

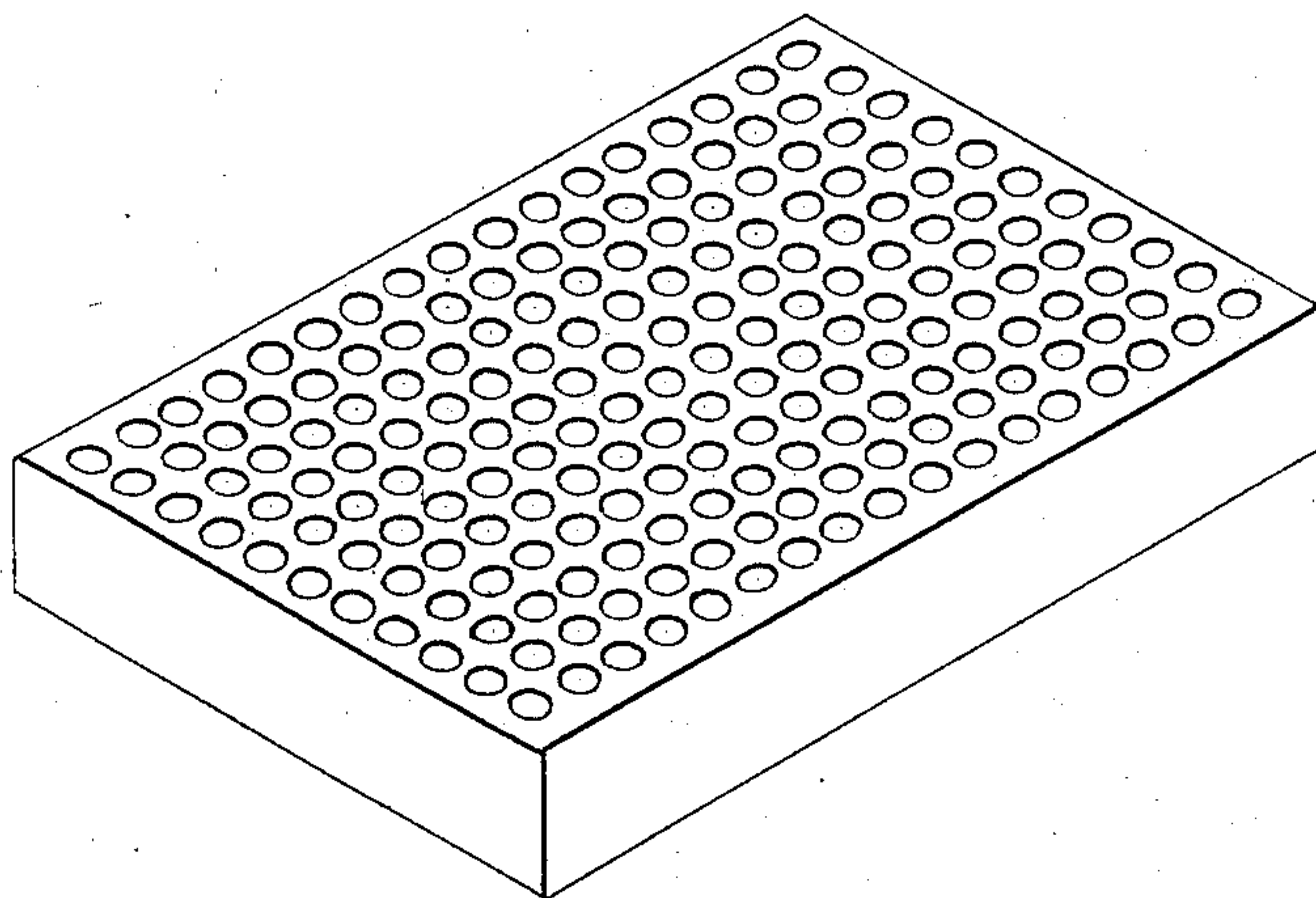
(Specimens.)

W. HUSTON.

PERFORATED TILE FOR FURNACE LININGS.

No. 317,459.

Patented May 5, 1885.



Witnesses
Henry Bossert
David S. Williams

Inventor
William Huston
by his Attorneys
Howson & Sons

UNITED STATES PATENT OFFICE.

WILLIAM HUSTON, OF WILMINGTON, DELAWARE, ASSIGNOR TO JABEZ C. GILBERT, OF BROOKLYN, NEW YORK.

PERFORATED TILE FOR FURNACE-LININGS.

SPECIFICATION forming part of Letters Patent No. 317,459, dated May 5, 1885.

Application filed February 2, 1885. (Specimens.)

To all whom it may concern:

Be it known that I, WILLIAM HUSTON, a citizen of the United States, and a resident of Wilmington, Delaware, have invented an Improved Perforated Tile for Furnace-Linings, of which the following is a specification.

There are many different kinds of furnaces in which perforated tiles or slabs are used for subdividing volumes of the products of combustion. In locomotive fire-boxes, for instance, such tiles are often arranged in an inclined position in the fire-boxes to partly intercept the products of combustion before they reach the flue-tubes. Perforated slabs are also used in furnaces for admitting volumes of air in the condition of numerous jets to the products of combustion, and these slabs are in all cases subjected to heat of more or less intensity. It has been the practice prior to my invention to make these slabs of ordinary fire-clay—that is, the clay of which ordinary fire-bricks are made—and this clay is available as a refractory material in the construction of furnaces, although those surfaces of the bricks which are most exposed to the heat become more or less vitrified. This vitrification or fluxing is a source of much difficulty in the use of perforated slabs or tiles of the character referred to, for the holes are liable to become more or less choked, and the removal of the obstructions is a difficult and tedious operation.

I have produced a perforated tile or slab the holes in which always remain unobstructed, no matter what the degree of heat may be to which it is subjected. This perforated tile is made of glass-makers' clay, a well-known composition used by glass-makers in the manu-

facture of their melting-pots. This composition consists mainly of German clay, a well-known article of commerce, and this is mixed with old melting-pots, pulverized, and sometimes with coarse sand and other ingredients.

Although different ingredients may enter into the composition of glass-makers' clay, it is a material well known, and can be purchased from glass-makers, or the perforated slabs can be made at glass-makers'.

In making the perforated slabs, of which a perspective view is shown in the drawing, the glass-makers' clay is molded or otherwise formed and the holes made while the clay is in a plastic condition, the slab being afterward properly baked, as in the case of melting-pots made of the same clay.

I have made perforated slabs or tiles two and three-quarters inches thick, with holes of five-eighths of an inch in diameter and a little over an inch from center to center, and these slabs have resisted intense heat without any such fluxing as to obstruct the perforations.

I claim as my invention and as a new article of manufacture—

The within-described slab for locomotive fire-boxes and other furnaces, the said slab consisting of glass-makers' clay, and being perforated, as and for the purpose set forth.

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

WILLIAM HUSTON.

Witnesses:

HENRY BOSSERT,
HARRY SMITH.