

No. 872,098.

PATENTED NOV. 26, 1907.

H. WESTPHAL.
CEILING AND FLOOR COMPOSED OF TILES.
APPLICATION FILED JAN. 12, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

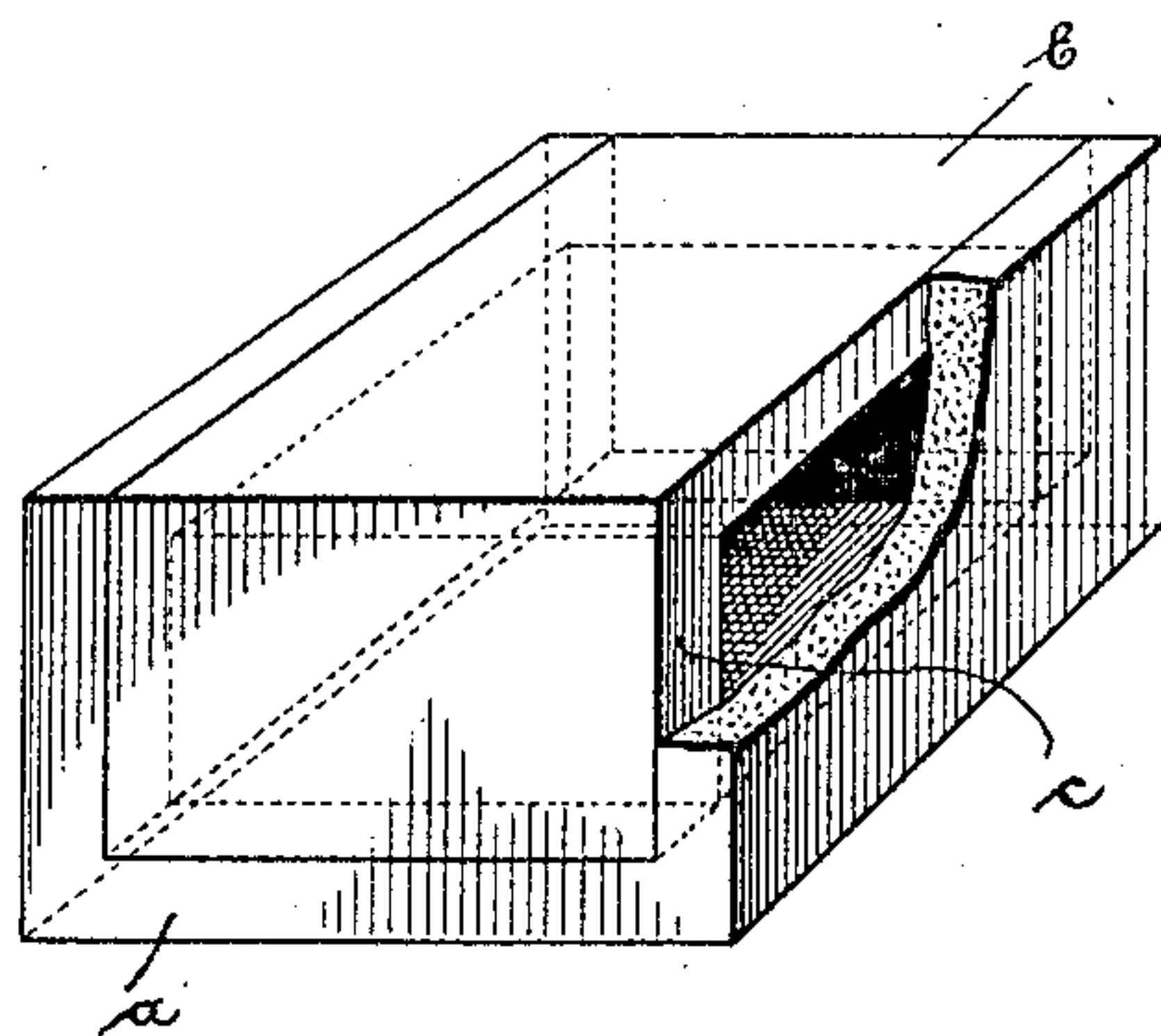
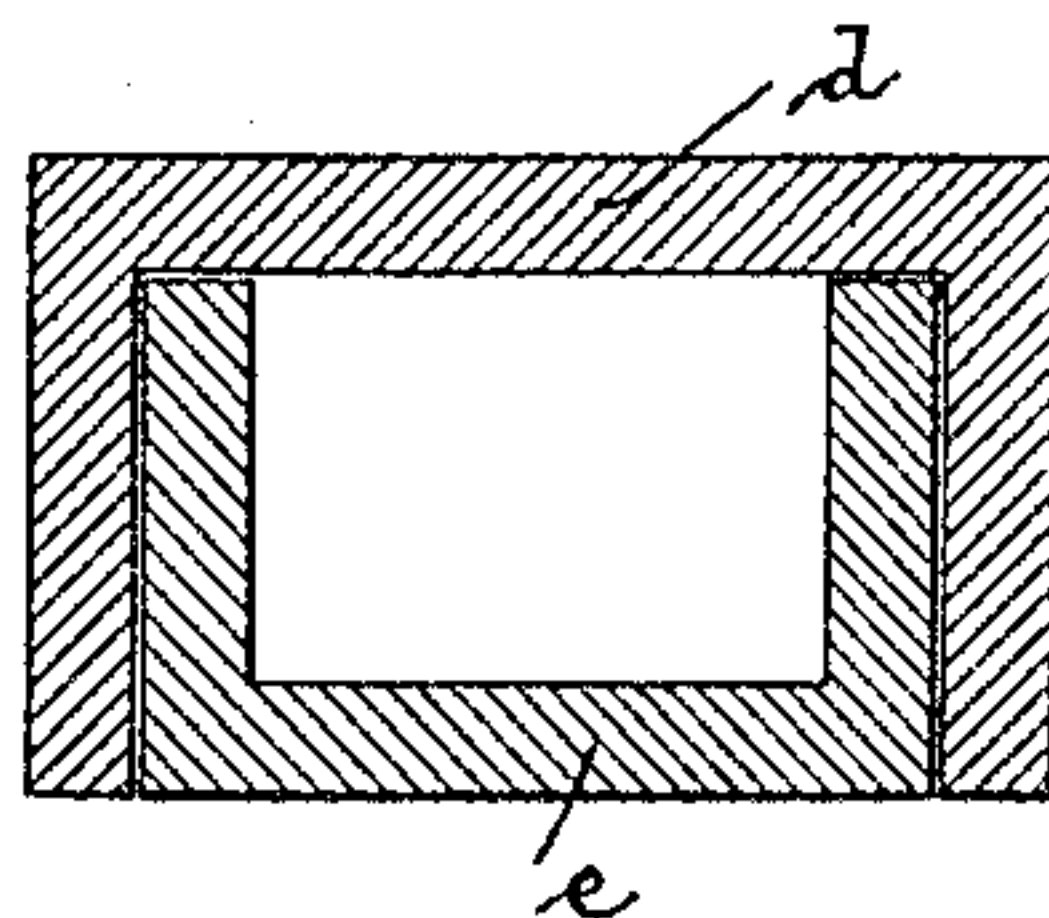


Fig. 2.



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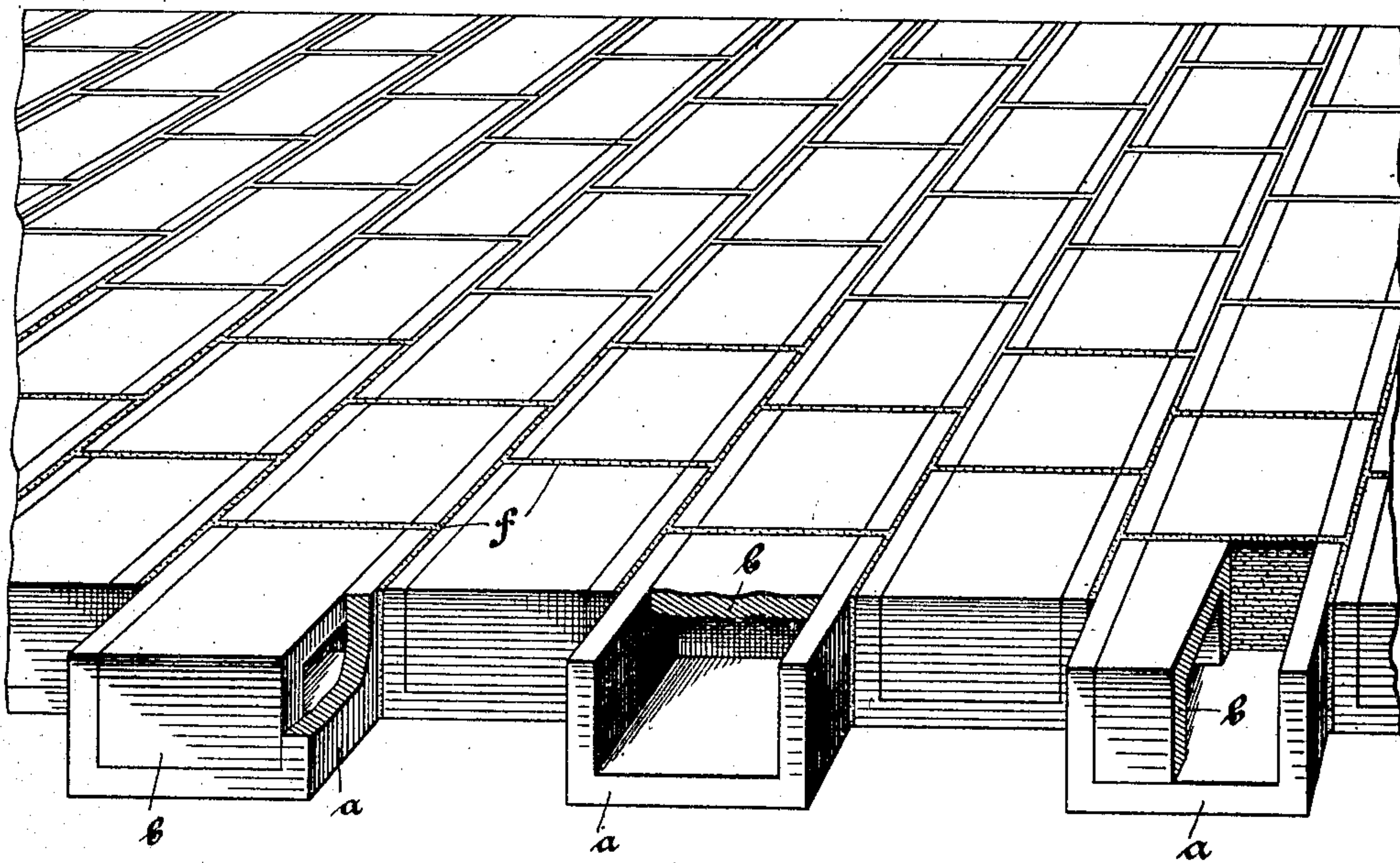
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2 SHEETS—SHEET 2.

Fig.3.



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UNITED STATES PATENT OFFICE.

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CEILING AND FLOOR COMPOSED OF TILES.

No. 872,098.

Specification of Letters Patent.

Patented Nov. 26, 1907.

Application filed January 12, 1905. Serial No. 240,725.

To all whom it may concern:

Be it known that I, HEINRICH WESTPHAL, a citizen of the German Empire, residing at Posen, Germany, mason and master carpenter, have invented certain new and useful Improvements in Ceilings and Floors Composed of Tiles, of which the following is a specification.

My invention relates to ceilings or floors. The purpose of invention is to produce a strong, light and durable ceiling or floor which can be easily completed by unskilled workmen in a very cheap manner.

It has been found that a strong, light ceiling or floor can be obtained if tiles or bricks containing hollows are used which are so constructed that same can be assembled together in such a way that the mortar joints between the tiles are out of connection with the hollows of the tiles, so that it is possible to pour the plaster or other cement into the joints without same penetrating into the hollows. However with the known bricks or tiles the purpose of invention cannot be obtained in a manner which is in every respect satisfactory.

My present invention shows a new and improved means for realizing the said purpose of invention. This is done by employing a new hollow structure as element in constructing the ceiling or floor, said hollow structure being closed on all sides without free passages leading to the hollow or hollows and consisting of two channeled bricks or tiles so proportioned with relation to each other that the U-channel of the one tile is adapted to receive the other tile in a position where the directions of the channels of the tiles are crossing each other. Such tiles can easily be manufactured from clay in such a way that a rectangular column of clay is formed by a suitable pug mill and that this rectangular column is divided into two U-shaped columns the one receiving the length of the other in its channel. This division may be made in a well known manner by wires or the like suitably fixed in the mouth piece of the pug mill. The two U-shaped columns embracing each other are divided into pieces the length of each being equal to the width of the U-channel of the outer column. If this is done each piece of the inner column can be inserted into the U-channel of the outer column not only in

the position in which it leaves the mouth piece of the pug mill but also in a position where the two channels are crossing each other. The last position is that where the two tiles form a hollow structure which is closed on all sides and which is therefore fit for use in ceiling and floor constructions as above explained.

The special kind of manufacturing the bricks which has been just now described is very convenient for the purpose in question also in this respect that the two U-shaped columns formed from one single rectangular column are adhering one to the other with their adjacent faces so that the pieces cut from such columns may be handled like one single piece and are highly secured in this way against deformation. On the other hand the outer and the inner brick can be easily separated from each other after burning. However I may dispense with this special method of manufacturing the bricks for the hollow ceiling elements.

On the accompanying drawing I have represented in Figure 1 a view of a hollow structure formed out of two U-shaped bricks in accordance with my invention, a part of one flange of one brick being broken away. Fig. 2 is a cross section through a rectangular column of clay showing the cuts dividing the column into two U-shaped parts. Fig. 3 is a perspective view of a section of a ceiling constructed in accordance with this invention.

In Fig. 1 the two U-shaped tiles are designated *a*, *b*. Tile *a* is the outer one and embraces tile *b*. The direction of the channel of tile *b* forms a right angle with the direction of the channel of tile *a* and the flanges *c* of said tile *b*—one of same only being visible on the drawing—close the channel of tile *a*. The hollow structures of the kind represented in Fig. 1 of the drawing are assembled together as it is customary in the art and shown in Fig. 3 where the outer tiles of the hollow structures are again designated *a* and the inner tiles *b* and the joints between the several elements are filled with mortar as usual, the mortar filled joints being designated *f* in Fig. 3.

Fig. 2 shows how a rectangular clay column may be divided into parts *d*, *e* adapted to be combined in the manner shown in Fig. 1 provided that the column is cut into

pieces in such a way that the length of each piece is equal to the width of the channel of the part *d*.

What I claim is:

- 5 1. A ceiling or floor comprising hollow structures each consisting of two-channeled tiles one embracing the other with the channels extending transversely to each other and the faces of the one closing the channel
- 10 of the other and vice versa, said hollow structures being cemented together by suitable cement.
2. A ceiling or floor comprising hollow structures or elements each consisting of two

channeled tiles one embracing the other 15 with the channels extending transversely to each other and the faces of the one closing the channel of the other and vice versa, the length of the outer tile being equal to the width of its channel, said hollow structures 20 being cemented together by suitable cement.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

HEINRICH WESTPHAL.

Witnesses:

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