PATENT SPECIFICATION

301,589

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Complete Left: June 29, 1928.

Complete Accepted: Dec. 6, 1928.

PROVISIONAL SPECIFICATION.

Improvements in or relating to Slab and Post Wall Constructions for Buildings and Structures, applicable also to Toy Building Sets.

I, HARRY WILLETTS ADSHEAD, of 2, Osmaston Road, Norton, Stourbridge, in the County of Worcester, a British subject, do hereby declare the nature of this invention to be as follows:—

This invention has reference generally to the construction of buildings, walls, and the like, but is especially suitable and intended for use in connection with the erection of dwelling-houses, workshops, warehouses, pavilions, garages, and like buildings, also partition and other walls.

The object is to provide a method of construction, utilising ready-made concrete or other slabs, which shall cheapen and expedite the erection of the wall or building, the structure at the same time being of increased rigidity and strength as compared with slab wall structures built by ordinary methods.

The invention consists in a method of wall construction wherein concrete or other slabs are laid in courses between and within spaced pairs of channelled steel stanchions, preferably of H section, the slabs thus laid being reinforced and locked together by means of metal bars or dowels inserted in holes provided in the slabs, and the joints being completed by a grouting of liquid cement run into grooves extending around the jointing faces of the individual slabs.

In carrying the invention into effect, the slab wall is built up in sections within a metal framing, each section being contained between and within a spaced pair of upright steel stanchions, which stanchions are of H section so as to present upright longitudinal channels on each side, the spacing of the stanchions varying according to the size of slab employed, a spacing of three to six feet being suitable for ordinary walls.

The slabs, which are preferably of pressed and moulded concrete, but which may alternatively be of stone or metal, are of rectangular form and of dimensions appropriate to the kind of wall to be constructed, each slab being formed with a semicircular or other groove extending continuously and centrally around its peripheral edge, and each slab having also a pair or plurality of holes extending through from top to bottom, these holes being uniformly spaced and being so arranged as to register with the corresponding holes of slabs in adjacent courses.

In building the wall the slabs for each section are laid in horizontal courses between the respective pair of stanchions, with the outer upright edges of the slabs contained within the channels of the stanchions, and on each successive course of slabs having been thus laid, steel bars or dowels are inserted into the series of holes for the purpose of reinforcing and locking the course of slabs to the course to be superposed, and a grouting of liquid cement is then run into the grooves surrounding the individual slabs, thereby completing the joints and further ensuring the locking together of the individual slabs.

On the building up of the wall section being completed, the section is finished and further locked at the top by means of an inverted horizontal channel or angle which is rigidly secured to the top of the stanchions.

Doors or windows may be inserted as required during the process of building the wall. For this purpose the door or window is contained within a steel frame of channel section, having its channel outwardly disposed. This frame is assembled so as to rest with its lower horizontal channel upon a ledge constituted by the upper edge of the course of slabs beneath, and slabs are then inserted and grouted down each side of the frame, the frame being finally secured and locked by a superposed slab or slabs constituting a lintel, this lintel being jointed and grouted within the upper horizontal channel of the frame.

For corners or for partition wall connections, the principal H-section stanchions may be associated with subsidiary stanchions of channel section, into which the side walls or internal partition walls

are built up in a manner similar to that already described.

The ready-made concrete or other slabs employed in constructing the wall or building may if desired be suitably faced in imitation of brickwork.

The hereinbefore described method of constructing walls or buildings may be readily adapted for use in miniature in connection with constructional toy sets such as are used by children and others, the grouting grooves around the slabs in this case being dispensed with if desired.

Dated this 28th day of September, 1927.

LEWIS W. GOOLD,
Chartered Patent Agent,
5, Corporation Street, Birmingham,
Agent for the Applicant.

COMPLETE SPECIFICATION.

Improvements in or relating to Slab and Post Wall Constructions for Buildings and Structures, applicable also to Toy Building Sets.

I, HARRY WILLETTS ADSHEAD, of 2, Osmaston Road, Norton, Stourbridge, in the County of Worcester, a British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates generally to the construction of walls, partitions, and the like, for use mainly in connection with the erection of dwelling-houses, workshops, warehouses, pavilions, garages, and like buildings.

It has previously been proposed, in connection with slab wall constructions, for the slabs to be laid in courses and to be reinforced and locked together by means of metal dowels and by means of a cement grouting filled into the joints. A slab wall construction has also been proposed in which the end slabs of intersecting walls are received within the grooved sides of a pillar erected at the point of intersection of the walls, the slabs in this case being moulded with a reinforcing metal framework embedded therein.

It has also been proposed, in connection with slab and post wall constructions, for the slabs to be laid in courses between and within spaced pairs of channelled stanchions, which may be of H or other section, and in one construction of this kind the wall has been furnished at the top with an inverted horizontal channel member fitted over the upper course of slabs so as to carry the gutters and support the principal rafters of the building.

It is to this latter type of wall construction, that is to say, the slab and post type, that the present invention more particularly refers, the invention having for its object to provide a method of construction, utilising ready-made concrete or other slabs, which shall ensure increased rigidity and strength as compared with slab wall structures or slab and post wall structures built by ordinary methods.

The invention consists in a method of slab and post wall construction wherein concrete or other slabs are laid in courses between and within spaced pairs of channelled steel stanchions, preferably of H section, and wherein the slabs thus laid are reinforced and locked together by means of metal bars or dowels inserted in holes provided in the slabs, the joints being preferably completed by a grouting of liquid cement run into grooves extending around the jointing faces of the individual slabs.

In order that the invention may be clearly understood and readily carried into practice, reference may be had to the appended explanatory sheet of drawings, upon which:—

Figure 1 is a front elevation of a short length of wall constructed in accordance with the invention.

Figure 2 is a plan of the same, in section taken on the line 2—2 of Figure 1.

Figure 3 is a similar view in section on the line 3—3 of Figure 1.

Figure 4 is a perspective view of one of the component slabs.

Figure 5 is a sectional plan illustrating a partition wall connection.

Figure 6 is a similar view of a corner construction.

In carrying the invention into effect, the slab wall is built up in sections within a metal framing, each intermediate section being contained between and within a spaced pair of upright steel stanchions *a*, which stanchions are preferably of H section so as to present upright longitudinal channels on each side, the spacing of the stanchions varying according to the size of slab employed, a spacing of three to six feet being suitable for ordinary walls.

The slabs *b*, which are preferably of pressed and moulded concrete, but which may alternatively be of stone or metal, are of rectangular form and of dimensions appropriate to the kind of wall to be constructed, each slab being formed with a semicircular or other groove *c* extending continuously and centrally around its peripheral edge, and each slab having also a pair or plurality of holes *d* extending through from top to bottom, these holes being uniformly spaced and being so arranged as to register with the corresponding holes of slabs in adjacent courses.

In building a wall the slabs *b* for each section are laid in horizontal courses between the respective pair of stanchions *a*, with the outer upright edges of the slabs contained within the channels of the stanchions, and on each successive course of slabs having been thus laid, steel bars or dowels *e* are inserted into the series of holes *d* for the purpose of reinforcing and locking the course of slabs to the course to be superposed, and a grouting of liquid cement is then run into the grooves *c* surrounding the individual slabs, thereby completing the joints and further ensuring the locking together of the individual slabs *b*.

On the building up of the wall section being completed, the section is finished and further locked at the top by means of an inverted horizontal channel or angle member *f* which is rigidly secured as at *g* to the tops of the stanchions *a*.

Doors or windows may be inserted as required during the operation of building the wall. For this purpose the door or window *h* is contained within a steel frame *i* which is of channel section having its channel outwardly disposed (see Fig. 2). This frame *i* is assembled so as to rest with its lower horizontal channel upon a ledge constituted by the upper edge of the course of slabs beneath, and slabs b^1 of the necessary special sizes are then inserted and grouted down each side of the frame, the frame *i* being finally secured and locked by a superposed slab or slabs b^2 constituting a lintel, this lintel being jointed and grouted within the upper horizontal channel of the frame *i*.

For partition wall connections (Fig. 5) the principal H-section stanchions *a* may be bolted to or otherwise associated with auxiliary stanchions a^1 of channel section, the internal partition walls *j* being built up into these channelled stanchions a^1, and into the necessary additional series of H-section stanchions, in a manner similar to that already described. A similar arrangement may be employed for corners (Fig. 6), except that in this case the outermost principal stanchion a^2 is preferably of channel section so as to present a plain outer face; j^1 is the side wall and a^1 the channelled auxiliary stanchion.

The ready-made concrete or other slabs *b* employed in constructing the wall or building may if desired be suitably faced in imitation of brickwork.

The hereinbefore described method of wall construction may be readily adapted for use in miniature in connection with constructional toy sets such as are used by children and others, the grouting grooves around the slabs in this case being dispensed with if desired.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A method of wall construction wherein concrete or other slabs are laid in courses between and within spaced pairs of channelled steel stanchions, preferably of H section, and wherein the slabs thus laid are reinforced and locked together by means of metal bars or dowels inserted in holes provided in the slabs.

2. A method of wall construction in accordance with Claim 1, wherein each section of the wall is finished and further locked at the top by means of an inverted horizontal channel or angle member rigidly secured to the tops of the stanchions.

3. A method of wall construction in accordance with Claim 1, wherein the joints are completed by a grouting of liquid cement run into grooves extending around the jointing faces of the individual slabs.

4. A wall constructed according to the method of any of the preceding claims.

5. A miniature or toy building set adapted for use according to the method of construction set forth in Claim 1 or Claim 2.

Dated this 28th day of June, 1928.

LEWIS W. GOOLD,
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5, Corporation Street, Birmingham,
Agent for the Applicant.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1928.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

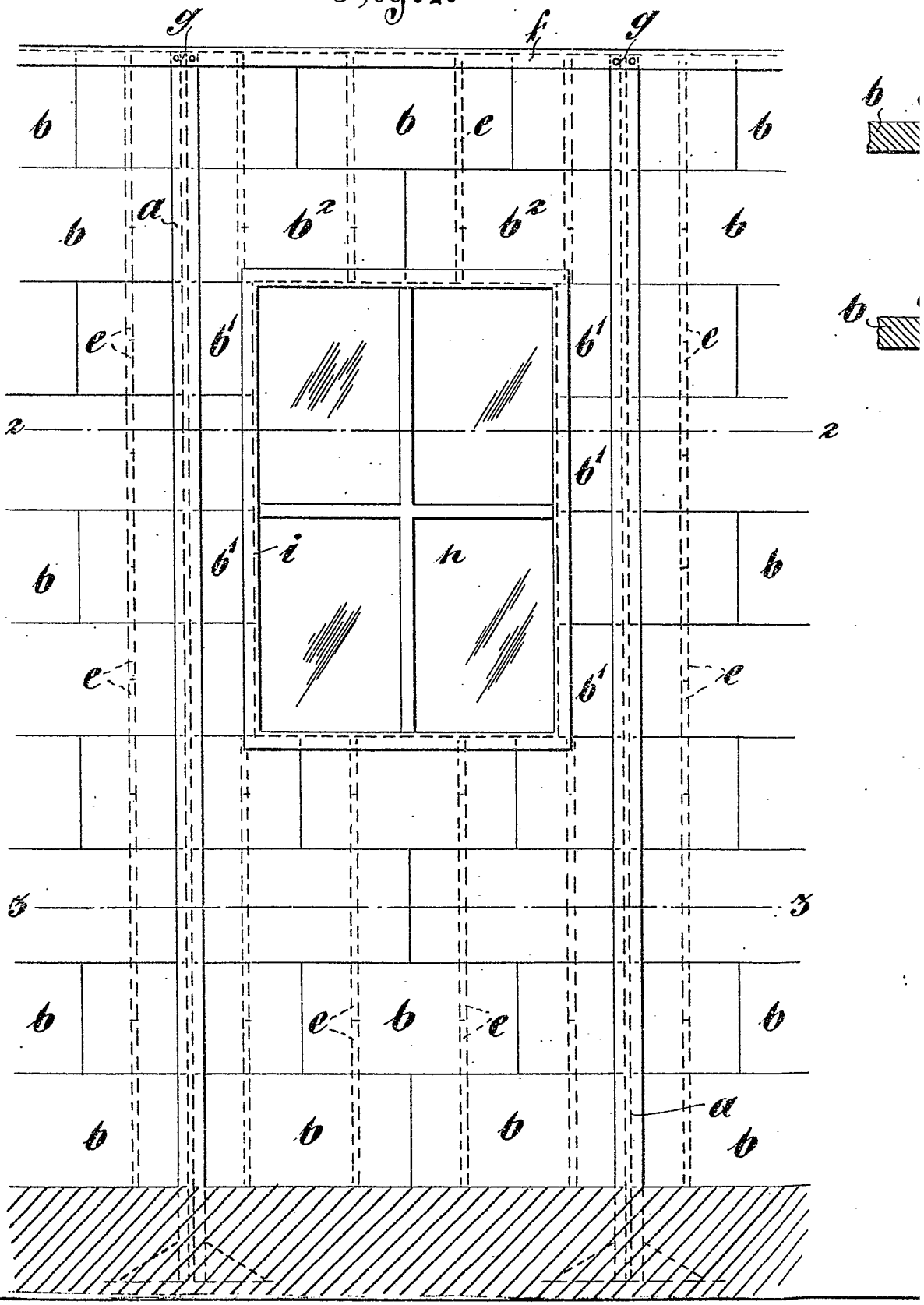


Fig. 2.

Fig. 3.

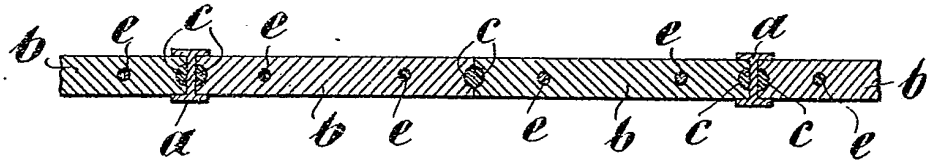


Fig. 4.

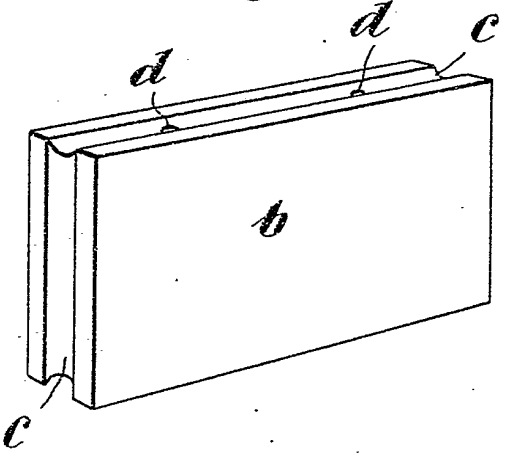


Fig. 5.

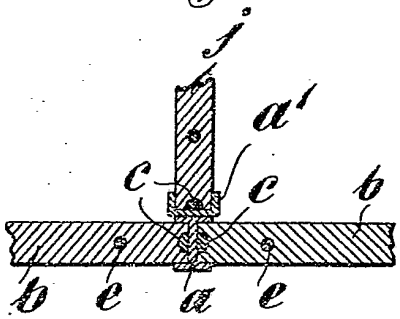
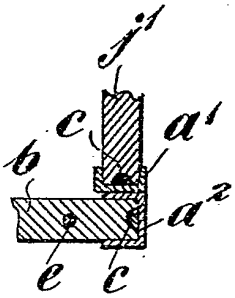


Fig. 6.



Charles & Read Ltd. Photo Litho.

[This Drawing is a reproduction of the Original on a reduced scale.]

Fig. 1.

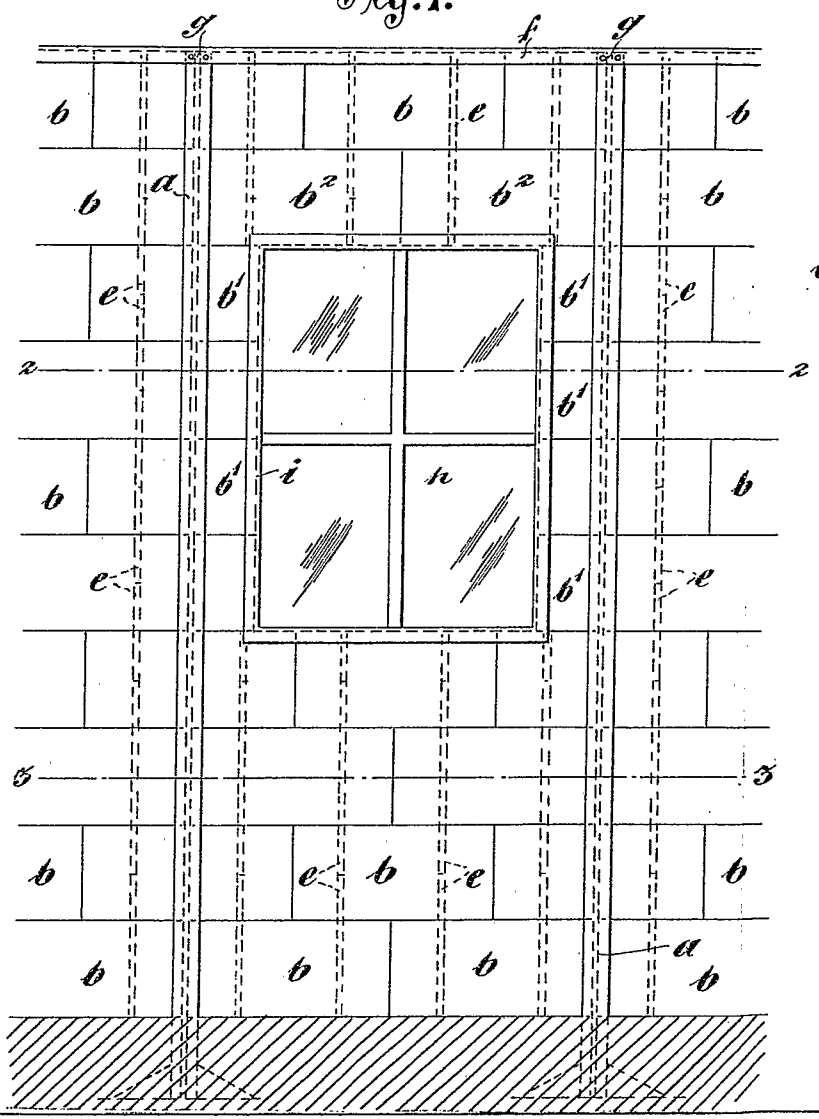


Fig. 2.

Fig. 3.

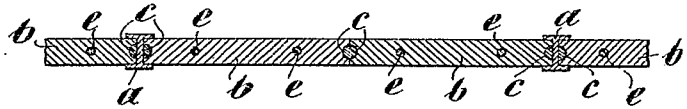


Fig. 4.

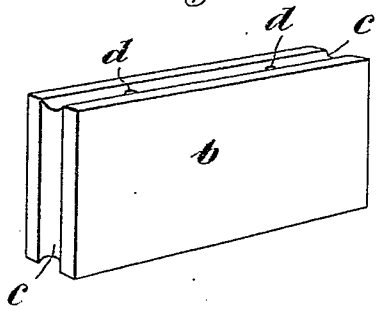


Fig. 5.

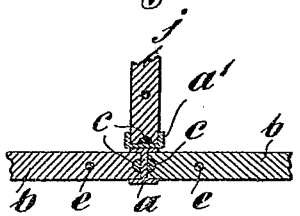
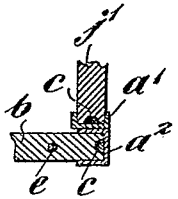


Fig. 6.



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