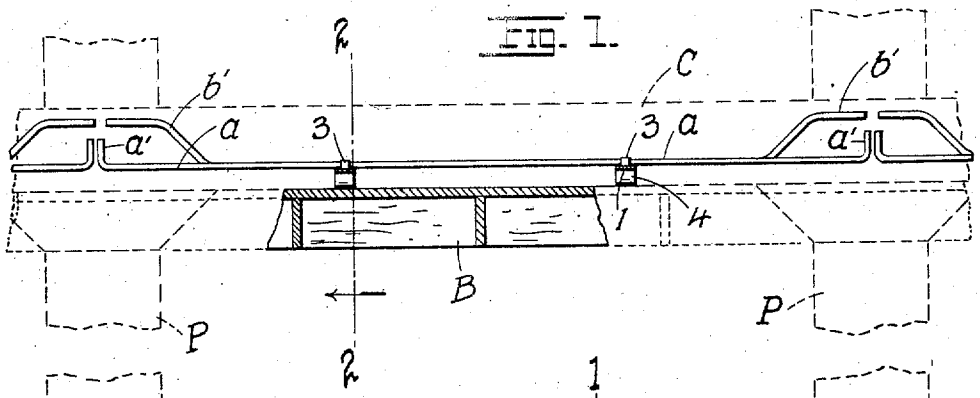
No. 888,671. PATENTED MAY 26, 1908.

F. C. TAXIS.

CONCRETE FLOOR CONSTRUCTION.

APPLICATION FILED JULY 27, 1907.

FIG. 1.



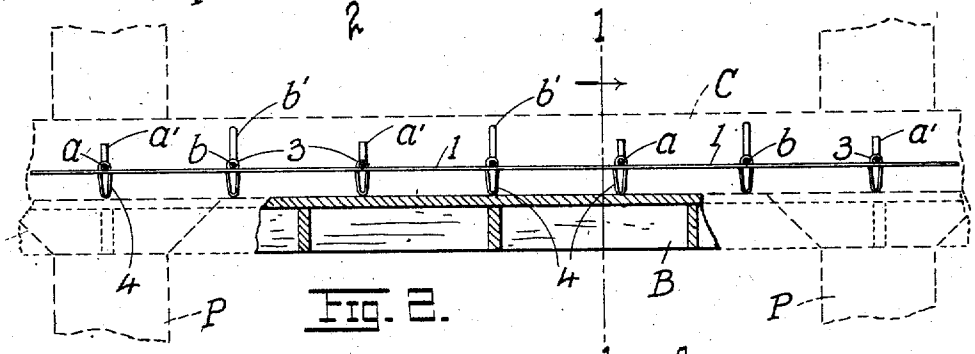


FIG. 2.

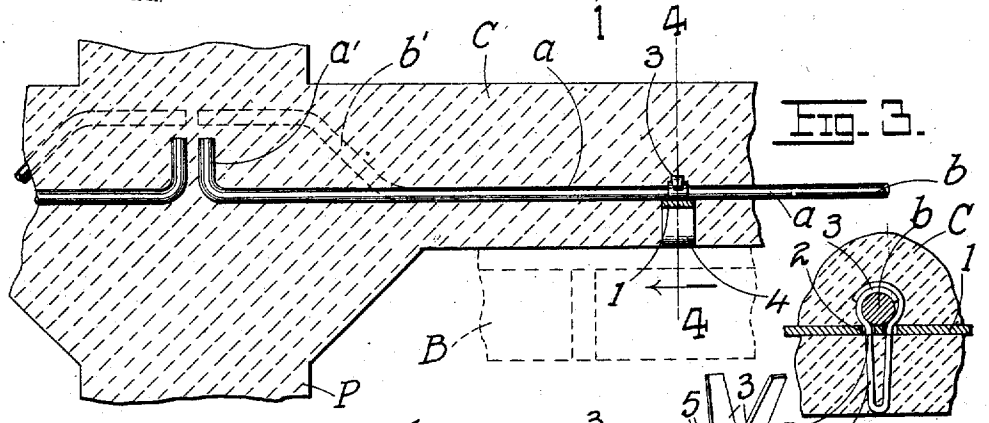


FIG. 3.

FIG. 4.

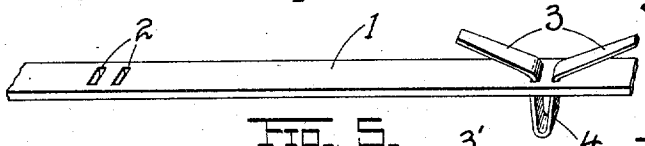


FIG. 5.

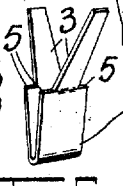


FIG. 6.

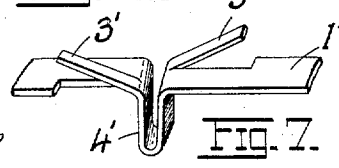


FIG. 7.

WITNESSES:

Thos. J. Drury

Josa Michael

INVENTOR.

Frederick C. Taxis

BY

Emil Thaer

ATTORNEY.

NORRIS PETERS, INC., LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK C. TAXIS, OF ST. LOUIS, MISSOURI.

CONCRETE FLOOR CONSTRUCTION.

No. 888,671. Specification of Letters Patent. Patented May 26, 1908.

Application filed July 27, 1907. Serial No. 385,842.

To all whom it may concern:

Be it known that I, FREDERICK C. TAXIS, citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Concrete Floor Constructions, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in concrete-floor constructions, and it consists in the novel details more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a vertical section of a concrete floor showing my invention applied thereto, the section being on the line 1—1 of Fig. 2, and the concrete being shown dotted; Fig. 2 is a section at right angles to Fig. 1 being a section on line 2—2 of Fig. 1; Fig. 3 is an enlarged section on the order of Fig. 1, showing the concrete in full; Fig. 4 is a vertical section on line 4—4 of Fig. 3; Fig. 5 is a perspective of one of the transverse tie members; Fig. 6 is a perspective of one of the ties or anchors; and Fig. 7 is a modified form of tie member showing the anchor and gage leg integral therewith.

The object of my invention is to introduce into a concrete floor construction a structural detail which shall not only serve to properly space and tie the metallic reinforcing and supporting bars for the concrete, but shall at the same time serve as a gage for the construction of the boxing into which the cement composition is poured around the bars previously spaced and positioned. With my improvement any shifting of the reinforcing members from the positions they are intended to occupy is impossible, a thorough tying therefore is insured, and a uniform construction can always be depended on.

The advantages of the improvement will be better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, P, P, represent concrete (or other) pillars for the support of the concrete floor, the latter being made up of suitable cement composition C, and series of supporting and reinforcing bars or members *a*, *b* respectively, having up-turned ends *a'*, *b'*, respectively, the said members forming the supports for the floor, the ends thereof resting directly on the pillars P where the latter are resorted to, or on I-beams or equivalent structural members (not here illustrated as they are fully understood in the art). The body portions or main portions of the members *a*, *b* are disposed in the same horizontal plane at equal distances from the opposite faces of the completed floor as shown, the cement being as well understood temporarily laid on and supported by the boxing B, which is removed when the concrete has fully set and hardened.

In the construction of the floor the supporting and reinforcing members are (as well understood) laid with their opposite ends over the pillars (or structural members) and disposed parallel to one another at predetermined distances apart. To insure permanent parallelism therefor and prevent displacement thereof, I tie the several members *a*, *b* together by means of a series of cross spacing-members or tie-bars which in the preferred form of my invention are in the shape of metal strips 1, provided with pairs of slots or openings 2, 2, through which are inserted the arms or tongues 3, 3, of the substantially U-shaped spacing pieces or legs 4, which, in the completed floor depend below the reinforcing members *a b*. The tie-bars are connected to the members *a*, *b* by folding the tongues 3, 3 around the members as shown in the drawings. Thus the members *a*, *b* are superposed directly over the tie members 1, the spacing legs or pieces 4 serving to space the roof of the boxing B a uniform distance from the reinforcing members so that these legs serve as gages which determine the depth of the concrete below the planes of the reinforcing members, the bases of the legs coming in contact with the boxing as the latter is undergoing construction, and coming flush with the under surface of the concrete portion of the floor when the latter is finished. The depth of insertion of the arms 3 into the openings 2 is limited by the shoulders 5, 5, which bear against the solid portion of the strip 1 beyond each opening. The arms 3, 3, and leg 4 are stamped from a single sheet of metal and bent into the form as shown (Fig. 6), subserving the double function of anchors for securing the spacing or tie-members 1 to the reinforcing members *a*, *b*, and as spacing pieces or gages for regulating the depth of cement below the plane of disposition of the reinforcing members.

In the form of the invention so far described, the anchors and spacing legs constitute a separate piece from the tie member

1, but in the modification shown in Fig. 7, the tie member 1′ is provided with bends 4′ on either side of which the arms 3′ 3′ are severed or cut from the body of the strip, so that the anchors, and spacing legs or gages are integral with the tie member. The same result is attained with the modified form, the construction being virtually the same as in the first form described, except that the arms 3′ 3′ occupy positions on opposite sides of the longitudinal center of the strip 1′, instead of being disposed along said central line.

By "concrete" floor constructions, I of course wish to include any and all floors or walls of a composite character, that is, those composed of composition, concrete, or cement reinforced by metal, the term "concrete" being herein used in a very broad sense. It is obvious too, that the members 1 need not necessarily be at right angles to the reinforcing members *a*, *b*.

Having described my invention what I claim is:

1. In combination with a reinforcing member of a concrete floor, a tie member or strip having pairs of openings, anchor pieces composed of pieces of metal bent into a U-shaped form and passed with their arms through said openings, means for limiting the depth of insertion of the arms whereby a portion of the anchor piece is left projecting below the tie member and forming a gage or leg, the free ends of the arms being bent around the reinforcing member, substantially as set forth.

2. In combination with a reinforcing member of a concrete floor, a tie member or strip having pairs of openings, anchor pieces composed of single pieces of metal bent into a U-shaped form, and terminating in reduced arms passed through the openings aforesaid, said arms being bent around the reinforcing member, and shoulders formed between the arms and body of the anchor for limiting the depth of insertion of the arms into the openings of the tie member, the portion projecting below the latter serving as a gage or leg for bearing against the roof of the boxing over which the concrete is poured, substantially as set forth.

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

FREDERICK C. TAXIS.

Witnesses:

EMIL STAREK,

JOS. A. MICHEL.