

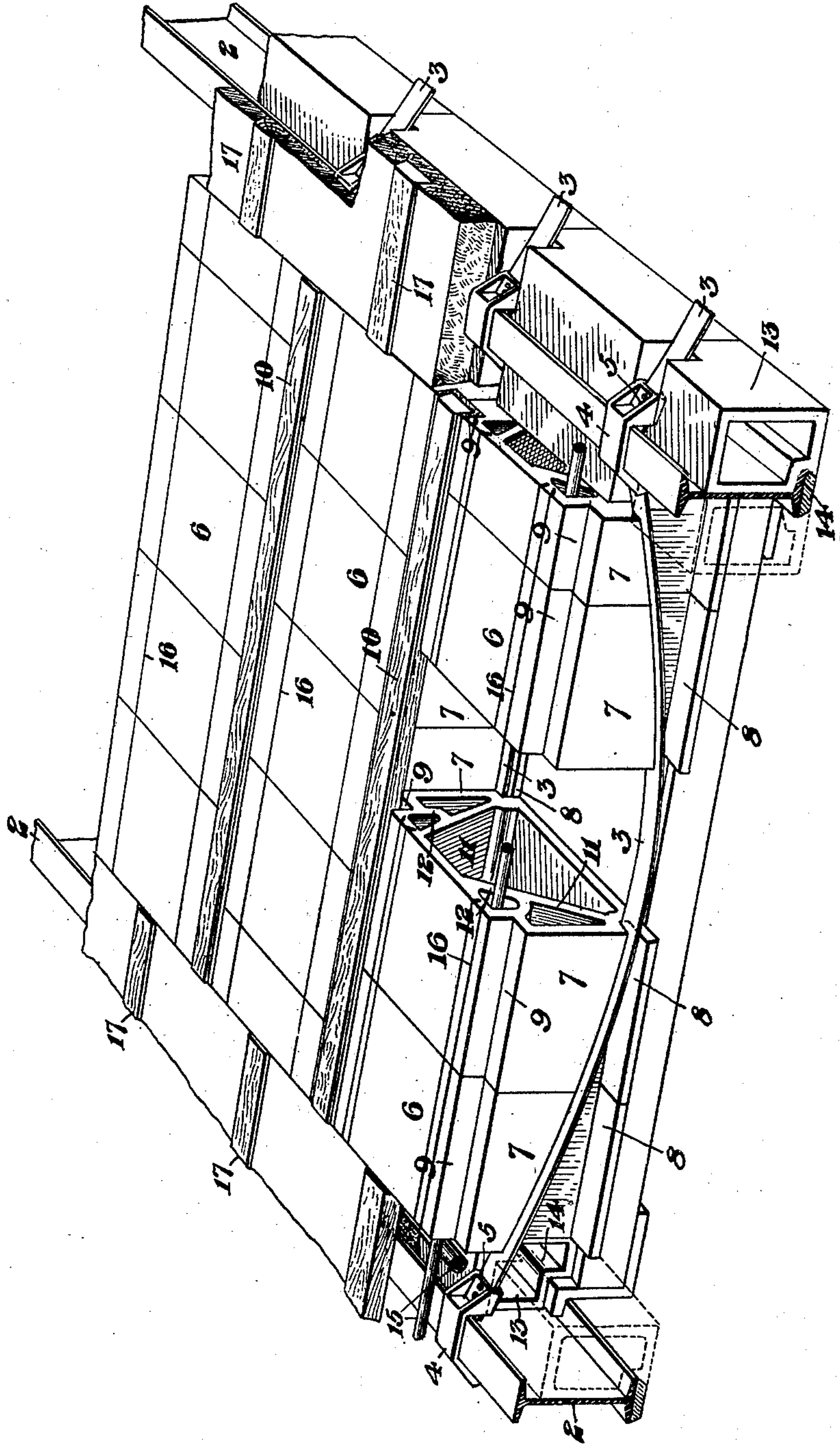
No. 713,743.

Patented Nov. 18, 1902.

C. F. BUENTE.
TILE FLOOR CONSTRUCTION.

(Application filed Aug. 29, 1899.)

(No Model.)



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES F. BUENTE, OF ALLEGHENY, PENNSYLVANIA.

TILE-FLOOR CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 713,743, dated November 18, 1902.

Application filed August 29, 1899. Serial No. 728,848. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. BUENTE, of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Tile-Floor Construction, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, in which the figure is a perspective view, partly broken away, showing the fireproof flooring constructed in accordance with my invention.

My invention relates to the flooring or ceiling construction of fireproof buildings, and more especially to the tiles employed therein, and the manner of securing the sleepers to which the flooring-boards are fastened.

In the drawing, 2 2 represents the usual parallel iron beams of the floor structure, between which extend the downwardly bent or curved tie-rods 3, the ends of which enter horizontal slots in hangers 4 and are secured therein by pins or rivets 5. These hangers fit over the beams and are preferably made of malleable castings with both end portions of the same form. The main tiles 6 are of general box form and are provided on both sides with lateral lugs 7, having curved lower faces to fit the tie-rods, the lugs being successively deeper in the tiles toward the center of the rods. The tiles are also provided at one side with a lower lateral flange 8, which extends horizontally and closes the spaces between the tiles of adjacent courses, and along their upper side edges are formed right-angled recesses 9, the registering recesses of the tiles of the two adjacent courses forming a receiving-channel for the wooden sleeper 10. These sleepers are preferably beveled or tapered upwardly on their sides and are secured in the channels by liquid cement or concrete, they being suitably supported upon small blocks, if necessary, before the cement is applied, so that their upper surface will be slightly above the upper faces of the tiles. The upper surface of the tiles is considerably above the level of the supporting-beams, the lower faces of the recesses 9 being preferably at about the level of the tops of the beams.

Each main tile is provided with internal oblique oppositely-extending strengthening-

webs 11, which connect the sides and top, and I also preferably form the tile with supplemental webs 12, which extend from the shoulders of the upper recesses inwardly to the webs 11.

In order that the main tiles may all be made of the same length and to provide for variations in the distance between the beams, I preferably provide hollow end tiles 13, having along one lower side edge a recess 14, which fits upon the foot of the I-beam, and having also an upper recess or recesses to receive the curved tie-rod and hanger. These end tiles 13 do not extend above the level of the I-beams, and consequently a space is left at the ends of the courses of main tiles in which may be laid piping 15 for gas, water, electric wires, or other purposes. In order that piping may also be laid longitudinally of the tiles, I preferably weaken their tops by inwardly-inclined cuts 16 in the roofs of the cells formed by the webs and the top. With this construction the weakened portions of the top may be broken by a hammer and the pipes laid in the channels thus formed, or the pipes may be pushed through the ends of the registering tiles within the cells, as shown.

17 represents wooden sleepers, which extend across the I-beams and against the ends of the main tiles and are secured by concrete or tiling. These short sleepers are preferably spaced between the sides of the main tiles and staggered relatively to the sleepers 10, so that the hangers for the tie-rods may be fully protected by the filling of concrete or similar material.

The advantages of my invention are numerous. By the securing of the sleepers within recesses in the tiles the thick layer of concrete, which has heretofore been used between the tiles and the wooden flooring, is rendered unnecessary. The spaces between the ends of the main tiles and the beams give a convenient space for piping, and the small end tiles, which may be made of different widths, will compensate for difference in width of the space between the beams. The joints between the tie-rods and the beams are fully protected against heat, and the tiles are easily applied and securely held in place.

The horizontal bottom flanges may be used at both sides of the tile, in which case they

would be made one-half of the width shown, and many other changes may be made in the form and arrangement of the tile and other parts without departure from my invention.

5 I claim—

1. A hollow box-tile having lower side recesses arranged to be supported on tie-rods, a closing-flange below at least one of said recesses, and upper recesses directly above the
10 lower recesses, and arranged to receive sleepers; substantially as described.

2. A tile floor composed of hollow tiles projecting above the supporting-beams, and having spaces between the ends of the tiles and
15 above the level of the beams, to receive piping; substantially as described.

3. A tile floor composed of hollow tiles, sup-

ported upon curved tie-rods and projecting above the level of the beams, and end tiles of less height between the main tiles of each row 20 and the supporting-beams; substantially as described.

4. A tile having upper side recesses, oppositely-inclined strengthening-webs connecting the sides with the top, and branch webs 25 extending from the recessed portions to the main webs; substantially as described.

In testimony whereof I have hereunto set my hand.

CHARLES F. BUENTE.

Witnesses:

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