R. M. HAVENS.

BUILDING CONSTRUCTION.

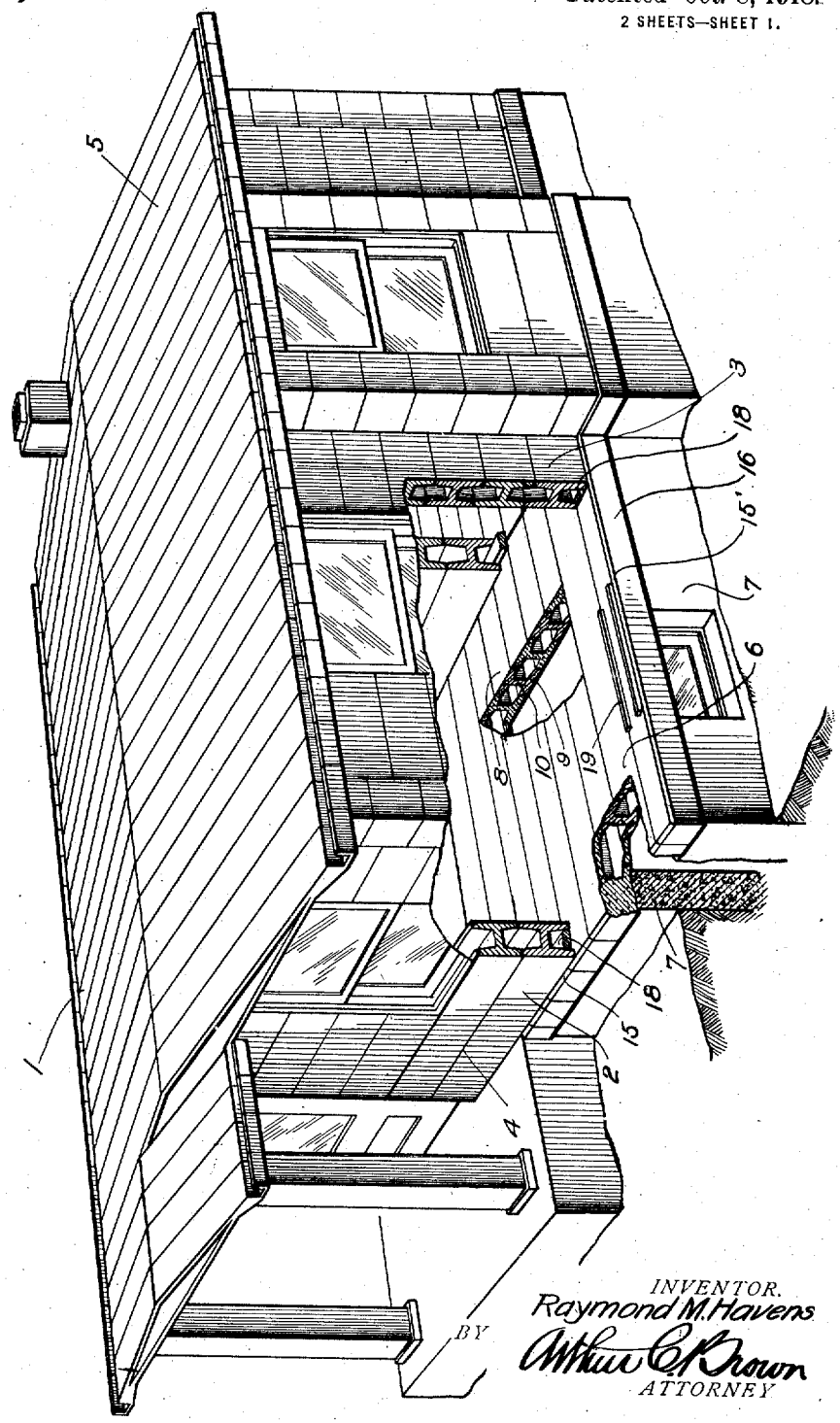
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1,280,726.

Patented Oct. 8, 1918.

2 SHEETS—SHEET 1.

Fig. 1.



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Fig. II.

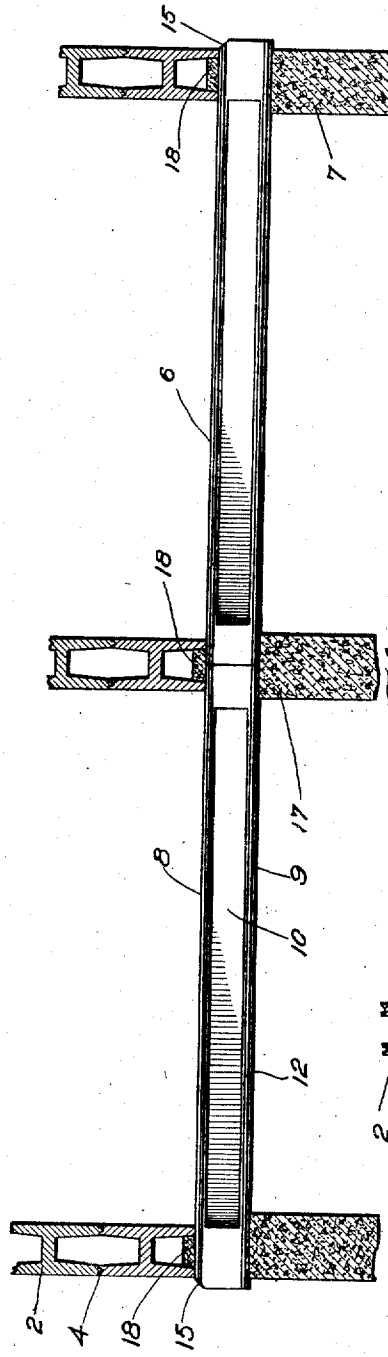


Fig. III.

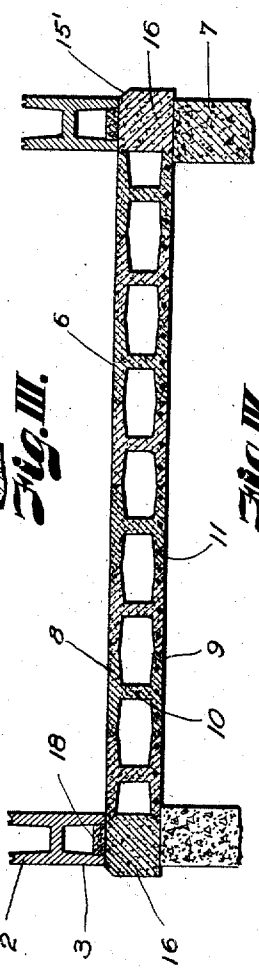
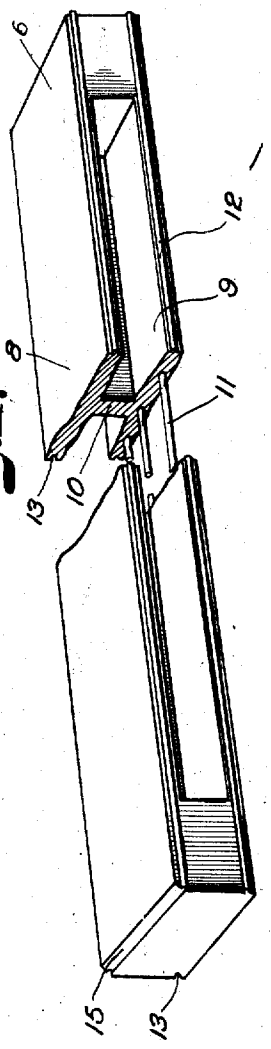


Fig. IV.



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UNITED STATES PATENT OFFICE.

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BUILDING CONSTRUCTION.

1,280,726. Specification of Letters Patent. Patented Oct. 8, 1918.

Application filed March 12, 1917. Serial No. 154,129.

To all whom it may concern:

Be it known that I, RAYMOND M. HAVENS, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Building Construction; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to building construction and more particularly to the detail construction of concrete floor beams; the principal object of the invention being to provide a beam having reinforced end portions adapted, when the beams are arranged in functional position, to provide a substantial and sightly sill whereon the walls of a building may be supported.

In accomplishing this and other objects of the invention I have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of a building comprising a floor constructed according to the present invention.

Fig. II is a longitudinal vertical section of a building, illustrating the use of my improved floor beams.

Fig. III is a transverse vertical section of the floor.

Fig. IV is a detail perspective view of a beam, illustrating the location of reinforcing rods therein, and the reinforced end portions forming the wall sills.

Referring more in detail to the drawings:

1 designates a building of concrete construction, wherein beams 2 are arranged in superimposed relation to form the opposite end and side walls 3—4, and which carry roof-forming beams 5; the walls of the building being supported upon the floor beams 6, presently described, and the latter are, in turn, supported by the foundation walls 7.

The beams 6, forming the floor of the building, are made in predetermined lengths and may be extended entirely or partially across the building; the said beams in their preferred form being substantially of I-beam construction, comprising the upper and lower walls 8—9 and vertical connecting webs 10, and it is preferred to reinforce the lower walls by extending rods 11 longitudinally therein.

At the opposite ends of the beams the channels at the sides of the web are filled even with the longitudinal edges of the beam to form a solid block to provide a substantial bearing portion for parts supported thereon and to close the ends of the beams to the exterior of the building. The opposite longitudinal edges of the upper and lower walls of the beams are provided with tongues 12, and grooves 13, whereby the blocks may be keyed together to form a tight joint and which serve to more substantially hold the beams in horiozntal alinement and form a smooth floor surface.

At the ends of the beams which are exposed to the exterior of the building I provide, at the upper transverse edges of each, a sloping face 15, which is adapted to aline with like faces of adjacent beams to form a water table which, from the exterior of the building, appears to be formed by the insertion of special sill blocks. At the sides of the building special beams 16 are arranged, which are substantially solid and are provided at one side with a sloping edge 15′, to form a continuation of the water table and sill course formed at the ends of the beams. The latter are also provided with the tongue and grooves to permit their keying to the floor beams.

In case both ends of the beams do not extend to the exterior of the building, the interior ends, which may be supported on a partition wall 17 (Fig. II) are not provided with the water table faces, and the end reinforcing is not extended as far along the beams as at the exposed ends, and should it be desired to build a partition wall within the building it is preferred that the latter be built to cover the joint of the abutting ends of the beams supported on the partition wall.

In the building here shown, the side walls are built of superimposed beams, substantially H-shaped in cross section, and in order to key the wall blocks to the floor beams, after the latter have been arranged to form the building floor, I form a key 18 about the edges of the floor by placing parallel spaced strips 19 thereon and filling the space therebetween with concrete, which, after becoming set and the strips being removed, will

be received between the spaced side walls of the wall beams to effectively prevent any displacement of the walls and, furthermore, prevent any possibility of an open joint.

Assuming that the beams are so constructed, in using the same to form a floor, they are arranged with their longitudinal edges keyed together and the ends in proper alinement and extending slightly beyond the foundation walls to produce a sill block and water table, the sills and water table at the sides of the building being formed by the special sill blocks 16.

After the floor has been laid, the wall keys are poured about the edges of the floor and the wall blocks placed thereover to key the latter to the floor and to provide for a closed joint therewith.

It is apparent that beams of this character may be made in various sizes and lengths as required in different buildings and reinforcing may be placed therein as needed.

It is also apparent that variations may be made in the end portions of the blocks forming the sill courses without departing from the spirit of the invention.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters-Patent, is:—

In a building, the combination with a foundation, of separate beams having solid ends supported on the foundation, and having laterally-channeled, intermediate portions, forming a floor, side walls supported on the solid end portions of the floor beams; the said end portions of the floor beams being extended beyond the foundation and side wall to form a sill and water table, molded concrete keys arranged transversely on the solid end portions of the floor beams, with the keys on adjacent beams in alinement and projected into the lower portions of the side wall to retain the latter substantially as set forth.

In testimony whereof I affix my signature.

RAYMOND M. HAVENS.

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