

961,682.

Fig. 1.

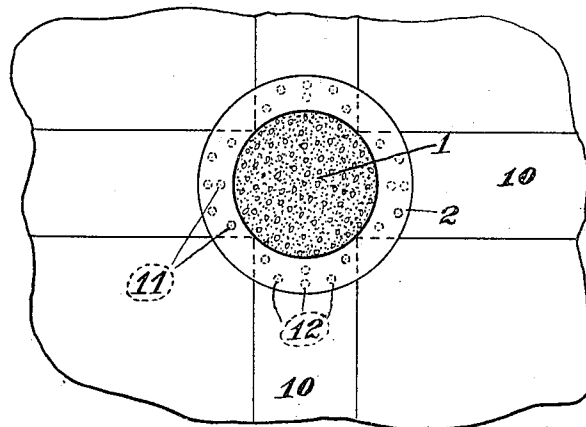


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOHN E. CONZELMAN, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO UNIT CONSTRUCTION COMPANY, A CORPORATION OF DELAWARE.

CONCRETE CONSTRUCTION.

961,682.

Specification of Letters Patent. Patented June 14, 1910.

Original application filed January 9, 1909, Serial No. 471,431. Divided and this application filed April 29, 1909. Serial No. 492,861.

To all whom it may concern:

Be it known that I, JOHN E. CONZELMAN, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have
5 invented certain new and useful Improvements in Concrete Construction, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to concrete building structures and has particular reference to a construction in which concrete slabs and beams are used for ceilings and floors, and are supported at their ends and corners by
15 uprights or columns.

In the construction of concrete buildings, it is essential that secure and durable jointures be made between the columns and the horizontal members of the structure
20 or the beams and slabs.

It is the object of this invention to provide a structure of concrete building elements which cooperate and are interengaged to form a rigid, secure and lasting combination of elements.
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It is also an object to provide a concrete building structure in which the general construction of the cooperating uprights and horizontal elements is generally improved in
30 the manner to be hereinafter set forth and described.

With these objects in view, my construction will now be fully set forth and described, reference being had to the accompanying drawings, in which,
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Figure 1 is a longitudinal section through an upright, and the contiguous horizontal members, and Fig. 2 is a sectional view on line 1—1 of Fig. 1.

40 Referring more particularly to the drawings, the superposed columns 1 and 7 represent one of the vertical units in a number of series of alined columns which are spanned by and support a floor and ceiling structure hereinafter described. Said columns are alined in ordinary usage, in parallel rows.

This application is a divisional application of my copending application, Serial No. 471,431, filed January 9, 1909.
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The column 1 is formed with a base or cap 2 provided with a shoulder 3 and the stud 4. Said stud 4 rests on stud 5 of a cap 6 formed around column 7, thereby provid-

ing the latter with shoulder 8. When column 1 rests on column 7, a groove 9 is formed between shoulders 3 and 8 and around studs 4 and 5. Said groove is adapted to receive beams 10, each of which is or may be anchored to column 1 by rod 11, or a plurality of such rods, extending from base 2 into each of said beams and to the column 7 by a rod 12, or plurality of such rods, extending from the cap 6 into each of said beams. Preferably, the rod or rods 11, which extend from the column 1 into beam, or beams, 10 will overlap rod or rods 12 extending from column 7 into said beam or beams. As is evident, the beams are secured to the columns 1 and 7 at right angles to one another, thereby providing right angled recesses or sockets in the groove 9 for the insertion of the corners of slabs which form the floor and ceiling members. Or, said floor and ceiling members or slabs may be inserted in groove 9 and the beams 10 cast or molded between said slabs.

It will be observed that each beam 10 overlaps the joint 13 between columns 1 and 7, and that by reason thereof and because of the position of such beam in the groove between shoulders 3 and 8 and on account of the bond between beam 10 and columns 1 and 7, respectively, formed by the rods 11 and 12, that a very strong union between the several parts is produced.
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Having thus described my said invention, what I claim and desire to secure by Letters-Patent is:

1. A concrete construction, comprising, in combination, alined rows of supporting columns, caps located around the bodies of said columns, and studs projecting thereabove, similarly but opposingly formed columns superposed above said first columns, so as to have downwardly projected studs resting on said upwardly projecting studs, beams extended between the columns of said alined rows and formed to have their ends inserted between the opposing caps, and in abutment with both of said studs thereby forming sockets around said abutments, and quadrangular slabs fitting between said beams and having their corners inserted between said caps and fitting in said sockets.
100

2. A concrete structure comprising, in combination, alined rows of supporting columns, caps located around the bodies of said

columns, and studs projecting thereabove, similarly but opposingly formed columns superposed above said first columns, so as to have downwardly projected studs resting on said upwardly projecting studs, beams 5 extended between the columns of said alined rows and formed to have their ends inserted between the opposing caps and in abutment with both of said studs, thereby forming 10 sockets around said abutments, vertical rods projected from said caps into said beams to secure the latter in angular relation, and quadrangular slabs fitting between said beams and having their corners inserted between said caps and fitting in said sockets. 15

3. A concrete construction, comprising, in combination, alined rows of supporting columns, caps located around the bodies of said columns, and studs projecting thereabove,

similarly but opposingly formed columns superposed above said first columns, so as to have downwardly projected studs resting on said upwardly projecting studs, beams extended between the columns of said alined rows and formed to have their ends inserted at right angles to one another between the opposing caps, and in abutment with both of said studs thereby forming sockets around said abutments, and rectangular slabs fitting between said beams and having their corners inserted between said caps and fitting in said sockets. 20 25 30

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN E. CONZELMAN.

Witnesses:

GEO. G. ANDERSON,
GLADYS WALTON.