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WALL STRUCTURE

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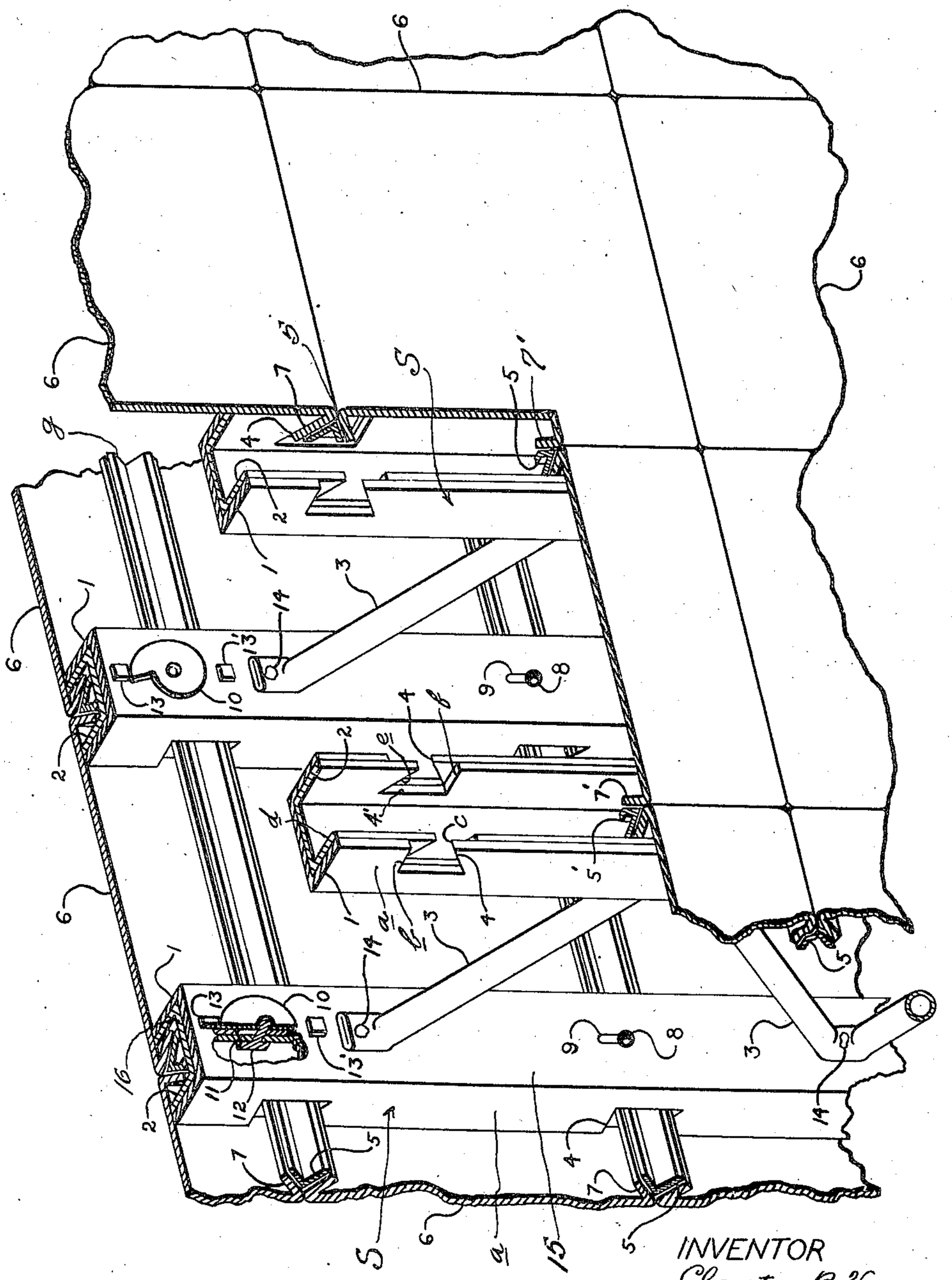

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WALL STRUCTURE

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This invention relates to a wall structure and it is an object of the invention to provide a structure which can be readily and effectively assembled and which serves effectively as load bearing.

It is also an object of the invention to provide a wall structure comprising upright studs with associated covering plates, and wherein said studs and plates are provided with coacting means for effectively maintaining the desired assembly.

Another object of the invention is to provide a wall structure wherein the upright studs comprise nesting sections provided with means whereby, upon relative lengthwise movement of said sections, the side plates may be readily applied or removed and also effectively maintained in assembly.

An additional object of the invention is to provide a wall structure including vertical studs having nested sections one movable with respect to the other and wherein said sections are provided with coacting means for effecting the desired relative endwise movement.

A still further object of the invention is to provide a wall structure or curtain of a skeleton type possessing a maximum of strength.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved wall structure whereby certain important advantages are attained, as will be hereinafter more fully set forth.

In order that my invention may be better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein is illustrated a fragmentary view in perspective, with portions in section, of a wall structure constructed in accordance with an embodiment of the invention.

As illustrated in the accompanying drawing, the wall structure comprises a plurality of suitably spaced upright studs or members S arranged in series of two, with the studs of each series spaced as desired in a direction transversely of the assembled wall structure. Each of the studs S comprises an outside fixed member 1 of channel form with its open longitudinal face outwardly directed. This member 1 may be supported in position in any manner preferred.

Snugly but slidably fitting within the member 1 is an interior member 2 also of channel formation with its open longitudinal face outwardly directed. This member 2 is adapted to have independent endwise movement within certain limitations with respect to the outer member 1 in a manner and for a purpose to be hereinafter set forth.

Interposed between the studs S of each series are the suitably formed truss members 3, herein disclosed as comprised in a single element of desired length and preferably tubular and which

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is suitably anchored, as at 14, by spot-welding or otherwise to the inner or base walls of the outer members 1 of the studs S. These truss members 3 are herein disclosed as in zigzag relation although they may be otherwise assembled as preferred. It is believed to be obvious that these members 3 serve to maintain the studs S of each series in desired spaced relation.

The side flanges *a* of the outer members 1 of the upright studs S at desired points therealong are provided with the recesses 4 in alignment transversely of the studs S and the upper edges *b* of these recesses 4 are at right angles to the longitudinal axes of the flanges *a* while the lower edges *c* are disposed on a predetermined upward incline.

The recesses 4 register with the recesses 4' in the side flanges *d* of the inner members 2 and the upper edges *e* of the recesses 4' are outwardly and downwardly inclined at a predetermined angle while the lower edges *f* are at right angles to the longitudinal axes of the flanges *d*.

The edges *c* and *e* coact to provide substantially V-shaped recesses with their apices outwardly disposed and with said apices open. The edges *c* and *e* are disposed on an angle substantially coincident with the angular relation of the side members *g* of an elongated filler strip 5 which is of material length and adapted to have operative engagement with a plurality of upright studs S.

In applying a filler strip 5, the inner members 1 of the studs S are raised sufficiently to permit the recesses 4 and 4' to receive the strip which is V-shaped in cross section and in its application has its apex portion outwardly disposed.

The wall plates 6 may be of plastic or any material desired and are of such dimensions as may be determined by the placing of the upright studs S at each face of the wall structure and by the spacing of adjacent recesses 4, 4'. The upper and lower longitudinal margins of these plates 6 are provided with inwardly disposed angular flanges 7, the angularity of which with respect to a plate 6 being substantially the same as that of the flanges *g* of a filler strip 5 and approximating the angle of the edges *c* and *e*.

In applying a wall plate 6, a flange 7 is engaged within the recesses 4, 4' either above or below a filler strip 5 after the inner member 2 of the stud S has been sufficiently raised and when the inner member 2 is moved down, there results an effective holding of the plate 6 in position.

In the present embodiment of the invention, the plates 6 are substantially square and the side marginal portions are also provided with the inwardly inclined flanges 7' disposed on substantially the same angle as the flanges 7. When a plate 6 is placed in position, these flanges 7' will be received within the inner members 2 of the studs S through the open outer face thereof and

will engage a side face of a filler strip 5' which is placed within the member 2 and disposed lengthwise therealong.

While these filler strips 5 and 5' are indicated as freely positioned in the structure, it is believed to be obvious that, if desired, they can be welded or otherwise effectively held in a fixed position and under which circumstances the free longitudinal edges of the strips 5 would be secured directly to the vertical edges of the outer members 1 of the upright studs S.

The intermediate or base walls 15 of each of the members 1 of an upright stud S at predetermined points spaced lengthwise thereof, and preferably at the transverse center, are provided with the longitudinally directed slots 9 and 11 of desired length. Extending out through the lower slot 9 is a binding rivet or element 8 carried by the intermediate or base wall 16 of the inner member 2 of the stud S and extending out through the upper slot 11 is a stub shaft 12 or the like. Fixed to this shaft 12 or the like outwardly of the intermediate or base member 15 but immediately adjacent thereto is a spiral cam or disk 10 which coacts from below with a fixed abutment or lug 13 carried by the outer face of the intermediate or base member 15.

Upon rotation of the spiral cam or disk 10 engagement of the cam with the stop or abutment 13 forces the inner member 2 downwardly while engagement of the cam 10 with the stop or abutment 13' raises said member 2.

In view of the foregoing, it is believed to be readily apparent that a wall structure embodying the present invention can be readily and conveniently assembled and that the invention is such as to permit the assembly of a structure for any preferred use.

While the plates 6 may be made of plastic, they may also be of aluminum, steel or other metal or a material with a porcelain coat and, when desired, said plates may be transparent.

From the foregoing description it is thought to be obvious that a wall structure constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated.

I claim:

1. A wall structure comprising upright studs, each of said studs including nested members, one movable with respect to the other, said members being of channel form and having registering recesses in their side flanges, the bottom edges of the recesses of one of the members being upwardly and outwardly inclined and the upper edges of the recesses in the second member being downwardly inclined, and wall plates having inwardly disposed flanges interlocking with the inclined edges of the recesses of the members of the studs.

2. A device as set forth in claim 1, wherein the members of a stud are provided with coacting means for moving one of the members with respect to the other.

3. A device as set forth in claim 1, wherein the members of a stud are provided with coacting means for moving one of the members with respect to the other in either direction.

4. A wall structure as set forth in claim 1, wherein a filler strip is placed within the recesses of the members of the stud and bridging the space between adjacent studs, said filler strip coacting with the flanges of applied plates to facilitate the locking of the plates in position.

5. A wall structure as set forth in claim 1, wherein a cam member is carried by one of the members of the stud and an abutment carried by the second member of the stud for contact by the cam member to move one of the members lengthwise with respect to the other.

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