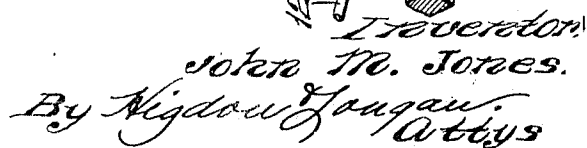
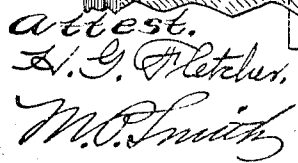


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2 SHEETS—SHEET 1.



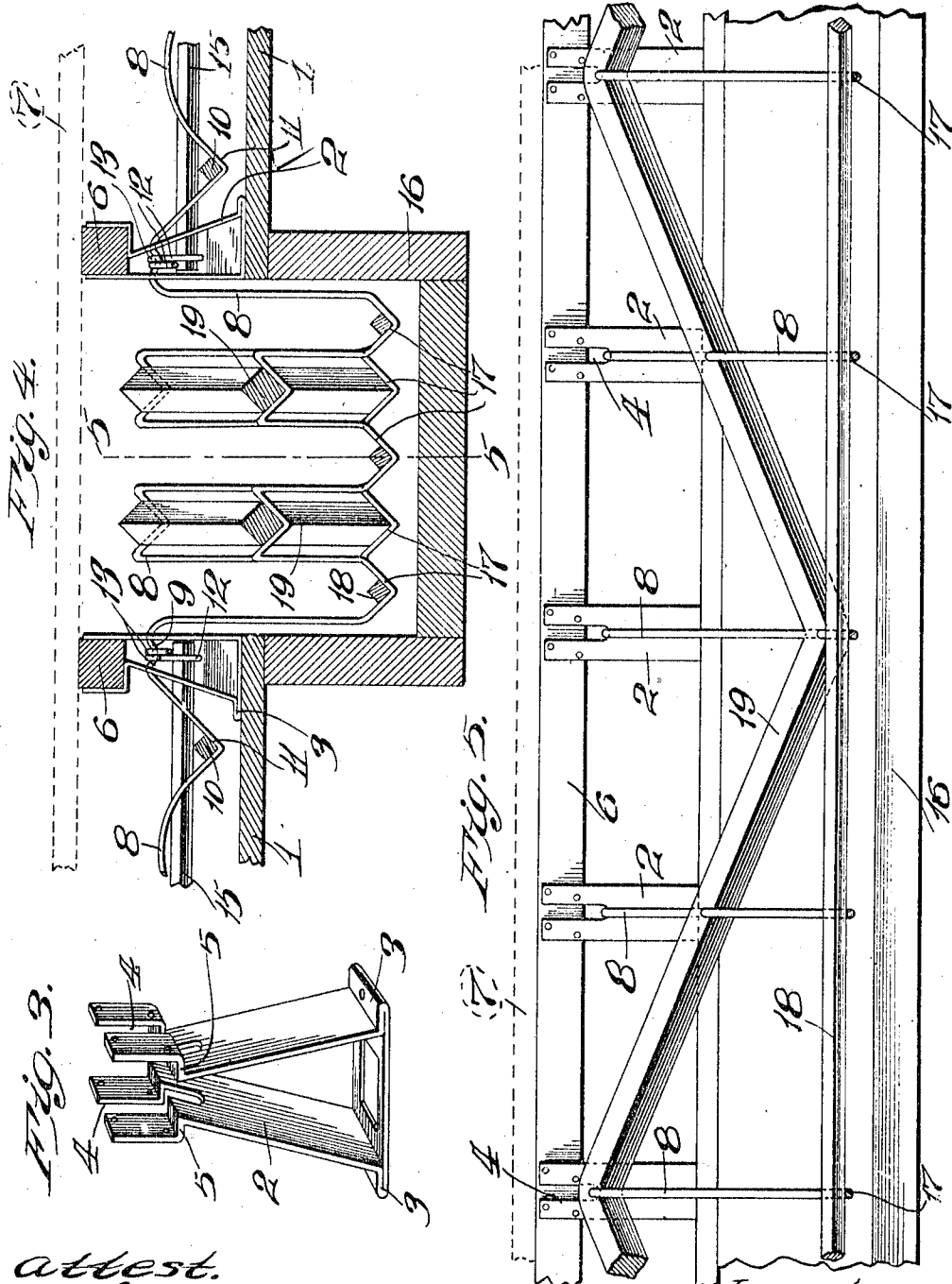
J. M. JONES.
REINFORCED CONCRETE FLOOR CONSTRUCTION.

APPLICATION FILED JAN. 11, 1909.

Patented Mar. 29, 1910.

2 SHEETS—SHEET 2.

953,091.



attest.
E. G. Fletcher.
W. O. Smith

Inventor.
John M. Jones.
By Higdon & Langum.
Attys.

UNITED STATES PATENT OFFICE.

JOHN M. JONES, OF ST. LOUIS, MISSOURI, ASSIGNOR TO DANIEL F. JONES, OF ST. LOUIS, MISSOURI.

REINFORCED-CONCRETE FLOOR CONSTRUCTION.

953,091.

Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed January 11, 1909. Serial No. 471,563.

To all whom it may concern:

Be it known that I, JOHN M. JONES, 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 a reinforced concrete floor construction, the objects of my invention being:—1st: to materially cheapen the cost of reinforced concrete flooring; 2nd: to greatly increase the tensile strength of the span or slab of flooring between the floor beams; 3rd: to do away with the filling of cinders, or the like, which is usually employed in the construction of concrete flooring; and 4th: to provide simple means whereby floor sleepers are arranged in the upper portion of the concrete flooring to serve the purpose of guides for the top surface of the flooring, and to provide means for securing the wooden flooring to the concrete construction.

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

Figure 1 is a cross section taken through a portion of a span or slab of concrete flooring constructed in accordance with my invention, and showing a part of the reinforcement without the surrounding body of concrete; Fig. 2 is a section taken approximately on the line 2—2 of Fig. 1; Fig. 3 is a perspective view of a stanchion or reinforced floor sleeper support I make use of in carrying out my invention; Fig. 4 is a cross section of the reinforcement used for forming one of the beams which supports the floor construction; Fig. 5 is a vertical section taken on the line 5—5 of Fig. 4.

Referring by numerals to the accompanying drawings:—1 designates a deck or false flooring, which is supported in any suitable manner, and on which the reinforced concrete flooring is to be formed; and arranged on said deck, at suitable distances apart, are stanchions 2, preferably constructed of sheet metal; and the lower portions of which are provided with flanges 3, which are perforated

in order to receive small nails utilized in fixing said stanchions upon the deck 1. Seated in the lower portions of said stanchions are wooden blocks 2^a, which serve as means for readily attaching hangers, or the like, used for forming auxiliary beams or moldings on the under side of the concrete floor. The upper ends of these stanchions are provided with slots 4, and said upper ends are also formed with shoulders 5, upon which rest floor sleepers 6, in the form of wooden strips or rails, rectangular in cross section, and to which the wooden flooring 7 is secured.

8 designates hangers, preferably constructed of wire, the ends of which are formed into hooks 9 which engage in the slotted upper ends of the stanchions 2, said hangers extending between each adjacent pair of said stanchions; and supported on said hangers, between the stanchions, are reinforcing bars 10, and said hangers being bent downward, as designated by 11 to form saddles or seats for said bars 10.

12 designates hangers in the form of wires, which extend lengthwise between the stanchions 2, the ends of said wires being provided with hooks 13, which engage over the ends of the hangers 8, which pass through the slotted upper ends of said stanchions; and said wires 12 are bent downward, as designated by 14, to form saddles or seats for reinforcing bars 15, which occupy positions at right angles to and directly upon the reinforcing bars 10.

The beams between which the floor spans or slabs are positioned are formed in troughs 16, of temporary structure, which troughs extend a suitable distance below the deck 1; and the hangers 8 which extend across and through these troughs are bent downward, as designated by 17, to form saddles or seats for a series of straight reinforcing bars 18, between which are positioned a pair of larger reinforcing bars 19 which are bent into zig-zag shape and extend lengthwise of said troughs.

Stanchions 2 are fixed to the deck 1; and as said stanchions support the hangers 8 and 12, and all of the reinforcing bars carried thereby, said parts are very firmly held in position while the concrete, in a plastic condition, is placed on the deck 1.

Sufficient concrete is placed on the deck 1 to fill the space between the top surface

thereof and the top surfaces of the floor sleepers 6; and at the same time, the troughs 16 are filled with plastic concrete to form the beams between the floor spans or slabs; and thus a complete integral structure is formed which is reinforced by the various bars and hangers. The top of the concrete floor is leveled off even with the top surfaces of the floor sleepers 6; and, after the concrete has become thoroughly hardened, the deck 1 and trough 16 are removed; and the wooden floor 7 is now secured to the sleepers 6 to complete the floor.

The wooden blocks 2^a positioned in the lower portions of the stanchions 2 provide means whereby suitable hangers may be secured to the concrete floor beams or molding on the under side thereof.

By my improved construction of concrete floor, and by doing away with the base filling of cinders or the like, a comparatively thin, yet strong, floor is formed, thereby gaining considerable space between the floors without increasing the height of the building.

My improved concrete floor construction can be very cheaply produced, does away with the base filling of cinders, or the like, materially increasing the strength of the floor, and the stanchions and reinforcing members are very rigidly held while the plastic concrete is being placed on the deck or temporary flooring.

I claim:—

1. In a concrete floor construction, a series of stanchions, floor sleepers supported by the upper ends thereof, blocks arranged in the lower ends thereof, hangers carried by said stanchions, reinforcing bars supported by said hangers, and a body of concrete inclosing the stanchions, floor sleepers, and reinforcing bars.

2. A stanchion for concrete floor construction, constructed of sheet metal and pro-

vided with a base and upright standards arising from said base, said upright standards being spaced apart, disconnected at their upper ends and connected at their lower ends and forming a seat for receiving the floor sleepers, and said upright standards being further provided with a slot adapted to receive and support a hanger for carrying reinforcing bars.

3. A stanchion for concrete floor construction, constructed of metal, having upright standards, which standards are inclined toward each other from the bottom to the top and are disconnected at their upper ends and form a seat for receiving the floor sleepers, the said standards being provided with slots adapted to receive and support hangers which carry reinforcing bars, the said upright standards being connected at their lower ends with a base plate formed integral with said upright standards, and the said base plate being provided with an opening.

4. A stanchion for concrete floor construction, constructed of sheet metal, having upright standards, which standards are inclined toward each other from the bottom to the top and are disconnected at their upper ends, which ends are perforated and form a seat for receiving the floor sleepers, the said standards being provided with slots adapted to receive and support hangers which carry reinforcing bars, the said upright standards being connected at their lower ends with a base plate formed integral with said upright standards, and the said base plate being provided with an opening.

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

JOHN M. JONES

Witnesses:

M. P. SMITH,
E. L. WALLACE.