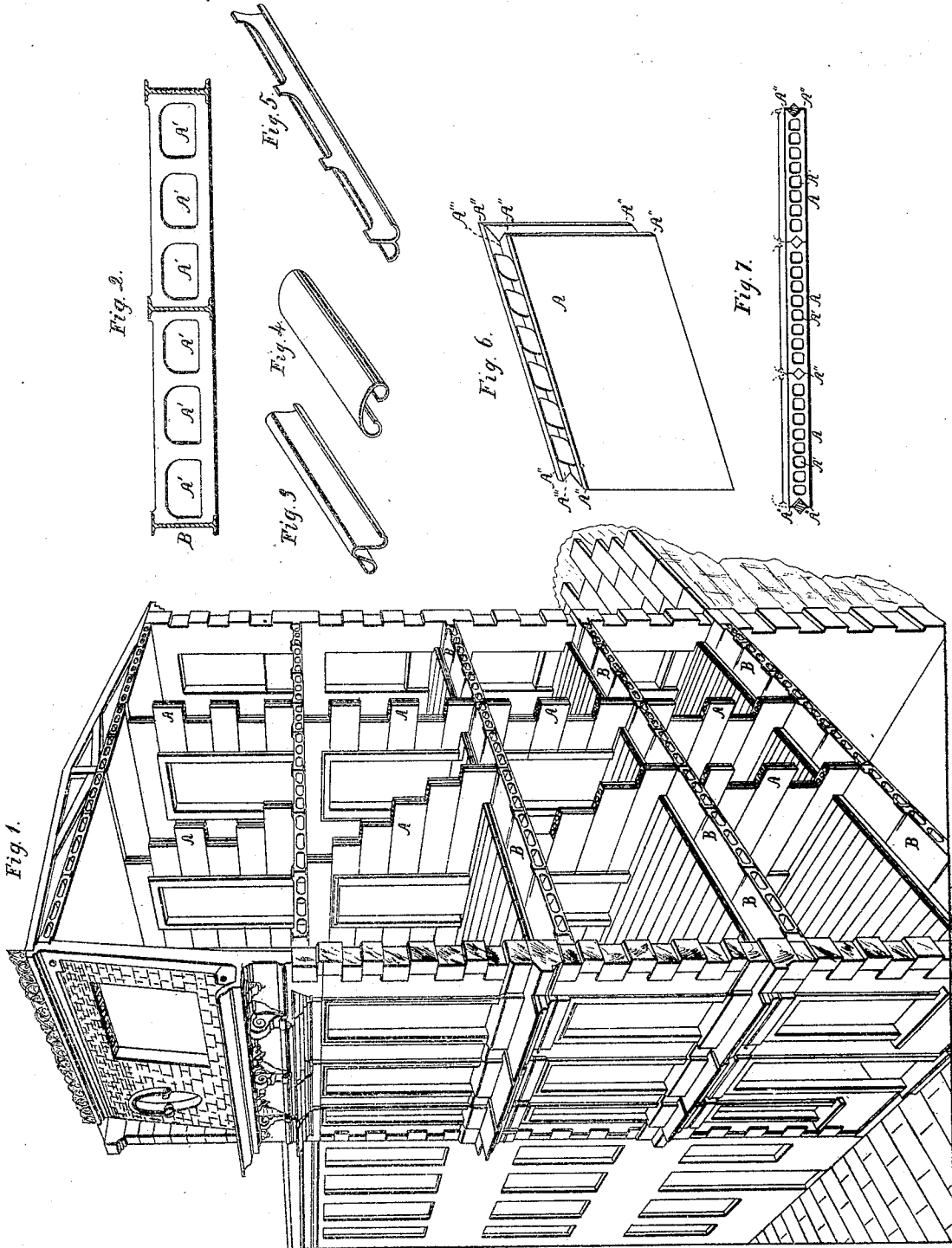


A. Wanner.

Fire Proof Building.

N^o 101,191.

Patented Mar. 22, 1870.



Witnesses.

*Wm. Johnson.
Chas. Billoy.*

Inventor.

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UNITED STATES PATENT OFFICE.

ANTHONY WANNER, OF NEW YORK, N. Y.

IMPROVEMENT IN FIRE-PROOF BUILDINGS.

Specification forming part of Letters Patent No. **101,191**, dated March 22, 1870.

To all whom it may concern:

Be it known that I, ANTHONY WANNER, of New York city and county and in the State of New York, have invented a new and useful Improvement in Fire-Proof Floors, Partitions, Roofs, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a perspective view of a building, shown partly in section. Fig. 2 is a vertical section of the floor-castings. Figs. 3, 4 and 5 are perspective views of sheet-iron cross-ties. Fig. 6 is a perspective view of a hollow casting used as partition, and Fig. 7 is a horizontal section of a partition.

The same letters of reference employed in the several figures denote identical parts.

The nature of my invention consists in providing buildings with fire-proof floors, partitions, roofs, &c., the fire-proof material consisting of hollow castings made of plaster of Paris, which may be cast on the beams, thus always fitting closely and compact, and supported by cross-ties placed between the beams and resting on the bottom flange, with which cast-iron beams generally are provided. The hollow castings may also be employed as partitions, and kept in place without cementing the castings together.

To enable others skilled in the art to make and use my improvement, I will proceed to describe its construction and operation.

Fig. 2 represents a transverse section of a floor-casting placed between parallel cast-iron beams. The castings are supported by sheet-iron cross-ties, as shown in Figs. 3, 4, and 5, which rest on the bottom flanges of the beams. The castings are then made so as to fill up the space between the beams, and molds of a cylindrical or arch-like shape are placed in a parallel position to each other, so as to leave hollow tubes in the castings when said molds are withdrawn. By this process floor-castings are made on the place where they are to remain, and by being partly hollow the upper surface of the casting will remain cool even if the lower surface is heated. To prevent the wooden strips on which the floor-planks are fastened from resting on the hollow casting, the upper

surface of the latter is curved downward, as shown in Fig. 2.

Fig. 6 represents a hollow casting, the sides and ends of which are provided with an angular groove. The partition-girder is placed in a diagonal position, and the angular groove of the casting fits over and covers the joist. The horizontal grooves of the castings may either be partly filled up with plaster of Paris, in order to cement the upper and lower castings together; or, instead of using plaster of Paris, a square rod may be employed, or the castings constructed with a mortise and tenon. Partitions built in this way may immediately receive paper-hangings, and the room occupied as soon as the partition is finished.

Fig. 7 shows a partition constructed as above described.

A is the hollow casting, and B is the diagonally-placed partition-girder, which is entirely covered by the brick A. Partitions for halls, vestibules, anterooms, offices, &c., may be built of colored or painted castings, or of marble bricks. Hollow castings of plaster of Paris only cost one-third and weigh one-half of brick arches, which are now commonly used in fire-proof floors. The tubes in the castings may serve to communicate cold and hot air, inclose gas and water pipes, bell-wires, &c.; and a fire-proof floor or partition made of hollow plaster-of-Paris castings is constructed in less than half the time of any now known method.

The castings may be made of concrete, cement, clay, or any other suitable material; but I prefer plaster of Paris as the lightest and best material for this purpose. For inside partitions and floor-castings, plaster of Paris is used to the best advantage, but for outside work I propose using cement or concrete castings. Another advantage arising from the manner of constructing floors and ceilings as above described is that the plaster of Paris may be cast upon a mold having upon its upper surface any ornamental design which it may be desirable to transfer to the ceiling.

I am aware that a patent was granted to F. D. Petersen, in 1855, for fire-proof floors, in construction somewhat similar to mine; but my invention is distinguished from that in several respects.

My fire-proof floors are made entirely of plaster of Paris, or any other suitable material, by casting them on boards or molds spanning from beam to beam, and forming the hollow spaces by cores; said boards and cores are afterward removed. Thus I dispense entirely with the tiles or hollow tubes which F. D. Petersen employs, and which are objectionable for various reasons, as they, for instance, augment the weight of the floors materially, are more expensive than mine, and require heavier beams to rest on. As the lower surface of Petersen's tile-tubes are to be covered with plastering in order to finish the ceiling, the construction of his floors and ceilings must require more labor and time than mine, which are completely finished as soon as the molds or boards are removed.

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

1. The fire-proof floor, substantially as herein described, when it is constructed by castings of plaster of Paris or other suitable material upon temporary molds or boards between the beams and around the cores to form hollow spaces in such fire-proof floors.

2. A portable fire-proof partition, constructed of hollow castings, the ends and sides of which are provided with angular grooves A''', lapping over and entirely covering the partition-girders, substantially as herein described.

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

ANTHONY WANNER.

Witnesses:

NIELS POULSON,
PAUL VILLOY.