

933,163.

Fig.1.

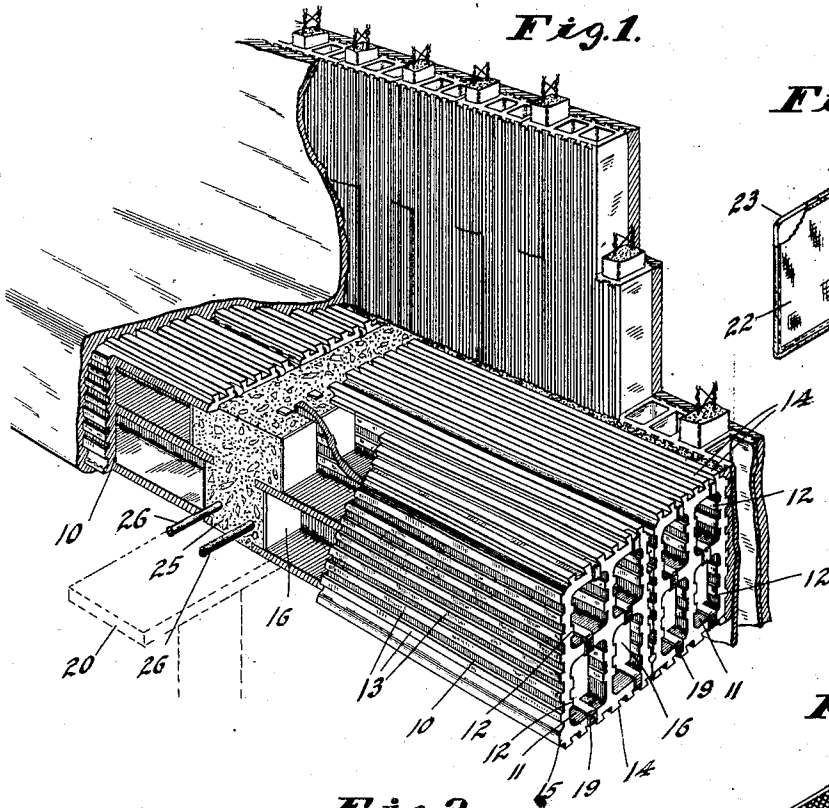


Fig. 3.

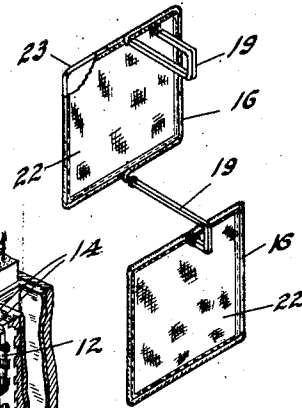


Fig. 4.

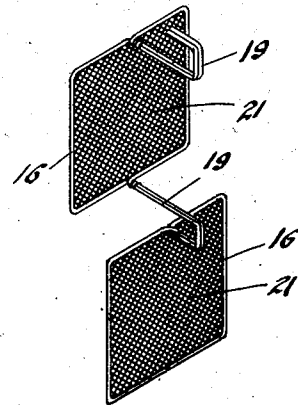


Fig. 2.

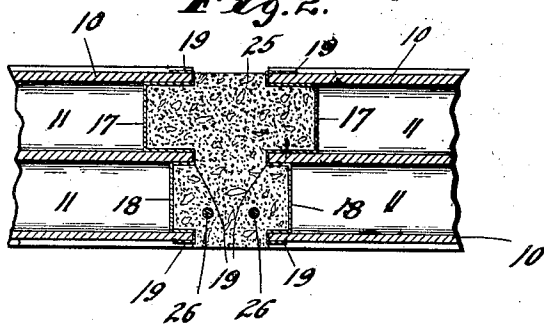
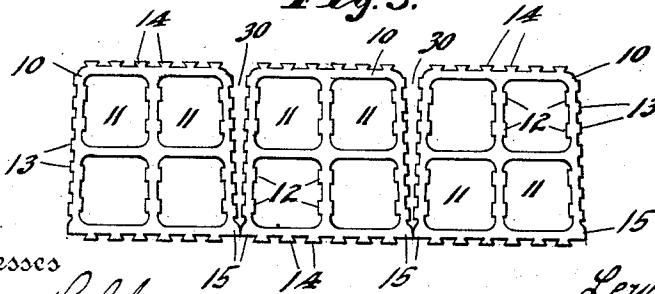


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

LEWIS K. DAVIS, OF NEW YORK, N. Y.

BUILDING CONSTRUCTION.

933,163.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed October 8, 1908. Serial No. 456,722.

To all whom it may concern:

Be it known that I, LEWIS K. DAVIS, a citizen of the United States, residing at New York city, in the county and State of New York, have invented certain new and useful Improvements in Building Construction, of which the following is a specification.

The object of my invention is to produce a building-construction comprising hollow blocks and a hardening plastic (such as concrete) wherein the blocks will form matrices for the plastic to connect the blocks into a rigid structure.

The accompanying drawings illustrate my invention.

Figure 1 is a perspective detail in partial section; Fig. 2 a section axially of blocks of adjacent series and transversely of the intermediate concrete beam; Figs. 3 and 4 details of modified stoppers; Fig. 5 an end elevation of several blocks in the same series.

In the drawings, 10 indicates a building block of a thickness nearly equal to the desired thickness of floor or wall of which it is to form a part; of a width convenient to handle; and a length economical in building construction depending somewhat on the loads to be carried. In practice I find a length of three feet to be convenient both in handling in producing the building and also for purposes of manufacture. Each of the blocks 10 is provided with a plurality of internal longitudinal passages 11 conveniently and preferably two or four in number and the side walls of these passages are provided with longitudinal plastic-holding ribs 12 which may be of any desired cross section. The vertical faces of each block are similarly provided with plastic-holding ribs 13 and the opposed top and bottom faces are provided with plastic-holding ribs 14, the ribs 14 being preferably undercut in order to mechanically hold the finishing plaster and floor surface. Each of the side faces 45 of the block, at its lower edge, is provided with a rib 15 of a transverse dimension exceeding the transverse dimensions of the ribs 13 so that two adjacent ribs 15 may be brought close together and at the same time leave a desirable vertical space between the adjacent vertical faces of the blocks. In order to facilitate the introduction of plastic between the adjacent vertical faces of the blocks I consider it desirable to make the top of each block somewhat narrower than

its bottom so that the adjacent vertical faces of the two blocks will diverge upwardly.

In use, where the blocks are to be arranged to form a floor, a suitable centering or support 20 is provided for the ends of said blocks and the blocks are laid in two series end to end a distance apart sufficient to permit the formation of a supporting concrete beam therebetween the centering bridging the gap between the adjacent ends of the blocks and serving as a support for the plastic until hardened. If plastic were poured into the space between the adjacent ends of the blocks it would flow for a considerable distance into the channels 11 thereof thus forming fingers which would taper downwardly and outwardly in each of the passages. Such an arrangement would be wasteful of concrete and in order to prevent this I arrange in the ends of passages 11 suitable dams 16 which may be formed of any desired material and held in place by any suitable means. For instance in Fig. 2 I show a dam formed of a pair of connected plates 17 and 18 having tongues 19 arranged to engage the ends of the blocks and predetermine the distance to which said plates can be forced into the ends of the blocks. Instead of such an arrangement, woven wire 21 can be used, as shown in Fig. 4 or canvas 22 or other flexible material used as shown in Fig. 3, said canvas being stiffened at desired points by a suitable stiffening frame 23 if desired.

In practice I find it desirable to arrange the dams in the upper channels 11 somewhat farther in than in the lower passages thus forming a beam 25 substantially T-shaped in cross section so as to be more efficient.

If desired, suitable reinforcing members 26 may be embedded near the lower surface of the beam. In practice the concrete will be filled into the adjacent ends of the beam as already described and will also be filled into the space 30 between the adjacent vertical faces of the blocks and also spread over the tops of said blocks forming the floor surface. It will be readily understood that the same blocks may be used in the production of a wall if desired.

The blocks may be made of any desired material but I prefer to form the same of a plastic, such as clay, which may be readily formed by the ordinary tile machine cut in

a suitable die and then vitrified so as to be rendered impermeable to moisture. To this end the ribs, or plastic-holding projections, should have sides which are parallel, with the length of the block.

I claim as my invention:—

1. A building construction comprising a plurality of series of hollow blocks each having a pair of longitudinal passages, the ends of one series being spaced a short distance from the ends of an adjacent series, a filling of hardening plastic filling the space between the adjacent ends of two series of blocks and extending into the interior passages thereof, and means for limiting the flow of plastic into said tubular passages, said means lying farther inward in the one series of passages than in the other series.

2. A building construction comprising a plurality of series of blocks each comprising a pair of longitudinal passages and provided on the adjacent faces of blocks of the same series with plastic-holding projections, dams arranged in the ends of the longitudinal passages at a greater distance into one passage of each block than into the other, and a hardening plastic filling the spaces between the ends of adjacent series and extending into the passages of the blocks to the dams therein, and filling the spaces between adjacent faces of blocks in the same series.

3. A building construction comprising a plurality of series of blocks each comprising a pair of longitudinal passages and provided on the adjacent faces of blocks of the same series with plastic-holding projections and also provided upon other faces with plastic-holding projections, dams arranged in the ends of the longitudinal passages at a

greater distance into one passage of each block than into the other, and a hardening plastic filling the spaces between the ends of adjacent series and extending into the passages of the blocks to the dams therein, and filling the spaces between adjacent faces of blocks in the same series, and also covering the other faces of said blocks.

4. A building block comprising a main tubular body having its interior divided into upper and lower passages, and dams inserted within the open ends of said passages, the dams in the upper passages lying different distances inward from the dams in the lower passages.

5. A building block having longitudinal oppositely projecting ribs projecting from the vertical faces of the blocks near the lower corners thereof, said blocks having upper and lower longitudinal passages, and dams inserted in said passages to a greater extent in one than the other.

6. A building block having longitudinal oppositely projecting ribs projecting from the vertical faces of the blocks near the lower corners thereof, plastic-holding projections formed on the vertical faces of said block above the rib and of less projection than the said rib, said blocks having upper and lower longitudinal passages, and dams inserted in said passages to a greater extent in one than the other.

In witness whereof, I, have hereunto set my hand and seal at New York city, New York, this twenty-fourth day of September, A. D. one thousand nine hundred and eight.

LEWIS K. DAVIS. [L.S.]

Witnesses:

EMILY M. EVANS,
RUSSELL F. WHITEHEAD.