(No Model.)

W. H. JENKINS.

CONSTRUCTION OF CONCRETE FLOORS FOR BUILDINGS.

No. 591,405 Patented Oct. 12, 1897.

Fig. 1.

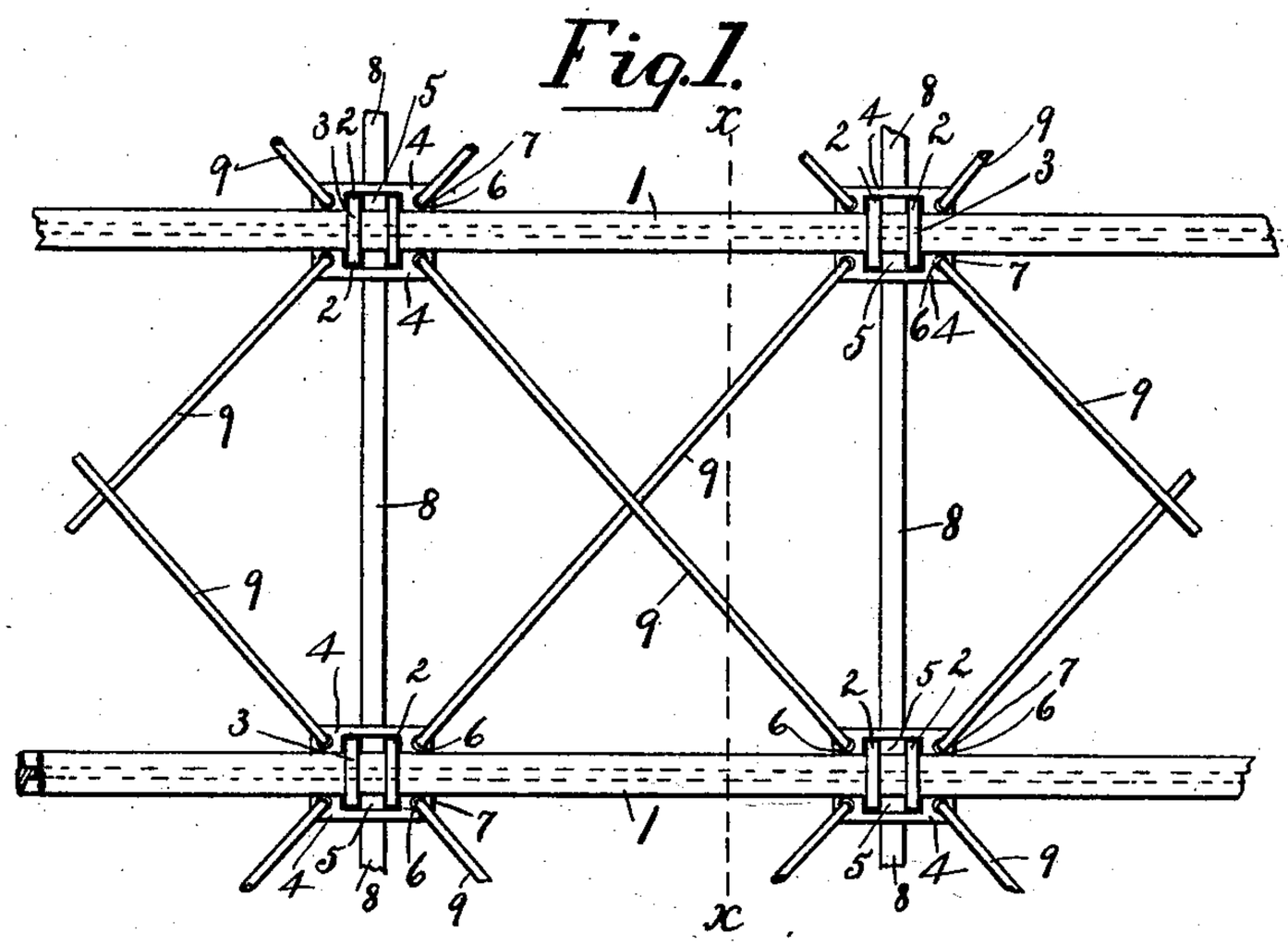


Fig. 2.

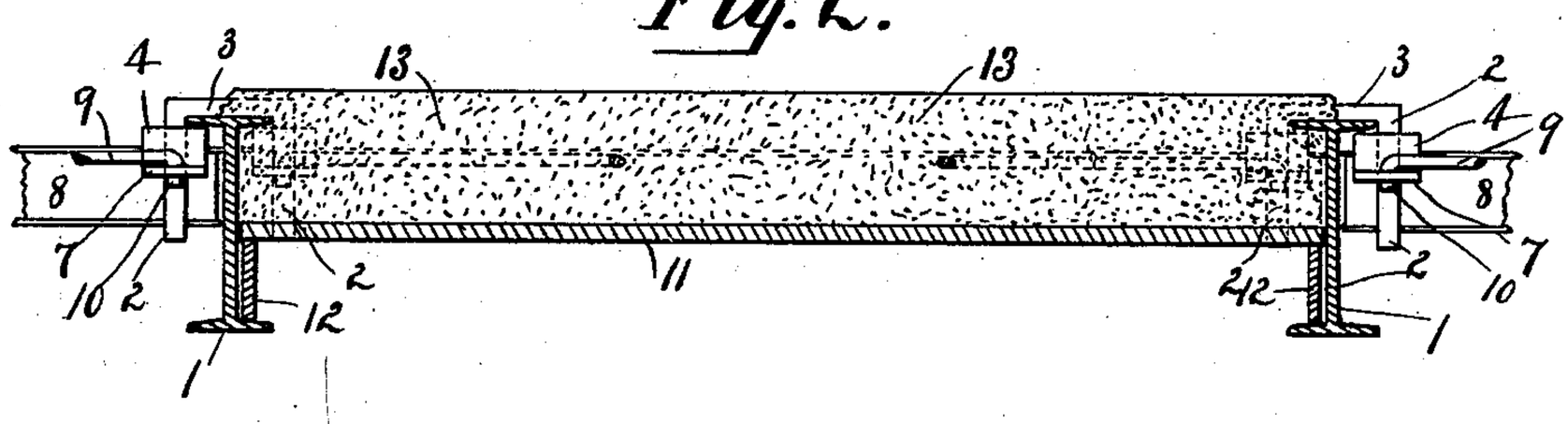


Fig. 4.

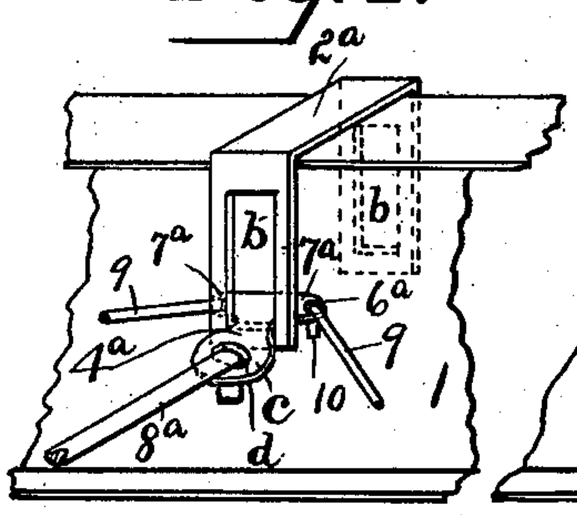
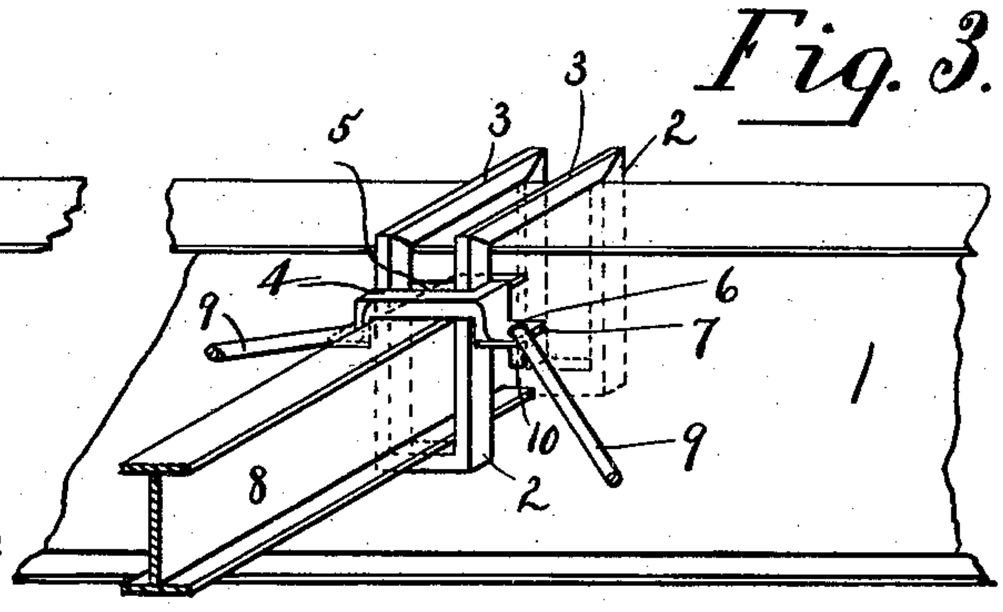


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

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CONSTRUCTION OF CONCRETE FLOORS FOR BUILDINGS.

SPECIFICATION forming part of Letters Patent No. 591,405, dated October 12, 1897.

Application filed October 7, 1896. Serial No. 608,082. (No model.)

To all whom it may concern:

Be it known that I, WARNER H. JENKINS, a citizen of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in the Construction of Concrete Floors for Buildings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a plan view of a section of floor previous to the laying of the concrete floor. Fig. 2 is a section, as on line *x x*, Fig. 1, after the floor has been laid. Fig. 3 is a perspective showing the construction and relative arrangement of the several parts. Fig. 4 is a perspective similar to Fig. 3, but showing a modification of my invention.

This invention relates to the construction of concrete floorings for buildings wherein the concrete is sustained by and between the girders or floor-beams after becoming set without having been laid upon a permanent floor; and its object is to provide a simple and efficient construction whereby the body of concrete forming the floor will be well and firmly braced and sustained.

The invention consists in the combination, with the usual I or other floor-supporting beams of a building, of a series of saddles resting upon said beams, cross-bars between the latter, whose ends rest upon said saddles, and brace-rods connected to and extending diagonally from the saddles on opposite sides of adjacent I-beams, constituting a support to the concrete in which they are embedded, all substantially as hereinafter described, and pointed out in the appended claims.

The invention relates to certain details of construction hereinafter pointed out.

Referring to the drawings, 1 marks the usual I-beams of a building, placed at certain intervals apart and whose ends rest upon supports adjacent to the side walls or in the walls themselves.

2 is a saddle of suitable metal, consisting of two U's whose limbs are connected at the top by bars 3.

4 is a second saddle in shape similar to some railway-chairs, having a longitudinal slot 5, whose length is somewhat greater than the width between the outer sides of the U's of saddle 2 and whose width is greater than that of the limbs of the latter. It is also provided with holes 6 in the end flanges 7.

8 is a bar whose length is somewhat less than the distance between two adjacent I-beams.

9 is a rod bent at each end to form hooks or L's 10.

In assembling these parts together (the beams 1 being in place) saddles 2 are placed over the said beams, their connecting-bars 3 resting upon the top of the beams, one opposite another on adjacent beams, and the several pairs a predetermined distance apart. A saddle 4 is then passed upwardly over the U of a saddle 2, the latter passing through the slot 5, and the end of a cross-bar 8 is inserted within the U under saddle 4. Another saddle 4 is passed over the opposite saddle 2. Thus the saddles 2 will be supported by the I-beams and cross-bars 8 by the said saddles and the saddles 4 by the cross-bars. The hooks 10 of rods 9 are now inserted in the holes 6 of the flanges of saddles 4, so as to extend diagonally between the I-beams, all as clearly shown in Fig. 3 in connection with Fig. 1. The free ends of the last rods of a series—those adjacent to the wall of the building—are firmly secured to the wall in a suitable manner. This system of saddles, cross-bars, and diagonally-extending rods is continued the length of the I-beams and for all the I-beams of the flooring, each U of a saddle 2 sustaining the end of a cross-bar. It will thus be seen that the several parts are braced in position, and the structure in its entirety will constitute a strong and firm skeleton support for the concrete floor to be laid.

Preparatory to laying the concrete I provide a temporary flooring or support 11, of boards, Fig. 2, which is sustained in place in any suitable manner, preferably by boards 12, placed on edge and resting upon the inner flanges of the I-beams, as seen in said Fig. 2. The concrete 13 is now laid upon the temporary floor so as to completely cover the saddles, cross-bars, rods, &c., which are thus embedded in the concrete, as shown in Fig. 2. When the concrete has sufficiently set or hardened, the temporary flooring is removed and the body of concrete constituting the per-

manent floor is supported by the said beams, cross-bars, and rods.

I sometimes use in lieu of the hereinbefore-described saddles 2 and 4 and bar 8 the construction illustrated in Fig. 4, as follows: The leg of the saddle 2^a is provided with an elongated opening *b*. 4^a is a plate with opposite limbs 7^a, with holes 6^a therein, and a third limb *c* with a hole *d* therein. This plate is supported and held in place by a saddle 2^a in the manner shown in said Fig. 4. In connecting it with the latter it is turned on edge, and then the limbs 7^a are passed into the opening of the saddle. It is now brought into the horizontal position, the limbs 7^a back of the saddle-leg, and the limb *c* projecting through the said opening. The bent ends of rods 9 are now hooked into the holes 6^a, and a rod or bar 8^a, similarly bent, is hooked into hole *d* of limb *c*, all as shown in Fig. 4. It will be seen that the saddle 2^a corresponds with saddle 2 of the preceding figures, the plate 4^a with saddle 4, and the bar 8^a with bar 8 of said figures. The saddles 4 may sometimes be dispensed with and the ends of rods 9 be then secured directly to the saddles 2 in any suitable manner.

I am aware of the fact that it has been common to support and strengthen walls, &c., of concrete or the like by means of suitable bars, rods, or the like embedded in the concrete in the process of laying the wall or floor.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a flooring of the nature described, the combination of the beams, the saddles resting thereon, the secondary saddles or plates which engage the limbs of the first-named saddles, the cross-bars, and the diagonally-extending rods whose end portions engage said secondary saddles or plates, substantially as and for the purpose specified.

2. In a flooring of the nature described, the combination of the beams, the saddles 2 resting thereon, the cross-bars whose ends are supported by said saddles, the saddles 4 which engage the vertical limbs of the saddles E and rest upon said cross-bars, and the diagonal rods whose ends are connected to the saddles 4, substantially as specified.

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

WARNER H. JENKINS.

Witnesses:
WALTER C. PUSEY,
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