No. 779,613. PATENTED JAN. 10, 1905.

C. F. LINSCOTT.

STRUCTURAL BLOCK.

APPLICATION FILED APR. 20, 1904.

2 SHEETS—SHEET 1.

Fig. 1

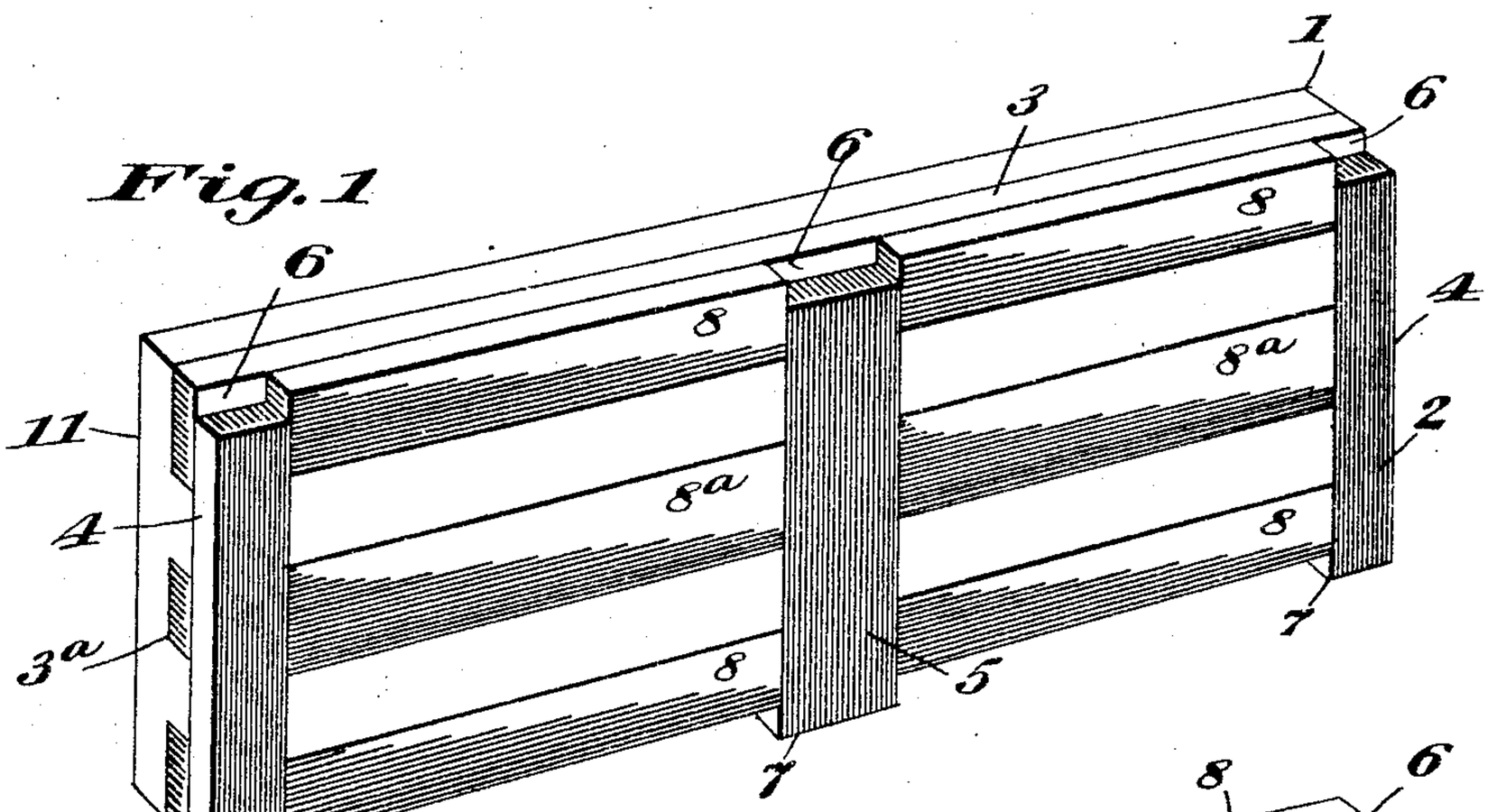


Fig. 2

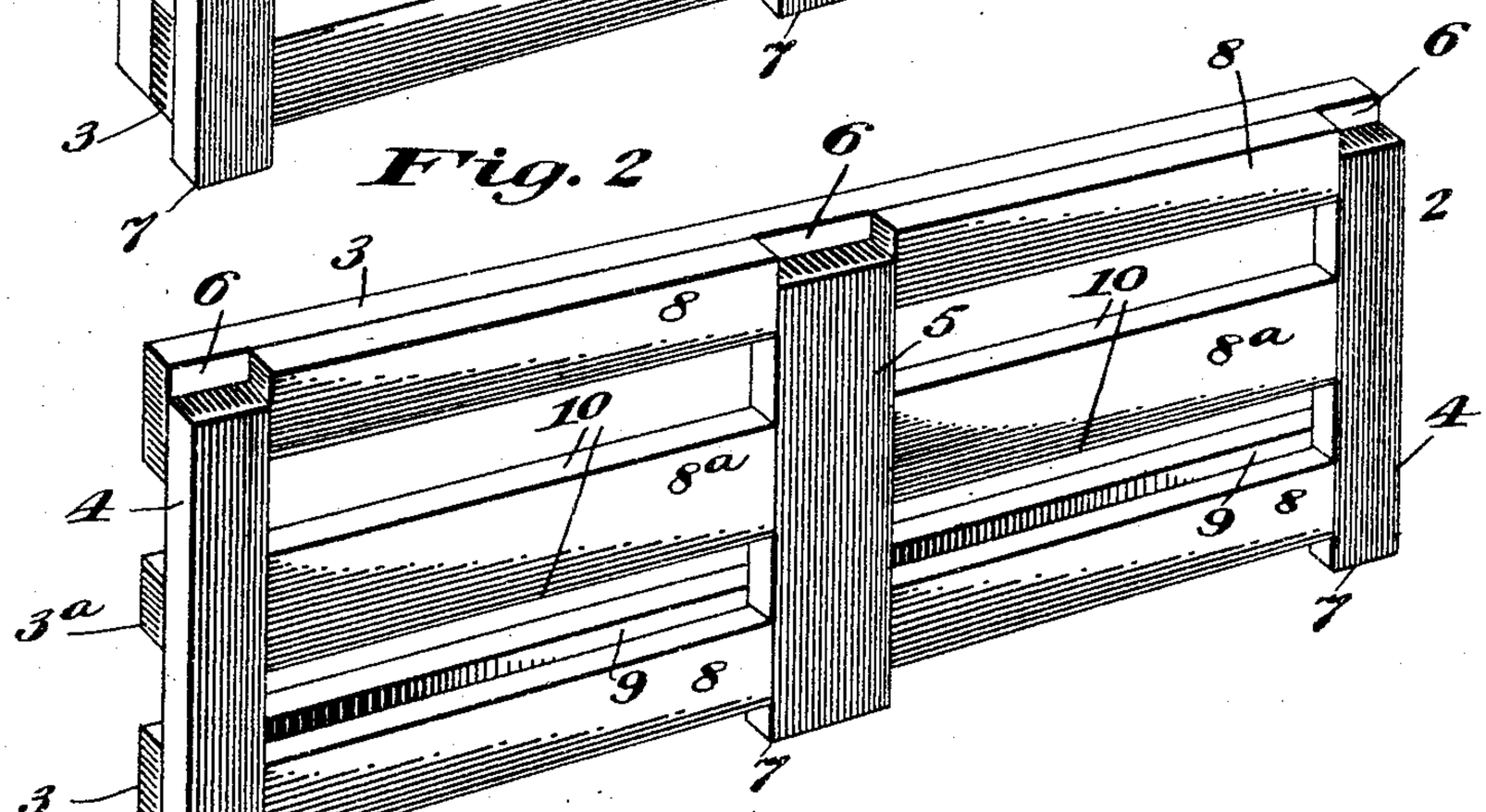
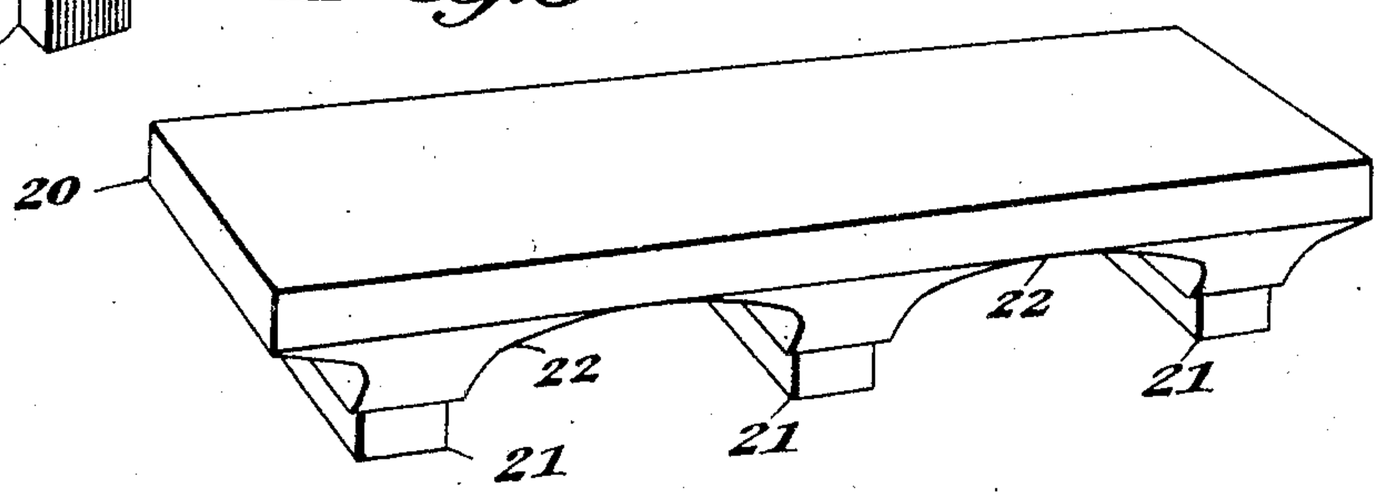


Fig. 6



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2 SHEETS—SHEET 2.

Fig. 5

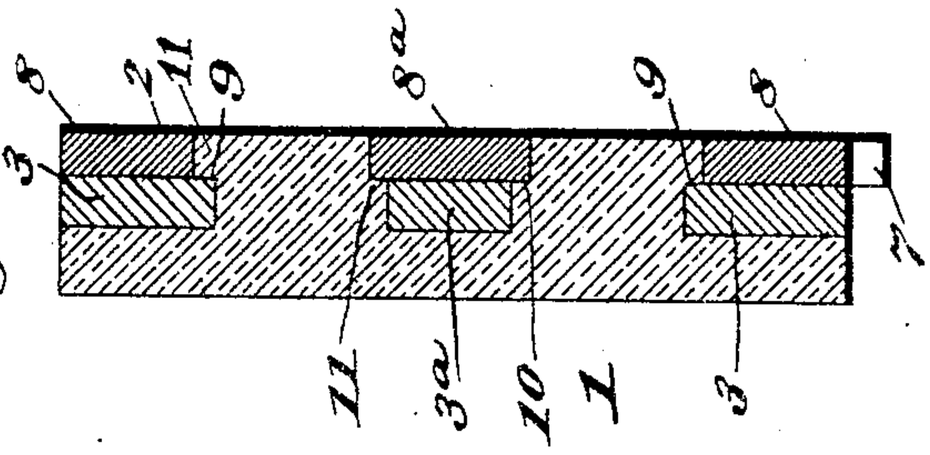
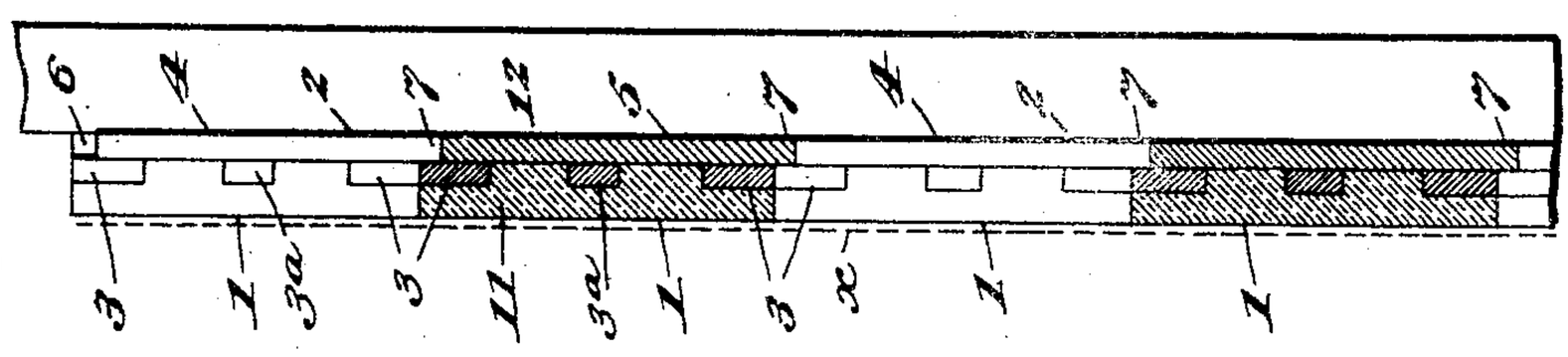


Fig. 4

Fig. 3



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No. 779,613. Patented January 10, 1905.

UNITED STATES PATENT OFFICE.

CHARLES F. LINSCOTT, OF CHICAGO, ILLINOIS.

STRUCTURAL BLOCK.

SPECIFICATION forming part of Letters Patent No. 779,613, dated January 10, 1905.

Application filed April 20, 1904. Serial No. 204,059.

To all whom it may concern:

Be it known that I, CHARLES F. LINSCOTT, a citizen of the United States of America, and a resident of Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Structural Blocks, of which the following is a specification.

This invention relates to certain improvements in blocks for building and other structural uses, and more particularly in that class of such blocks which are of a composite character and are formed with a body portion of molded plastic material wherein is embedded a strengthening or reinforcing frame; and the object of the invention is to provide a block of this general character of a simple and inexpensive nature and of a strong and durable construction which shall be adapted to lend itself readily to use in various structures—such, for example, as various portions of buildings, sidewalks, walls, and the like.

The invention consists in certain novel features of the construction, combination, and arrangement of the several parts of the improved structural block whereby certain important advantages are attained and the device is rendered simpler, cheaper, and otherwise better adapted and more convenient for use than various other similar devices heretofore employed, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

In the accompanying drawings, which serve to illustrate my invention, Figure 1 is a perspective view showing the rear, upper, and one of the end surfaces of a block embodying my improvements; and Fig. 2 is a perspective view showing the frame or reinforce of the block detached from the molded plastic body portion thereof. Fig. 3 is a sectional view taken vertically through a wall, showing upon a reduced scale the arrangement of the improved blocks therein; and Fig. 4 is a view of the inner surface of said wall. Fig. 5 is a sectional view taken transversely through one of the blocks as seen in Figs. 1, 3, and 4 and showing the location of the embedded reinforce or frame therein. Fig. 6 is a perspective view showing a modified form of the improved block, especially designed for use in walks, pavements, &c.

Referring first to Figs. 1 to 5, 1 indicates the improved structural block, as a whole, said block having a body portion formed from some suitable molded plastic substance, adapted to harden and retain desirable resisting qualities upon drying, in which body portion is embedded a strengthening or reinforcing frame 2, herein shown as formed of a slatted wooden frame, and comprising upper and lower rails 3 3, spaced apart and adapted to extend along the upper and lower edges of the block. The rails 3 3 are held in relation by means of transversely extended stiles or cleats 4 4 along the ends of the block, and at their central part are similarly tied together and braced and strengthened by an auxiliary cleat or brace 5. The stiles or cleats 4 4 and 5 may be secured to the upper and lower rails 3 3 in any preferred way—as, for example, by nails driven through them—and the upper ends of said stiles or cleats 4 4 and 5 are spaced below the upper edge of the upper rail 3, so as to leave at said upper ends of said stiles or cleats openings or recesses 6, and the length of the said stiles or cleats is such that the lower ends thereof project, as indicated at 7 on the drawings, below the lower edge of the block, so as to form at the ends and center of said lower edge of the improved block projections or tenons, as clearly seen upon the drawings. Each of the wooden frames 2 also comprises a central strip or rail 3^a, parallel with but midway between the upper and lower rails 3 3, and similarly secured to the stiles or cleats 4 4 and 5, and, by preference, of a width less than said upper and lower rails, and with its edges separated from the adjacent edges of said upper and lower rails by spaces extended lengthwise of the block and adapted to be filled by the plastic substance from which the block is molded.

In addition to the parts above referred to the frame 2 of the improved structural block comprises upper and lower strips or auxiliary rails 8 8 parallel with the rails 3 3 and extended in the spaces between the end stiles 4 4 and central stile or cleat 5, with their rear surfaces flush with the rear surfaces of said stiles

or cleats 4 4 and 5, and central strips or auxiliary rails 8^a 8^a, affixed upon the rear surfaces of the central rail 3^a in the spaces between the end stiles 4 4 and central cleat 5, with their rear surfaces flush with those of the said stiles or cleats.

As shown in Figs. 2 and 5, the auxiliary rails 8 8 are of less width than the rails 3 3 whereon they are secured, and the central auxiliary rails or strips 8^a 8^a are of greater width than the central rail 3, the edges of said central auxiliary rails or strips 8^a being separated from the adjacent edges of the upper and lower auxiliary rails or strips 8 8 by spaces extended lengthwise of the improved block and which are adapted to be filled by the plastic material from which the improved block is molded, and owing to the differences in thickness of the rails or strips 3 and 8 and of the rails or strips 3^a and 8^a there are provided upon the rear edge portions of the strips or rails 3 3 shoulders 9, on which the plastic molded body portion has engagement to strengthen the block to withstand strains in one direction, and upon the forward edges of the strips or rails 8^a 8^a other shoulders 10 10, reversely arranged and adapted to strengthen the improved block to withstand strains in an opposite direction. These interlocking shoulders 9 and 10 also serve to bind the molded plastic material of which the body portion of the improved structural block is formed rigidly to the strengthening or reinforcing frame 2, so as to prevent said plastic body portion from being cracked off therefrom when the block is in use, the plastic material flowing into and filling the spaces between the edge portions of the strips or rails, as clearly shown at 11 on the drawings.

In the use of the improved structural blocks constructed as above described for building walls or the like the same are applied in tiers or courses to upright posts or studdings 12 12, as illustrated in Figs. 3 and 4, being held thereto by means of nails driven through the blocks or otherwise into said posts or studdings, and in so applying the blocks in wall construction the joints between the ends of the blocks of one course or tier will be lapped over the joints between the ends of the blocks of the lower tier, as seen in Fig. 2, the end stiles or cleats 4 4 being for this purpose made of about half the width of the central cleats or stiles 5, as seen on said figure. In applying the blocks thus constructed in wall construction the downwardly-extended projections or tenons 7 afforded by the projecting lower ends of the blocks of an upper tier or course will be engaged in the sockets or recesses 6 6, above mentioned as formed in the blocks of the lower tier at the upper ends of the stiles or cleats 4 4 and 5 thereof, and owing to the adjacent end stiles 4 4 being together of a width equal to that of the overlying or underlying central stile or cleat 5 it will be seen that the blocks will fit together and interlock to produce a very strong and stiff resultant structure, the outer side of which may be covered over, as indicated at x on Fig. 3, with a coating or surfacing of cement or plaster, which will serve to cover the nails or other securing means and also to close the joints between the blocks, and thereby render the wall air-tight and moisture-proof. A similar arrangement of blocks may also be arranged upon the inner sides of the posts or studdings 12, so as to permit of building houses and other structures with air-packed walls at a very slight expense compared with what is necessary in the construction of walls which are sheathed outside and lathed and plastered inside, or of brick or stone walls.

It will be understood that the improved structural blocks constructed according to my invention are not limited in their use to the construction of the walls of buildings alone, but may be used for other purposes, and when so used will afford a very material economy in cost both of material and labor, since the construction of the improved block is extremely simple and inexpensive and the labor required in building operations where the improvements are employed is greatly lessened. As showing a form of the improved block adapted for other uses than for the construction of walls of buildings and the like, I have illustrated in Fig. 6 a construction of the block which is especially designed for use in pavements, sidewalks, and the like and wherein the block has a flattened upper portion 20 and is constructed with strengthening-arches 22 22 upon its lower part, in which arches may be embedded brick 21 or the like, which are designed to rest on the ground and afford a firm and even support for the block. Blocks of this structure may be laid in a pavement or walk and coated over with a cement or other surfacing, so that pavements or walks may be thereby laid at a very light expense compared with the cost of such walks when laid in other ways.

From the above description of my improvements it will be seen that the improved structural block is of a very simple and inexpensive nature and is especially desirable for use both by reason of its simplicity and cheapness and by reason of the economy in labor with which the structures in which it is employed may be placed in position and of the saving in time effected through its employment, and it will also be obvious from the above description that the device is capable of considerable modification without material departure from the principles and spirit of the invention, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the several parts of the device in carrying out my invention in practice.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A structural block comprising a body portion of molded material in which is embedded a frame formed of wooden strips or rails and stiles or cleats extended transversely across the strips or rails and auxiliary rails or strips extended along and having widths different from the widths of the said first-named strips or rails, whereby projecting shoulders are formed on edge portions of the strips or rails for engagement in the molded body portion to hold the frame therein.

2. A structural block comprising a body portion of molded material in which is embedded a frame having two sets of strips or rails, each strip or rail of one set being extended along a strip or rail of the other set and having a projecting edge portion for engagement in the molded body portion to hold the frame thereto.

3. A composite structure comprising blocks each of which has a body portion formed from molded material wherein is embedded a frame formed of rails and transverse cleats extended across the rails with end portions extended outside such molded body portion, to receive which extended end portions of the cleats another block has recesses produced in it.

4. A composite structure comprising two tiers of blocks one alongside of another, each block having a molded body portion in which is embedded a frame comprising central and end cleats the extremities of which project beyond one side of the molded body portion, each block having, along its side opposite to that at which the said cleat ends project, recesses at end and center to receive the cleat ends of another block, and the width of the central cleat and recess of each block being a multiple of the width of the end cleats and recesses thereof.

Signed at Chicago this 10th day of March, 1904.

CHARLES F. LINSCOTT.

Witnesses:

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