No. 755,122. PATENTED MAR. 22, 1904.

G. F. FISHER.

BUILDING CONSTRUCTION.

APPLICATION FILED MAY 28, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

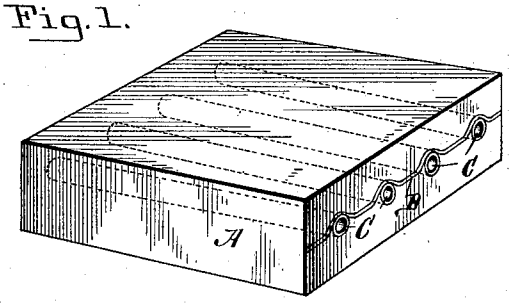


Fig. 2.

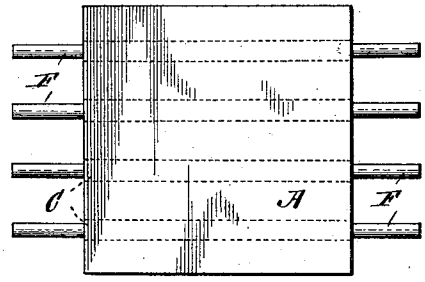
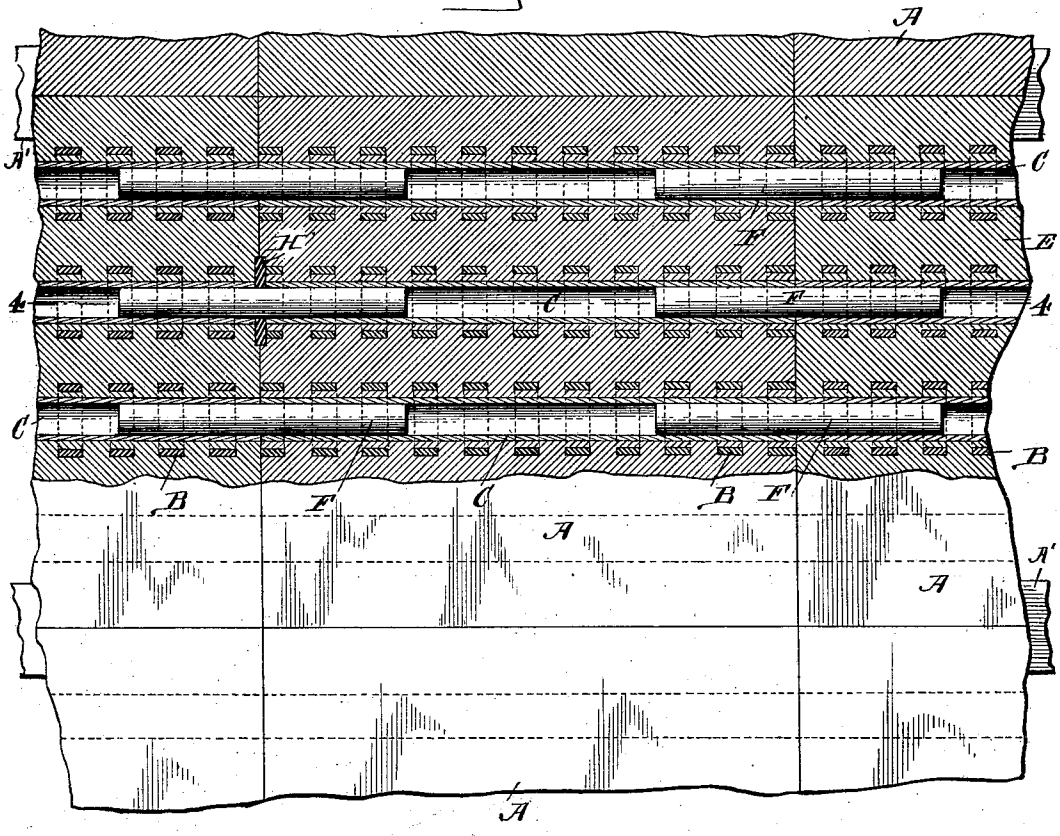


Fig. 3.



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APPLICATION FILED MAY 28, 1903.

NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

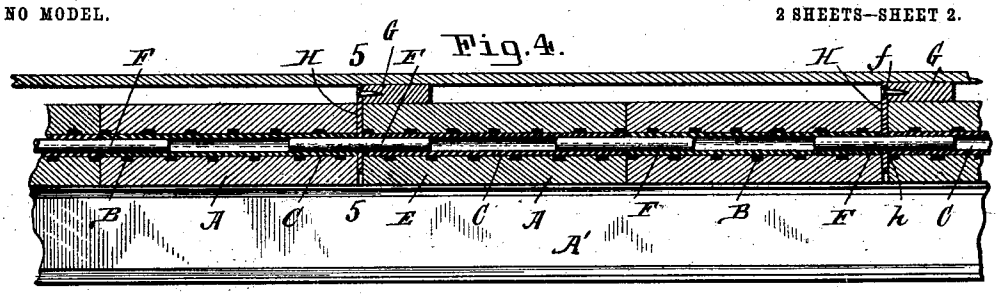


Fig. 5.

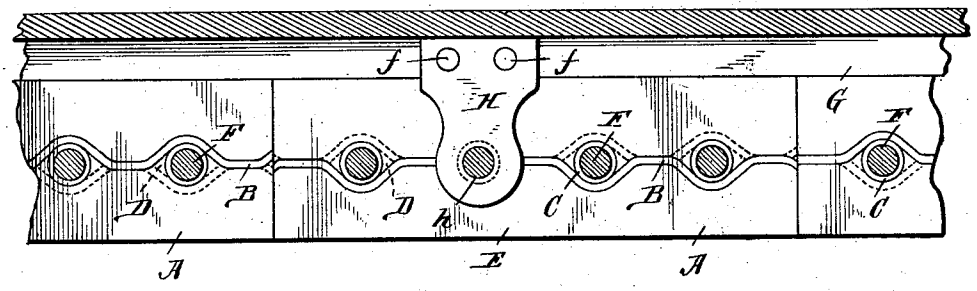
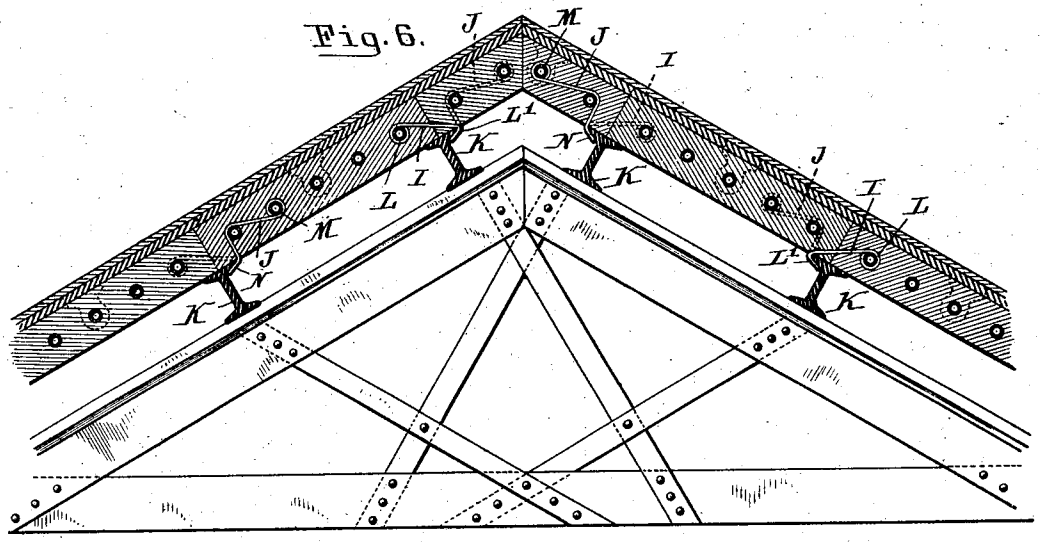


Fig. 6.



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No. 755,122. Patented March 22, 1904.

UNITED STATES PATENT OFFICE.

GEORGE F. FISHER, OF NORTH TONAWANDA, NEW YORK.

BUILDING CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 755,122, dated March 22, 1904.

Application filed May 28, 1903. Serial No. 159,120. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. FISHER, a citizen of the United States, residing at North Tonawanda, in the county of Niagara and State of New York, have invented certain new and useful Improvements in Building Constructions, of which the following is a specification.

This invention relates to building construction; and it has for its object the production of a composite block for floors, roofs, &c., which combines lightness and cheapness with strength and durability and which can be quickly and conveniently affixed to the floor or roof girders as its purpose may demand; and its further objects are to provide said blocks with metallic strengthening-tubes, which pass through the same, and to provide binders or plugs, which enter the ends of said tubes and connect said blocks rigidly together and hold the same in perfect alinement.

Still further objects are to provide simple, economical, and effective means whereby furring may be conveniently attached to the composite block to permit flooring or roof-sheathing to be used in connection therewith and to provide the blocks used for roof purposes with securing-clips, whereby said blocks can be quickly and conveniently affixed to the roof-beams.

To these ends the invention consists of the new and novel arrangement, construction, and combination of parts, as will be hereinafter described, and particularly pointed out in the appended claims.

Referring to the drawings, Figure 1 is a perspective view of the building-block used in my improved building construction. Fig. 2 is a plan view of a block used in my improved construction, showing the binders or plugs projecting therefrom. Fig. 3 is a horizontal section through a portion of a floor constructed according to my invention. Fig. 4 is a longitudinal section taken on line 4 4, Fig. 3. Fig. 5 is an enlarged transverse section taken on line 5 5, Fig. 4. Fig. 6 is a transverse section through a portion of a roof, showing the application of my invention on a roof.

Referring now to the drawings in detail, like letters of reference refer to like parts in the several figures.

A designates the individual blocks which are used in my improved building construction, and they are constructed of any suitable plastic composition. Each block has a metallic trellis B, preferably expanded metal, and a plurality of strengthening pipes or tubes C embedded therein, the said pipes being arranged to pass through loops D in the trellis formed by bulging the metal on opposite sides of perforations formed therein in opposite directions. The said trellis and the pipes held therein form a substantial foundation on opposite sides of and around which the plastic material E is placed. These blocks may be constructed in any desired sizes, and, if desired, wire screening or other suitable material may be substituted for the expanded metal trellis. The edges of the blocks are supported on the girders A′ of the building, and the pipes therein are arranged parallel with the same. The strengthening-pipes of all blocks between two girders are brought into alinement, and the blocks are securely connected together by plugs or pins F, which enter the meeting ends of the alined pipes. By inserting the plugs into the said pipes the blocks are held against independent deflection under the heaviest weight to which they may be subjected, and any weight applied to any one block must be carried by all blocks within certain limits. Such an arrangement avoids all possible collapse of a section of a floor, as the weight is divided and through the medium of the metallic trellises is carried by the girders of the building. The insertion of the plugs or pins F into the pipes prevents destruction of the blocks, as the weight carried by the blocks is necessarily imparted to the plugs, and their insertion into the composition blocks directly would weaken the same at points between the ends of the plugs and under heavy weights would cause the blocks to crack and separate at such points.

When using my improved building-blocks for floor construction, flooring is necessarily affixed to the upper side. For this purpose I provide furring-strips G, which are placed at

right angles to the pipes in the blocks. Each furring-strip is laid so that one edge thereof is in line with the meeting faces of two transverse rows of blocks, and, as shown, one strip is placed on the edge of every alternate transverse row, but may be otherwise spaced, if desired.

H designates securing-clips held between two building-blocks and having each an eye *h*, through which a connecting pin or plug F is passed. The upper end of the said clips extend above the upper faces of the blocks A and are nailed or otherwise secured to the furring-strips G, as at *f*, thereby securely holding the said strips to the building-blocks. Any suitable flooring may be nailed to the furring-strips, as shown.

When using my improved building-blocks for roofing, the metallic trellis may or may not be used, as desired. For such use, however, I provide securing-clips I and J, which are embedded in the composition blocks and adapted to be hooked onto the I-beams K, arranged lengthwise on the rafters. Each securing-clip I is bent at one end into an eye L and encircles one of the outer strengthening-pipes in the block. It then projects from the edge of the block and is recurved to form a hook L′, which engages the upper web of the I-beam, thus securely fastening one side of the block to the roof structure. The securing-clips J are each provided with an eye M, which encircles one of the intermediate strengthening-pipes in the block and is passed over the opposite outer pipe and thence down to project from the bottom of the block, whence it terminates in a lateral extension N, which engages the under face of the upper web of the I-beam. If desired, the clips I and J may be riveted to the I-beams; but in ordinary cases I find this to be unnecessary.

Having thus described my invention, what I claim is—

1. In a building, a floor or the like consisting of a series of blocks placed edge to edge and having strengthening-tubes extending therethrough and connecting-plugs entering the strengthening-tubes of two abutting blocks for tying the same together.

2. In a building, a floor or the like consisting of a series of composition blocks having alined strengthening-tubes embedded therein, and connecting-plugs entering the ends of said tubes for tying the blocks together.

3. In a building, a floor or the like consisting of a series of composition blocks having a metallic trellis embedded therein and tubes passing through said trellis and extending from edge to edge of said blocks, and plugs entering the said tubes for tying the blocks together.

4. In a building, a floor or the like consisting of a series of blocks, plugs entering said blocks and connecting the same together, and clips held between the blocks and being secured to said plugs, said clips extending from the space between said blocks to permit of furring being secured thereto.

5. In a building, a floor or the like consisting of a series of blocks, plugs entering said blocks and connecting the same together, and clips held between said blocks and each having an eye through each of which one of said plugs is passed, said clips extending from the space between said blocks to permit of furring being secured thereto.

6. A composition building-block having a series of tubes embedded therein, and securing-clips also embedded in said block and being secured with one end to one of said tubes and having their other ends projecting from the block for connection with the frame of the building.

7. A composition building-block having a tube embedded therein, and a securing-clip also embedded in said block and having an eye at one end through which said tube is passed and its other end projecting from the block for engagement with the frame of the building.

8. A composition building-block having a plurality of tubes embedded therein, and a securing-clip secured to one of said tubes and being passed over a second tube and terminating in a projecting securing end whereby the block is secured to the frame of the building.

9. In a building, the combination of two supporting-girders, a building-block bearing with two opposite marginal portions on said girders and having a metallic trellis embedded therein and strengthening-tubes arranged parallel with said girders and passing through said trellis.

In testimony whereof I have affixed my signature in the presence of two subscribing witnesses.

GEORGE F. FISHER.

Witnesses:
BERT MASON,
EMIL NEUHART.