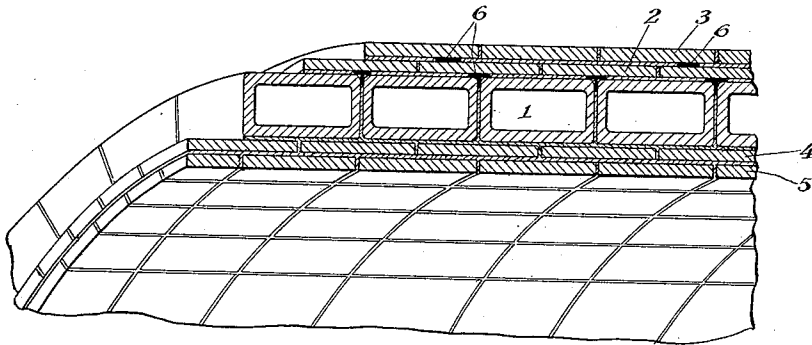


R. GUASTAVINO.
MASONRY STRUCTURE.
APPLICATION FILED JUNE 24, 1910.

1,057,729.

Patented Apr. 1, 1913.



Rafael Guastavino

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RAFAEL GUASTAVINO, OF NEW YORK, N. Y.

MASONRY STRUCTURE.

1,057,729.

Specification of Letters Patent.

Patented Apr. 1, 1913.

Application filed June 24, 1910. Serial No. 568,701.

To all whom it may concern:

Be it known that I, RAFAEL GUASTAVINO, a citizen of the United States, residing at No. 537 Greene avenue, borough of Brooklyn, city of New York, county of Kings, and State of New York, have invented certain new and useful Improvements in Masonry Structures, of which the following is a specification.

10 This invention relates to masonry structures particularly such as are constructed with a body portion of hollow building blocks with upper and lower faces bonded thereto and composed of courses of thin tile
15 slabs but has especially in view strengthening means therefor by the use of structural metal members which normally work in compression, the whole being adapted to produce the maximum of strength with a
20 minimum amount of material.

With the above general object in view the present structure contemplates a masonry structure which may be in the form of arches, domes, walls, floors or the like partly
25 formed of thin tile slabs arranged in courses and so combined with other building material and reinforcement as to secure a maximum of strength with a minimum amount of material and weight and at a minimum
30 cost; thus rendering the structure more available for general application, and providing a structure which will not readily conduct sound or heat and will prevent condensation of moisture and which is particu-
35 larly adapted for floors, roofs and ceilings.

The essential features of the invention are necessarily susceptible to a wide range of structural modifications without departing from the spirit or scope of the invention but
40 particular embodiments thereof are shown in the accompanying drawings in which the figure is a sectional perspective view of the section of an arch embodying the present invention.

45 Referring to the drawings it will be observed that the figure illustrates an arch structure wherein the same is made up of a row of hollow blocks or bricks 1 and two upper superposed courses of tiles 2 and 3

and two lower courses of tiles 4 and 5 upon 50 which the blocks or bricks 1 are superimposed. The building blocks or bricks 1 are laid side by side and end to end with bonding material of cement or the like therebetween as is usual. Likewise the tile slabs 55 are laid with a bonding cement or the like between their faces and edges so as to bind the adjacent faces and edges to each other and to the hollow blocks or bricks 1. It will thus be seen that the tile slabs so arranged constitute a protective and substantial covering for that part of the structure which is made up of the blocks or bricks 1.

In addition to the features referred to, I employ with the compound block and hollow tile structure described, metal reinforcement 6 embedded in the bonding material between the upper faces of the block or brick body portion and the superimposed layer of tile and also between the layers of 70 superimposed tile, such metallic reinforcement being adapted to work in compression. By this structure which is composed of an upper section of tile slabs, a lower section of tile slabs a central section of hollow blocks 75 or bricks and metallic reinforcement in or immediately beneath the upper tile section, I provide a light cheap and strong structure which will not readily conduct heat or sound, while at the same time the hollow 80 blocks or bricks are protected against abrasion and heat by the courses of tile and the metallic reinforcement is so disposed as to take up the compression strains at the point where these strains are at the maximum and 85 is likewise protected from heat and moisture.

Having described my invention, I claim:—

A reinforced masonry structure comprising a body part composed of hollow building blocks laid side by side and end to end in rows with bonding material therebetween, a plurality of upper superposed courses of thin tile slabs laid upon said body part, the 90 slabs in each course being flushly laid edge-wise, with their thin edges arranged edge to edge, similar courses of thin tile slabs simi- 95

larly laid and underlying the said body
part of blocks, concealed metal reinforce-
ment within the upper courses of tile, and
concealed metal reinforcement also between
5 the hollow blocks of the body portion.

In testimony whereof, I, RAFAEL GUAS-
TAVINO have signed my name to this specifi-

cation in the presence of two subscribing
witnesses, this 17 day of June 1910.

RAFAEL GUASTAVINO.

Witnesses:

EVANGELINE A. PEARCE,
WILLIAM L. TIERNEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
