

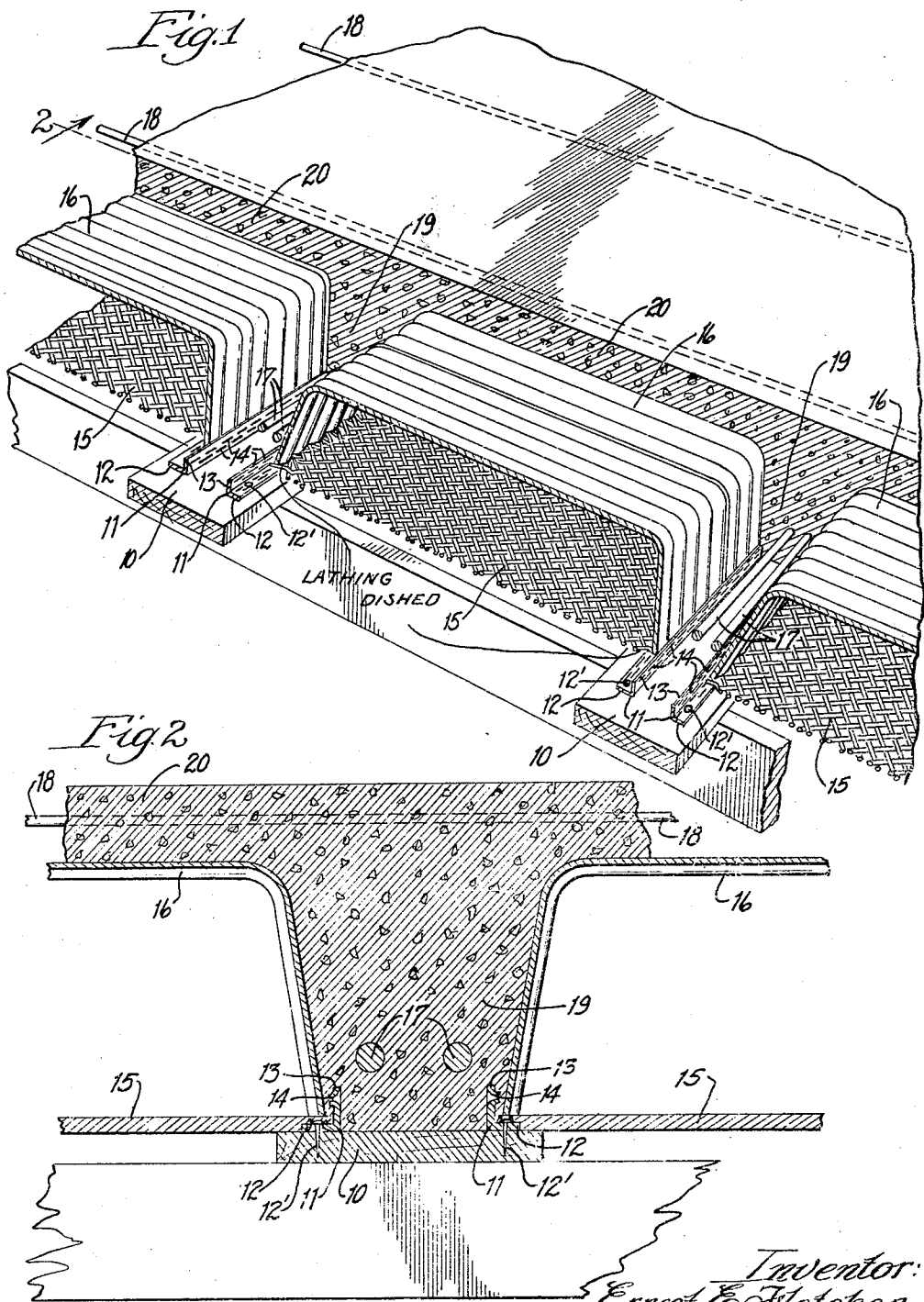
May 19, 1931.

E. E. FLETCHER

1,805,483

FLOOR CONSTRUCTION

Filed Sept. 7, 1929



Inventor:
Ernest E. Fletcher,
By Penning & Banning
Attys.

UNITED STATES PATENT OFFICE

ERNEST E. FLETCHER, OF CHICAGO, ILLINOIS

FLOOR CONSTRUCTION

Application filed September 7, 1929. Serial No. 390,965.

This invention relates to floor construction and particularly to a floor construction in which concrete beams are formed integral with the floor and the spaces between said beams are closed by lath or other material suitable for the reception of plaster.

One of the objects of the invention is to simplify the positioning of the inverted pans used in constructing such a floor.

10 A further object of the invention is to provide a simple means for supporting the inverted pans and lath or the like, before, during and after pouring the concrete to form the floor and beams.

15 A further object of the invention is to provide a novel concrete floor which can be rapidly and cheaply laid and which shall be strong and durable and provide ample support for the ceiling and the plaster or the like applied thereto.

Other objects, advantages and capabilities will hereinafter more fully appear.

My invention further resides in the combination, construction and arrangements of parts illustrated in the accompanying drawings, and while I have shown herein a preferred embodiment I wish the same to be understood as illustrative only and not limiting the scope of my invention.

30 In the drawings:

Figure 1 is a broken perspective showing the construction of a floor according to my invention, and

Fig. 2 is a sectional elevation thereof.

35 Referring to the drawings the numeral 10 designates soffits which are supported in suitable manner with their upper surfaces in the plane of the underside of the floor about to be laid, and occupying positions below the intended beams.

40 Upon said soffit are applied longitudinally two parallel angle irons 11, each resting on a web 12 which is directed outwardly towards the edge of the board. The other web 13 is directed upwardly into the location in which the beam is to be formed, the webs 13 of the pair of angle irons 11 upon a soffit being preferably spaced apart somewhat less than the width of the bottom of such beam. The angle irons 11 are preferably formed from

perforated lath metal, the perforations being designated 14. The perforated web 13 becomes embedded in and firmly held to the concrete of the beam. The webs 12 may be attached by nails 12', passed through the perforations thereof, to the soffits. The perforations in the webs 12 enable the subsequently applied plaster to make firm bond therewith.

Between adjacent soffits are laid sheets of lathing material 15 which may be metal lathing as shown in Fig. 1, or a board such as gypsum board, or celotex as shown in Fig. 2 or any other material which is adapted to receive plaster. The longitudinal edges of the lathing material 15 rests upon webs 12 of the angle irons 11. It is preferred to shape the lathing material 15 so that its under surface between the angle irons 11, is in the plane of the under side of the webs 12 and the upper surface of the soffits 10 so that after the floor is poured and set and the sub-structure removed, the ceiling to which plaster is to be applied lies in one plane. For this purpose the main portion of the lathing material 15 may be dished slightly with respect to its longitudinal edges, as shown in Fig. 1, or said edges may be rabbeted as shown in Fig. 2.

The pans 16 are applied so as to extend over the lathing material 15 and have their edges resting upon the lathing material 15 above the webs 12. The distance between the edges of the pan 16 may suitably be slightly less than the distance between the webs 13 of the angle irons 11 on which they rest. If desired, said edges may have a snug fit with respect to the webs 13 and said edges of the pan 16 may be spaced apart a greater distance than that between the webs 13, the pan 16 being bent slightly in order to place same in position. As shown in the drawings the pans 16 are preferably corrugated and their sides flare outwardly and downwardly to some extent as best seen in Fig. 2.

The reference numeral 17 designates the reinforcing members of the beams which are held in position in any suitable or known manner. The reference numeral 18 designates temperature or shrinkage rods which

extend transversely with respect to the beams and are located in the floor portion of the concrete structure. The concrete structure comprises beams 19 and floor 20 integral therewith.

It will be understood that when the concrete is poured to form the beams 19 and floor 20, the pans 16 resting upon the lathing material 15, which in turn rests upon the webs 12 of the angle irons 11, effectively prevent the escape of the concrete from the beam space. Said concrete surrounds the webs 13 of the angle irons 11 and enters the openings 14 therein so as to hold same firmly to the concrete beam 19. Said concrete also envelops the reinforcing members 17 and 18 and produces a unitary structure of great strength and rigidity. After the concrete has set, the sub-structure including the soffits is removed leaving the ceiling ready for plastering.

I claim:

1. A concrete floor comprising integral concrete beams, inverted pans beneath said beams, a pair of angle irons in the base of each beam, each angle iron having a web extending into the beam and firmly attached thereto and a horizontal web directed outwardly therefrom, lathing material resting upon said webs and extending beneath said pans in the ceiling plane, said lathing being engaged between said pans and said horizontal webs.

2. A concrete floor comprising integral concrete beams, inverted pans between said beams, lathing material beneath said pans and receiving the edges thereof, angle irons supporting said lathing material and comprising a web extending into the concrete beam and firmly secured thereto.

3. A concrete floor comprising integral concrete beams, inverted pans between said beams, lathing material beneath said pans the edges of which rest upon the edges of the lathing material, angle irons having horizontal webs on which said edges of the lathing material rest, said angle irons having vertical perforated webs extending into and firmly embedded in the concrete thereof.

4. A concrete floor comprising reinforced integral concrete beams; inverted pans between said beams, lathing material beneath said pans and receiving the edges thereof, angle irons supporting said lathing material and comprising a web extending into the concrete beam and firmly secured thereto, said lathing material between said angle irons having its undersurface in the plane of the underside of the beams.

5. A concrete floor comprising integral reinforced concrete beams, inverted pans between said beams, lathing material beneath said pans the edges of which rest upon the edges of the lathing material, angle irons having horizontal webs on which said edges of the lathing material rest, said angle irons

having vertical perforated webs extending into, and firmly embedded in the concrete thereof and said lathing material being dished between said angle irons so that its undersurfaces is substantially in the plane of the underside of the beams.

In testimony whereof, I have hereunto set my hand this 9th day of August, 1929.

ERNEST E. FLETCHER.