

U. S. G. ATHEY.
 REINFORCED CONCRETE FLOOR CONSTRUCTION.
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940,296.

Patented Nov. 16, 1909.

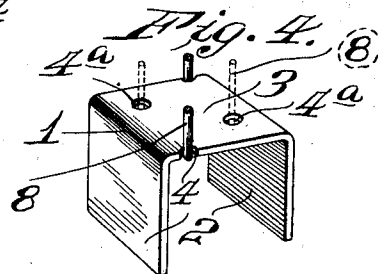
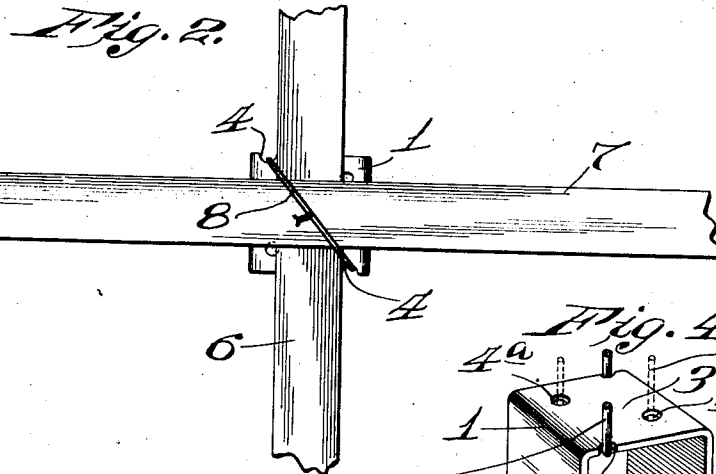
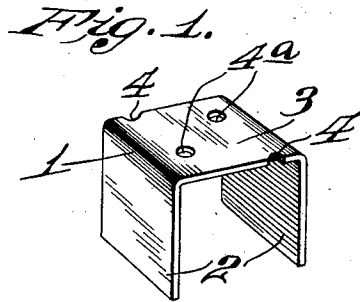
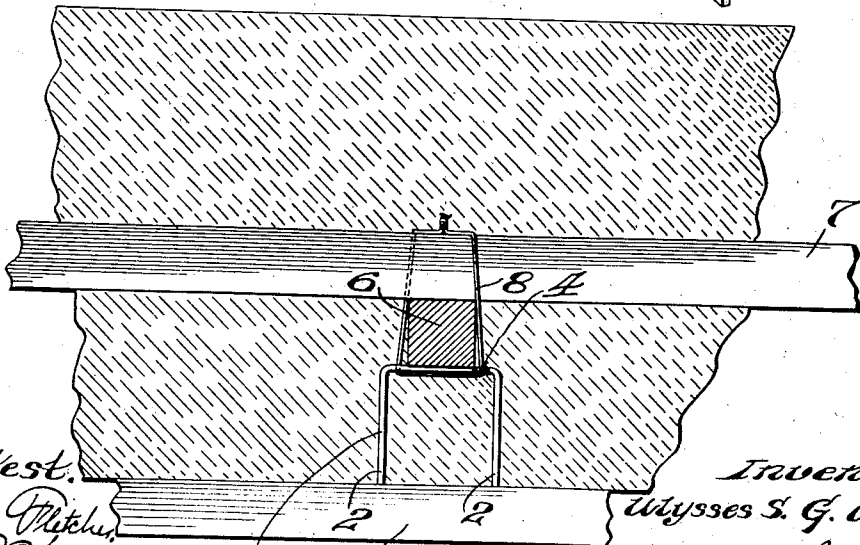


Fig. 3.



attest.

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UNITED STATES PATENT OFFICE.

ULYSSES S. G. ATHEY, OF ST. LOUIS, MISSOURI.

REINFORCED-CONCRETE FLOOR CONSTRUCTION.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ULYSSES S. G. ATHEY, a citizen of the United States, and resident of St. Louis, Missouri, have invented certain new and useful Improvements in Reinforced-Concrete Floor Construction, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to reinforced concrete floor construction, the object of my invention being to provide an improved means for supporting longitudinal and transverse reinforcing bars on a temporary floor and to provide recesses in such supports whereby a bond wire passed around said reinforcing bars and engaging in said recesses will prevent movement of the parts relative to each other. A further object being to provide a support and means whereby reinforcing bars of various sizes may be secured to prevent movement relative to each other.

For the above purposes my invention consists in certain novel features of the construction and arrangement of parts as will be hereinafter more fully described, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 is a perspective of one of the supports; Fig. 2 is a plan illustrating the support attached to crossed reinforcing bars; Fig. 3 is a sectional elevation of a section of concrete flooring showing the crossed reinforcing bars supported on a temporary floor and the bond wire for securing the bars and supports immovable relative to each other; and, Fig. 4 is a perspective of the support showing a section of bond wire arranged to secure reinforcing bars of one size and in dotted lines a bond wire for securing bars of a different size.

Referring by numerals to the accompanying drawings: 1 designates a substantially, inverted U-shaped support having vertical end portions 2, an upper horizontal portion 3 and diagonally disposed recesses 4 formed in the side margins of the horizontal portion 3. Perforations 4^a are formed in the horizontal portion, oppositely disposed in relation to each other and to the recesses 4. This support is preferably made of a single piece of sheet metal which is struck and

formed complete by one operation of a machine. This support is positioned on the temporary flooring 5 underneath the transverse reinforcing bars 6 at a point where the longitudinal reinforcing bars 7 cross the bars 6, the reinforcing bars 7 being positioned over and in a plane above the bars 6, thus temporarily supporting the bars to prevent sagging thereof between their fixed ends and allowing concrete to flow beneath them. When in such position the bond wire 8 is passed underneath the support 1 engaging in the recesses 4, when employed in connection with reinforcing bars from one half to one inch in thickness, and passed around the bars 6 and 7 and its ends united. Concrete is then filled in upon the temporary flooring 5, around the support and reinforcing bars thus making a reinforced concrete floor. After the concrete is set the temporary floor 5 is removed. When the support is employed on lesser sized bars a bond wire is passed through the perforations 4^a and secured around the bars in the same manner as when engaging in the notches and on larger sized bars.

By the employment of the supports as shown, assuming the reinforcing bars and temporary floor to be in position, the supports are placed upon the temporary floor and not secured thereto, at points underneath the bars 6 where the bars 7 cross over them, thus taking up all of the sag of such reinforcing bars to place them in horizontal alinement relative to each other. The bond wires are then secured around the bars and supports either through the perforations or engaging in the recesses in the supports to prevent slipping or movement of the wire, thus retaining the bars in fixed positions relative to each other. After all of the bars have been united where they cross each other, concrete is filled in upon the temporary floor around and over the reinforcing bars and their supports which concrete, when set together with the reinforcing bars, forms a fire proof and practically indestructible construction, the temporary floor 5 being removed after the concrete is thoroughly dry and set.

It is obvious that my improved support may be used in reinforcing pillar and beam construction or, in fact, in any place where

it is necessary for the reinforcing bars to be hidden and embedded in the reinforced concrete construction. It is obvious further that the support may be arranged to secure
5 reinforcing bars of various sizes.

I claim:

1. In a concrete floor construction, the combination of crossing reinforcing bars, of
10 an inverted U-shaped support positioned beneath the point where said bars cross each other, said support being provided with diagonally disposed recesses a bonding wire positioned in said recesses and embracing
15 said support and bars and the ends thereof united, there being openings formed in the support diagonally opposed to said recesses.

2. In a concrete floor construction, the combination of reinforcing bars arranged at angles and in different planes relative to
20 each other, of an inverted U-shaped support constructed of a single piece of sheet metal positioned beneath the lowermost bars, said support being provided with diagonally disposed recesses a bond wire engaging said
25 recesses and passing around said support and said bars and the ends thereof united, there being openings formed in the support diagonally opposed to said recesses, the inner margins of said openings being nearer the

longitudinal center of the support than the
inner margins of said recesses.

3. A support for reinforcing bars in concrete construction, consisting of a substantially U-shaped piece of sheet metal having
35 diagonally disposed recesses formed in its upper side margins and diagonally disposed perforations formed in the upper body portion of the support intermediate said recesses, which recesses and perforations serve to permit the attachment to the support of
40 different sized reinforcing bars.

4. A support for reinforcing bars in concrete construction consisting of a substantially U-shaped piece of sheet metal having
45 diagonally disposed recesses formed in its upper side margins and perforations in the upper portion of the support arranged opposite to the recesses, whereby bars of different transverse dimensions may be secured to said support by a bond wire.

In testimony whereof, I have signed my name to this specification, in presence of two subscribing witnesses.

ULYSSES S. G. ATHEY.

Witnesses:

E. E. LONGAN,
E. L. WALLACE.