

J. E. CONZELMAN.
CONCRETE CONSTRUCTION.
APPLICATION FILED JUNE 5, 1911.

1,045,774.

Patented Nov. 26, 1912.

Fig. 1.

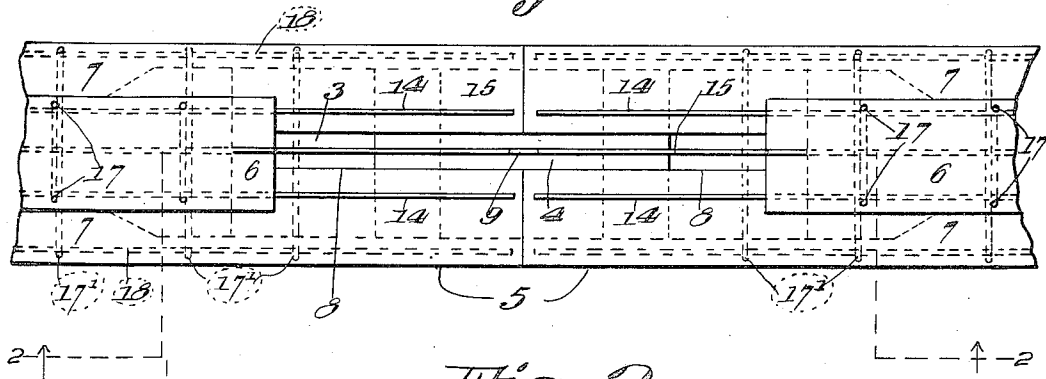
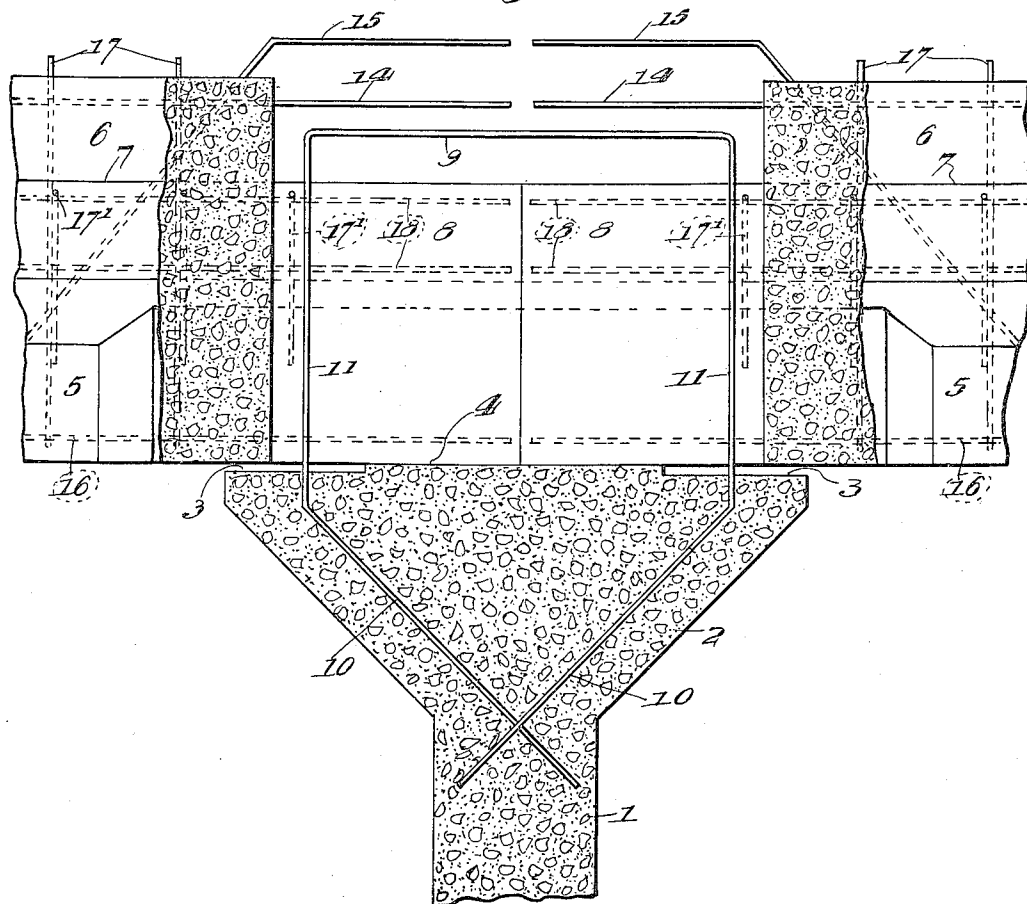


Fig. 2.



Witnesses:
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Inventor:
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Ray Hugh K. Wagner,
His Attorney.

UNITED STATES PATENT OFFICE.

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

CONCRETE CONSTRUCTION.

1,045,774.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Original application filed November 16, 1909, Serial No. 528,298. Divided and this application filed June 5, 1911. Serial No. 631,277.

To all whom it may concern:

Be it known that I, JOHN E. CONZELMAN, a citizen of the United States, residing in the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Concrete Construction, (Divisional Case N.) of which the following is a specification.

This invention relates to certain new and useful improvements in concrete construction.

This application is a division and continuation of one filed by me November 16, 1909, Serial No. 528298.

The object of the invention is to provide an improved means for uniting a pair of beams to a column.

In the drawings: Figure 1 is a fragmentary top plan view of the invention, and Fig. 2 is a section on the line 2—2 of Fig. 1.

The column designated 1 in the drawings is formed with a gusset 2, the latter having horizontal cutaway portions 3 on its top face providing a central seat 4.

5, 5, designate a pair of beams which are provided with tenons 6, the latter terminating in spaced relation to the free ends of the beams. The tenons 6 cooperate with the top faces of the beams to form shoulders 7 on which slabs, not shown, may be placed; the end of each beam beyond the tenon 6 thereof is slotted as indicated at 8 in the drawings, the slotted portions of the beams registering with each other as depicted in Fig. 1 and communicating with the horizontal cut-away portions 3 of the column gusset 2. A reinforcing bar 9 which is of inverted U-shape projects above the column gusset and has its ends 10 embedded in the gusset in crossed relation to each other. The bar 9 has its legs 11 extending into the slots 8 of the beams 5, the connecting portion of the bar 9 extending above the top faces of the beams but below the top faces of the tenons 6. Reinforcing bars 14 have a horizontal disposition, being embedded in the tenons 6 adjacent the top ends thereof, and project beyond the inner ends of the latter, the free ends of the bars 14 of the pair of beams being disposed opposite each other in spaced relation as shown in the drawings. A reinforcing bar 15 is embedded in the bottom portion of each beam, and, adjacent the end thereof, said bars are inclined upwardly,

projecting through the top faces of the tenons 6, and extend over the bar 9 of the column gusset 2, their inner ends being in spaced relation. Each beam has reinforcing bars 16 embedded in the lower end thereof and U-shaped bars 17 which extend around the bars 14 and project through the top faces of the tenons 6.

By reference to Fig. 2 of the drawings it will be seen that the beam ends abut, thereby bringing the slots 8 thereof into accurate register, the slotted ends of the beams cooperating to form a chamber in which the bottom of the same is formed by seat 4 and the bottom wall formed by the cutaway portion 3 of gusset 2. Thus when wet concrete is poured into the chamber above mentioned the concrete fills the chamber and enters the cutaway portion 3. The advantage of this construction is that the weight of the beams is placed directly at the center of the column, and no so-called "forms" are required in the formation of the key which occupies the chamber above mentioned, the only act necessary being that of temporarily closing the cutaway portions 3 at their outer ends to prevent the escape of the wet concrete. Bars 18 are embedded in the shoulders 7 and are encircled at intervals by bars 17'.

What is claimed is:

1. In concrete construction, in combination with a column, a single pair of beams having their inner ends seated thereon and in abutting engagement, said inner ends of the beams being formed with elongated registering slots which conjointly form a long continuous concrete receiving chamber closed on both of its opposite sides and ends, reinforcing rods carried by each beam having their free ends spaced apart and located opposite to each other and projecting in said concrete receiving chamber, and a concrete filler in said chamber which provides a long key that connects the beams.

2. In combination with a column, a single pair of beams having their inner ends seated thereon and formed with tenons which terminate in spaced relation to said inner ends of the beams, said inner ends of the beams beyond the tenons being formed with elongated registering slots, and a bar having its ends embedded in the column and having a looped portion which extends in said slots

and has its top portion extending above the slots of the inner ends of the beams and below the tenons thereof.

3. In combination with a column, a single
5 pair of beams having their inner ends abutting and seated thereon and formed with elongated registering slots that extend longitudinally of the beams and terminate at points adjacent the ends of the column, and
10 a bar having its ends embedded in the column and formed to have a pair of spaced vertical legs that extend between the inner

ends of the beams and the outer ends of the slots thereof and a horizontal connecting portion that extends longitudinally of the 15 beams and over the abutting ends of the beams.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN E. CONZELMAN.

Witnesses:

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