

(No Model.)

C. P. OUDIN.  
HOLLOW TILE GIRDER AND WALL.

No. 511,249.

Patented Dec. 19, 1893.

Fig. 1.

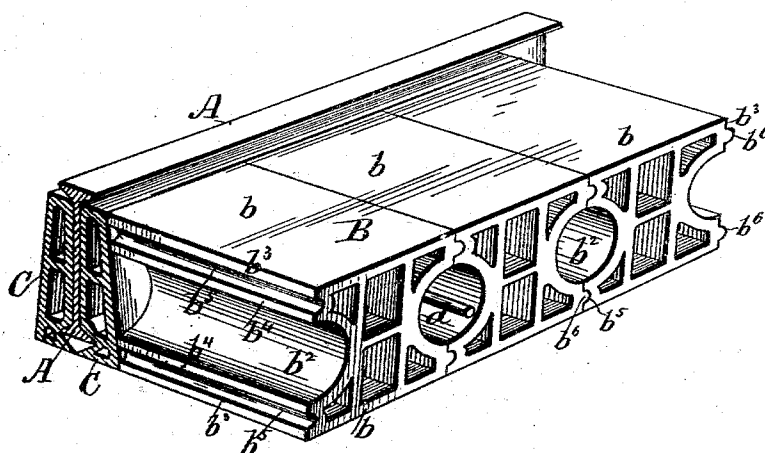


Fig. 2.

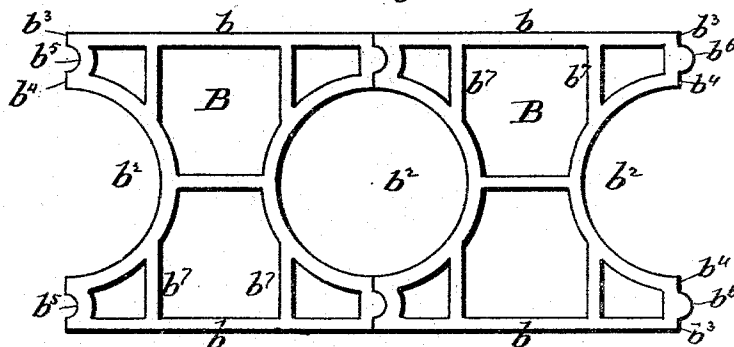
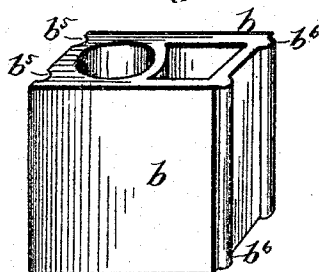


Fig. 3.



WITNESSES

*A. B. Degges*  
*L. D. Hinrichs*

INVENTOR

*Charles P. Oudin*  
by *E. E. Masson*, Attorney.

# UNITED STATES PATENT OFFICE.

CHARLES P. OUDIN, OF SPOKANE, WASHINGTON.

## HOLLOW-TILE GIRDER AND WALL.

SPECIFICATION forming part of Letters Patent No. 511,249, dated December 19, 1893.

Application filed September 20, 1893. Serial No. 485,990. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES P. OUDIN, a citizen of the United States, residing at Spokane, in the county of Spokane, State of Washington, have invented certain new and useful Improvements in Hollow-Tile Girders and Walls, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has reference to the construction of fire proof floors, ceilings and partitions of buildings; and the objects of my improvement are to obtain in said constructions, lightness with great strength and permanency of the structure, by interlocking the tiles out of which it is made on lines adjacent to both their flat faces. I attain these objects by the construction illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of a portion of a flat arch constructed in accordance with my invention. Fig. 2 is an end view of two of the tiles provided with interlocking grooves and ribs adjacent to both of their flat faces, and united together in accordance with my invention. Fig. 3 is a perspective view of a partition-tile having also ribs and grooves adjacent to both of its flat faces in accordance with my invention.

In said drawings A represents an I beam of metal, against the sides of which are placed the skewback bricks C, and against the latter the hollow tiles B. Two of the sides of said tiles are made flat as shown at *b*, and when used in the construction of an arch the upper flat surface constitutes the floor of a room, while the under flat surface constitutes the ceiling of the room under it. The two other sides of each tile have a hollow recess *b*<sup>2</sup> formed therein preferably in the form of a half cylinder, and above and under said recess, flat faces *b*<sup>3</sup> *b*<sup>4</sup>, are provided to serve as abutments for each tile to bear against the adjacent tile. But to prevent any of the tiles of a floor from occupying either an elevated or a depressed position relatively to the tiles placed on the sides thereof, each tile has formed in one of its sides, grooves *b*<sup>5</sup> and in the opposite side is provided with semi-cylindrical ribs *b*<sup>6</sup> between the abutments *b*<sup>3</sup> *b*<sup>4</sup> and close to the flat faces *b*. The grooves *b*<sup>5</sup> and

ribs *b*<sup>6</sup> are made of such size as to firmly interlock and form a side support for each other; while they are retained endwise by having their slightly beveled ends pressing against the skewback bricks.

The advantages obtained by having the two interlocking grooves and ribs *b*<sup>5</sup> *b*<sup>6</sup> as far from each other as possible, viz: close to the flat faces *b*, in place of in the center between said faces, are that, the tiles cannot rock on their centers, and thus greater stability is obtained. By this construction even if one of the ribs of the pair is damaged the tile will still be properly retained by the other rib and groove. The large central recesses *b*<sup>2</sup> in the sides of the tiles constitute, (when two of the tiles are laid against each other,) arched chambers well adapted for the passage of tie bolts *d* that may be used to unite the I beams of the floor. The top and bottom flat faces *b* are united together between their ends by strengthening partitions *b*<sup>7</sup> abutting on the arched walls of the chambers *b*<sup>2</sup>.

The partition tile shown standing in Fig. 3 is also provided with two interlocking grooves *b*<sup>5</sup> and ribs *b*<sup>6</sup> in two of its sides adjacent to its flat faces *b*, and the latter are united together by partitions suitably located between them.

Having now fully described my invention, I claim—

1. Two hollow tiles having two flat faces *b*, and in each side two interlocking ribs and grooves alongside of said faces and an arched chamber *b*<sup>2</sup> between the ribs and grooves in either side of the tile substantially as described.

2. The combination of an I shaped beam A, skewback bricks alongside thereof, a hollow tile having two flat faces *b*, an arched chamber *b*<sup>2</sup>, and two abutments *b*<sup>3</sup> *b*<sup>4</sup> in the sides, with two grooves *b*<sup>5</sup> in one side, and two ribs *b*<sup>6</sup> in the other side, each groove and rib being close to the flat faces *b* substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES P. OUDIN.

Witnesses:

CHARLES R. FENTON,  
JAMES E. FENTON.