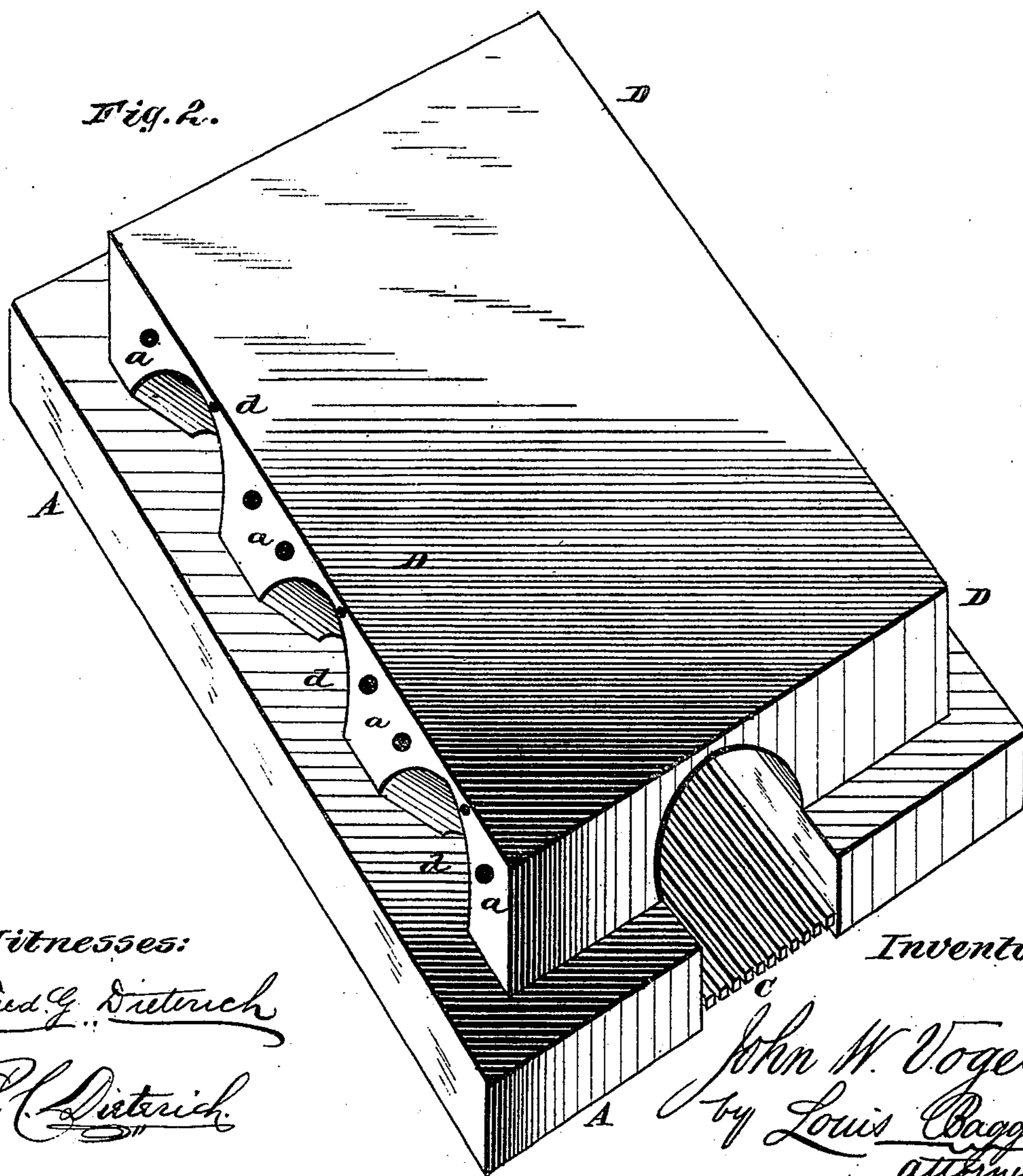
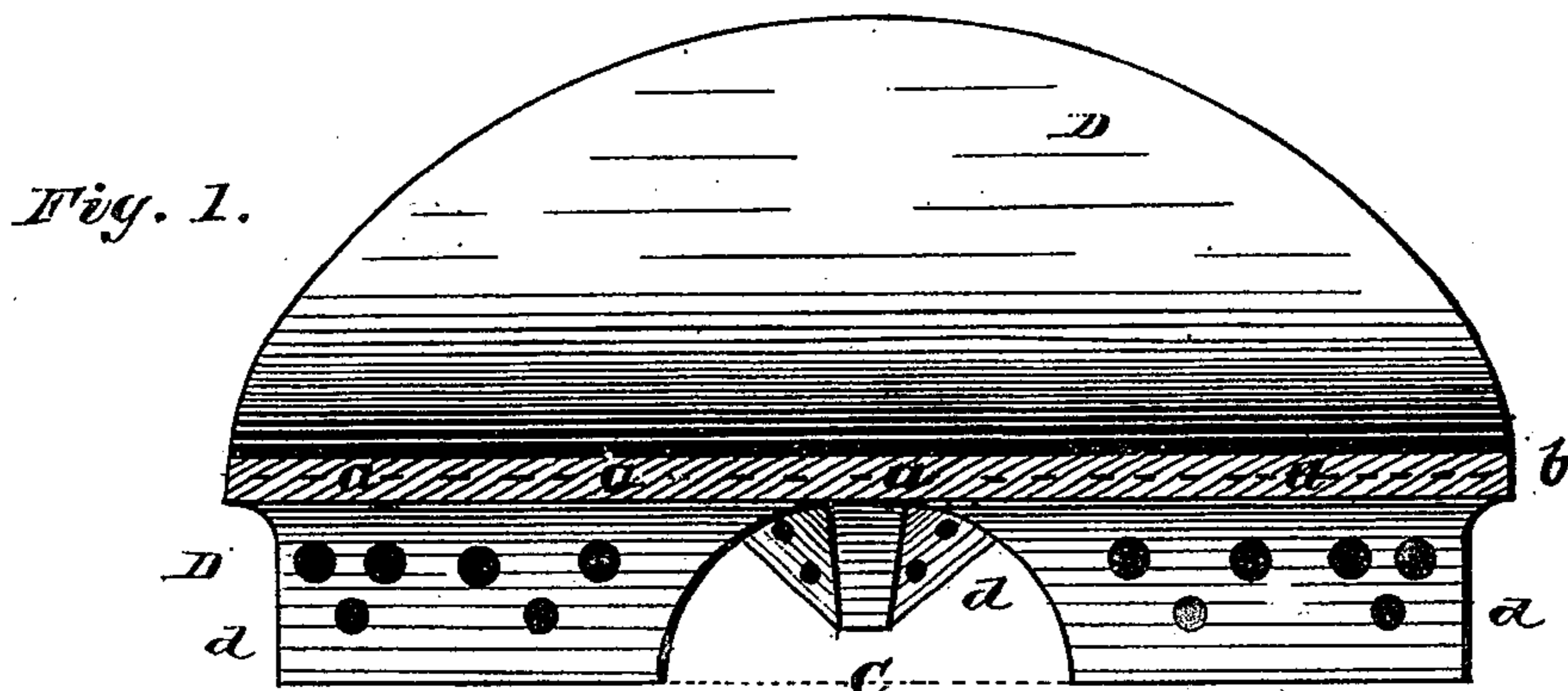


J. W. VOGEL.
Glass Furnace.

No. 241,097.

Patented May 3, 1881.



Witnesses:

Fred. G. Dietrich

P. C. Dietrich

Inventor:

John W. Vogel
by Louis C. Baggett
attorney

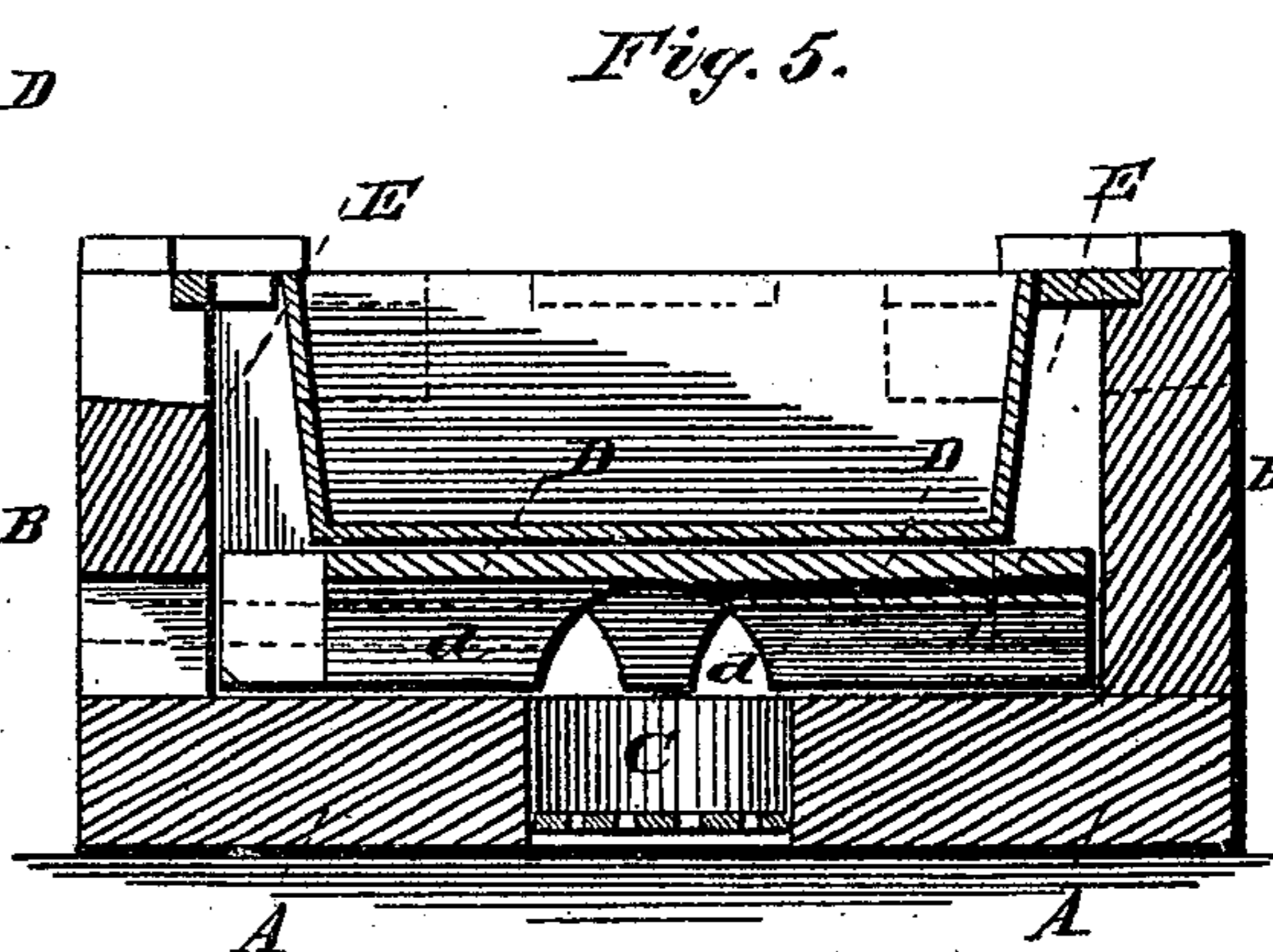
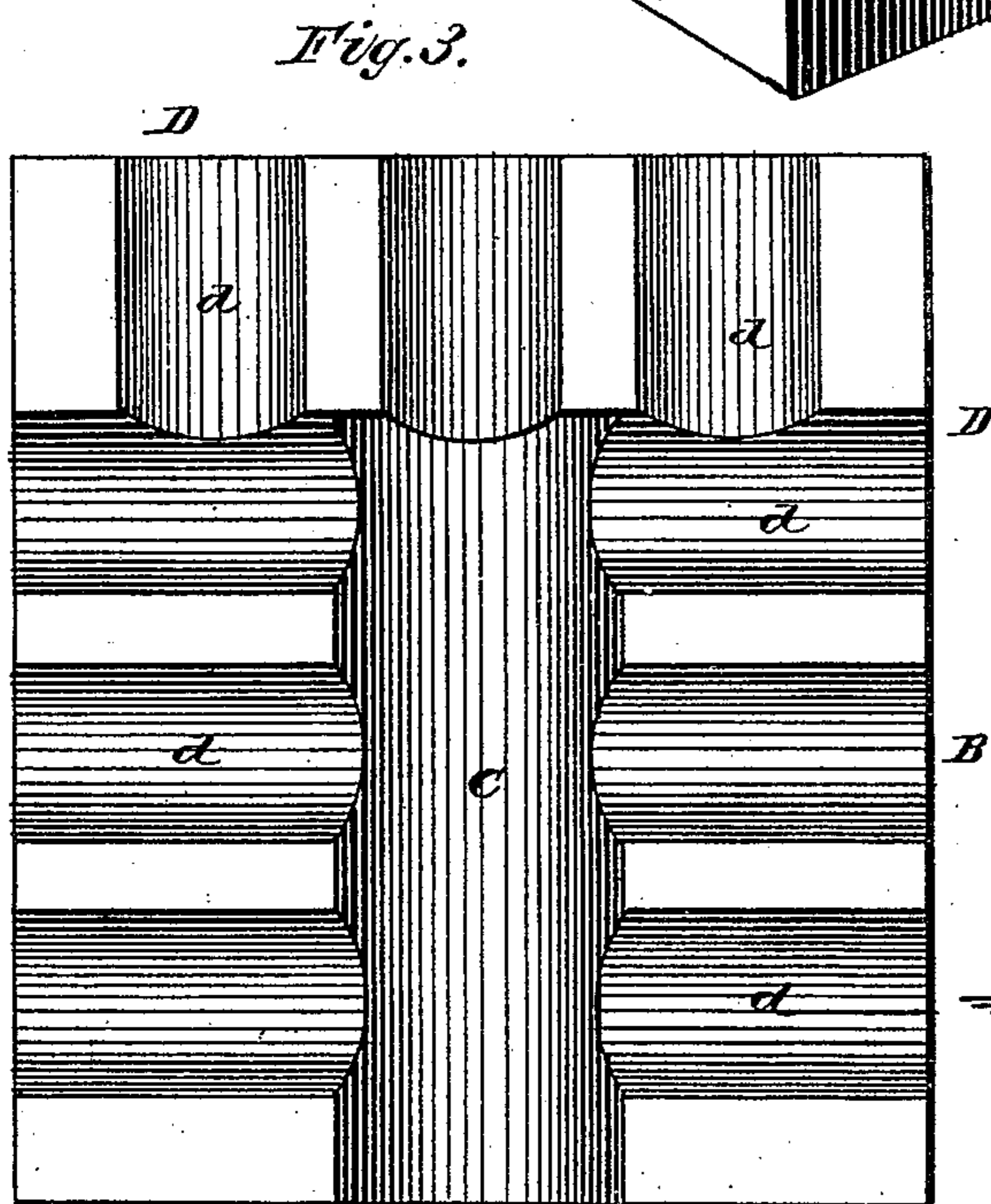
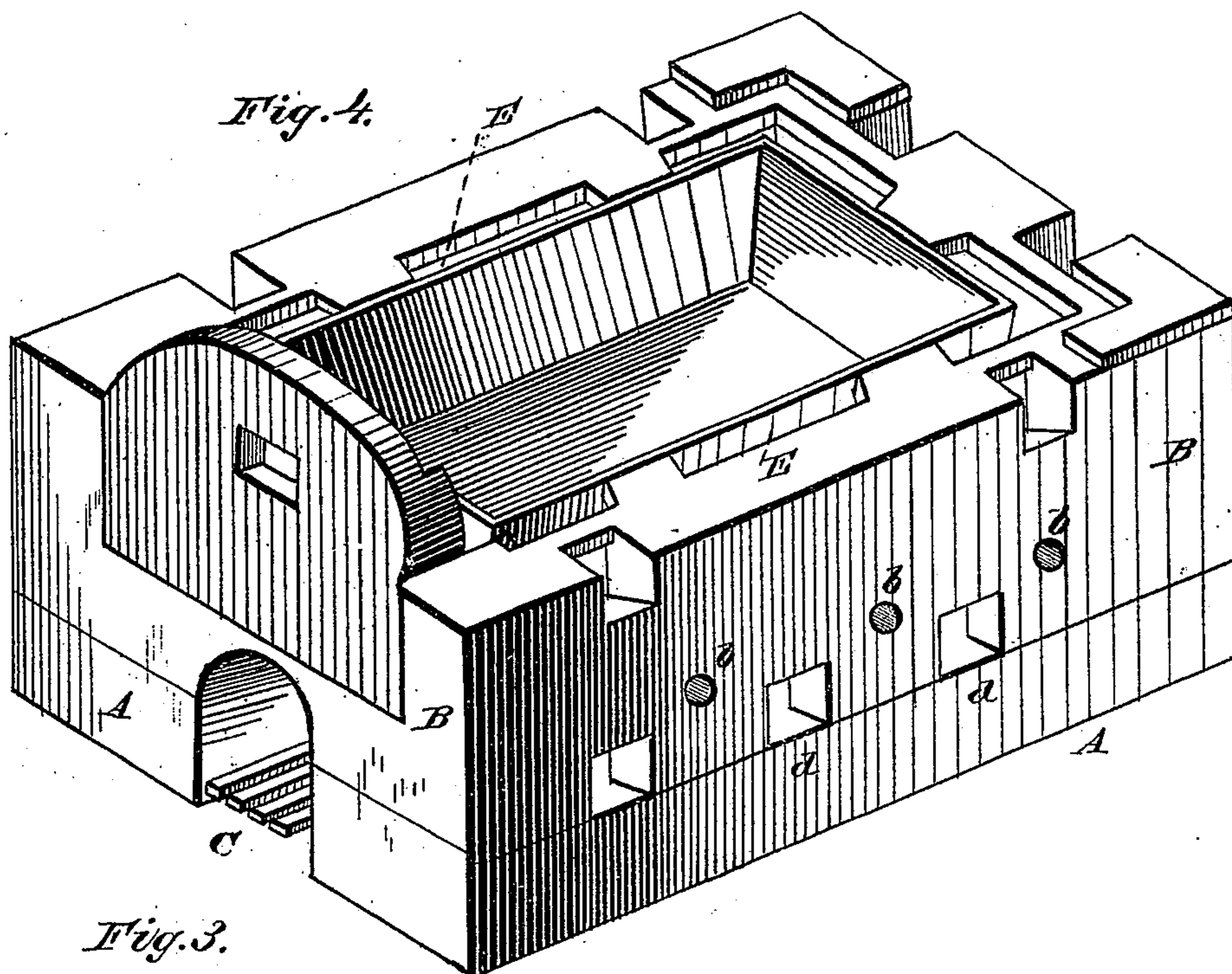
(No Model.)

2 Sheets—Sheet 2.

J. W. VOGEL.
Glass Furnace.

No. 241,097.

Patented May 3, 1881.



Witnesses:
Fred G. Dietrich
P. C. Dietrich.

Inventor:
John W. Vogel
by Louis Baugher
Attorney

UNITED STATES PATENT OFFICE.

JOHN W. VOGEL, OF SHARPSBURG, PENNSYLVANIA.

GLASS-FURNACE.

SPECIFICATION forming part of Letters Patent No. 241,097, dated May 3, 1881.

Application filed March 11, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. VOGEL, of Sharpsburg, in the county of Allegheny and State of Pennsylvania, have invented certain
5 new and useful Improvements in Glass-Furnaces; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and
10 use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view, representing one-half of my improved pot-bench for glass-
15 furnaces as constructed for a circular furnace. Fig. 2 is a perspective view of a pot-bench for a square furnace, showing also the furnace-bed. Fig. 3 is a bottom plan of the pot-bench shown in Fig. 2. Fig. 4 is a perspective view
20 of the complete furnace (of a square pattern) with its pot or tank, the dome having been removed; and Fig. 5 is a vertical cross-section of the same.

Similar letters of reference indicate corresponding parts in all the figures.

My invention contemplates improvements in glass-furnaces of any shape, (such as round, oval, square, or horseshoe form,) its object being to expose the tank to the greatest possible
30 amount of heat; and to this end it consists in the construction of a "pot-bench" in the nature of a platform or table, which is recessed on its under side to form hollow ducts or arches over the furnace-bed, and in the combination of this
35 pot-bench with the furnace-bed and sides or body of the furnace, substantially as hereinafter more fully set forth.

In the accompanying two sheets of drawings, the letter A, Figs. 2, 4, and 5, represents the
40 furnace-bed of a glass-furnace, of which B denotes the sides or body, which is provided with the usual flues and air-holes.

C is the fire-bed or furnace proper, which (as in the case of a circular furnace) may be in the center or eye of the furnace, or (as in the case
45 of a square or rectangular furnace) it may run from front to back, or from the front end half-way into the furnace.

D is the pot-bench, which is of a shape to
50 conform to the shape of the furnace, and recessed on its under side to form covered flues or arches, as shown at *d*, radiating or extend-

ing from that part of the bench which, when it is in its proper position upon the furnace-bed, will extend from the fire-bed to the walls of the
55 furnace. When the pot-bench is set into the furnace an open space is left between the top part or roof of each of the flues or arches *d*, to permit the flames and products of combustion to pass up between the sides of the pot or pots
60 shown at E in Figs. 4 and 5 and the walls of the furnace, and thus facilitate melting of the batch in the pot or tank. In other words, the bench is somewhat smaller than the furnace-bed and furnace, leaving an open space between the sides of the bench and the walls of the furnace to permit the flames and heated
air, which escapes from the fire-bed through the arches *d*, to pass up into the dome (not
shown in the drawings) and surround the pots
70 or tanks, which are placed upon the level platform of the bench.

To prevent the bench from melting from the intense heat within the furnace, I prefer to construct it with cold-air ducts *a a*, extending from
75 side to side between and above its arches *d*, those parts of the bench through which the air-ducts *a* are made being extended so as to impinge upon the walls of the furnace, which
80 have openings or air-inlets *b* registering with the air-ducts *a* in the bench, as shown more clearly in Fig. 1 of the drawings.

Having thus described my invention, I claim and desire to secure by Letters Patent of the
85 United States—

1. In a glass-furnace, the combination, with the furnace-bed A, provided with the fire-bed C, and furnace walls or body B, having suitably-
arranged flues and air-holes, of the pot-bench D, provided with the covered flues or arches
90 *d*, as set forth.

2. The pot-bench D, provided with the covered arches *d* and cold-air ducts *a*, in combination with the walls of the furnace B, having
air-inlets *b*, registering and communicating
95 with the ducts *a* of the bench, as set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN W. VOGEL.

Witnesses:

JOHN EASTLAND,
WM. A. BOYCE.