(No Model.)

H. J. JACOBSEN.

GLASS MELTING OVEN.

No. 341,103. Patented May 4, 1886.

Fig. 1.

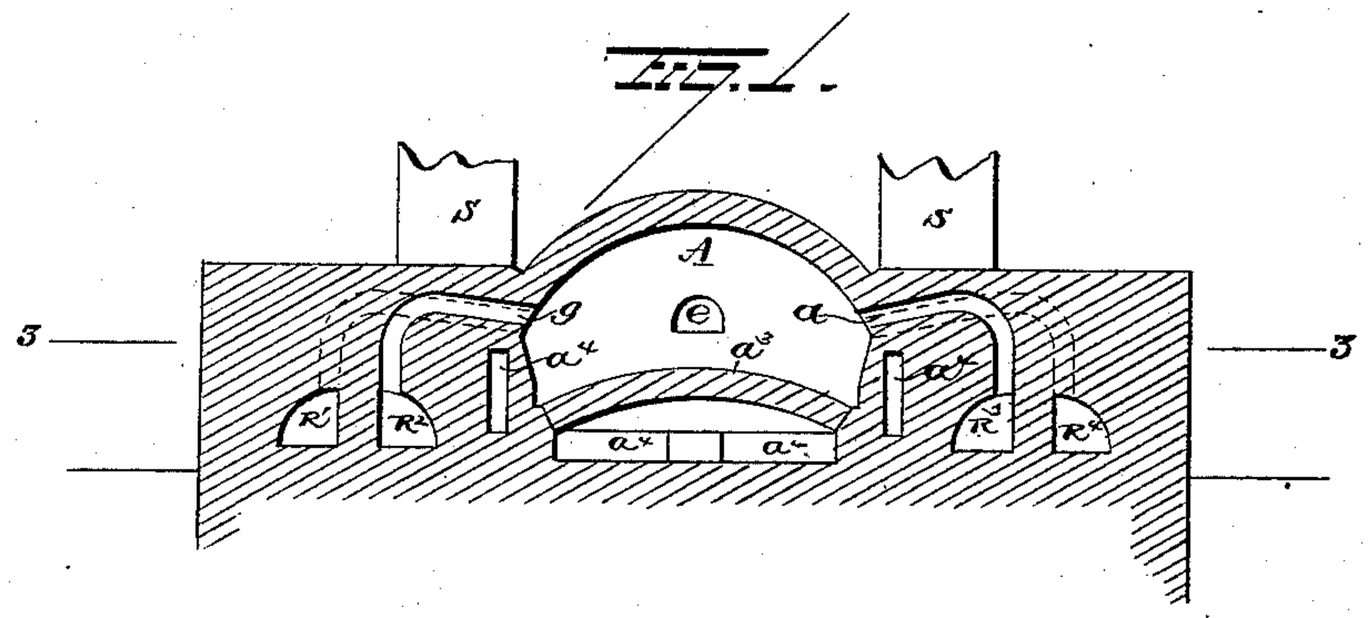

Fig. 2.

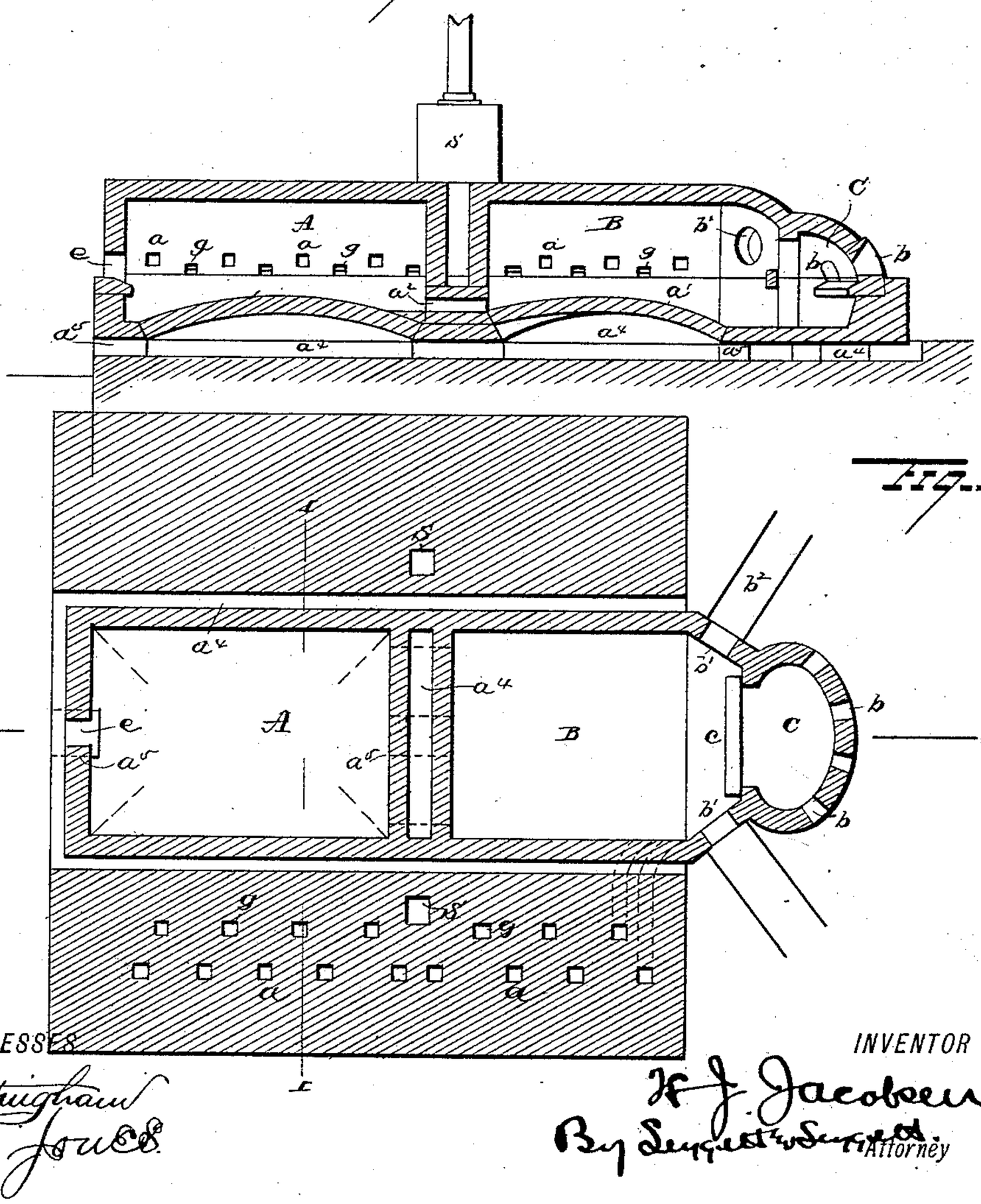

Fig. 3.

WITNESSES.

F. Hottinghaus

J. E. Jones

INVENTOR

H. J. Jacobsen.

By Sughrue & Sughrue Attorney

UNITED STATES PATENT OFFICE.

HANS JACOB JACOBSEN, OF CHRISTIANIA, NORWAY.

GLASS-MELTING OVEN.

SPECIFICATION forming part of Letters Patent No. 341,103, dated May 4, 1886.

Application filed September 25, 1885. Serial No. 178,187. (No model.)

To all whom it may concern:

Be it known that I, HANS JACOB JACOBSEN, a subject of the King of Norway, and residing in the town of Christiania, Norway, have invented certain new and useful Improvements in Glass-Melting Ovens; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in glass-melting ovens.

The object is to provide an oven of such construction that the ordinary drum or cylinder oven may be dispensed with, a further object being to provide a bottom for the melting-furnace which will remain tight for a greater length of time than those hitherto constructed.

With these ends in view my invention consists in certain features of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view of the oven in transverse section through line 1 1 of Fig. 3. Fig. 2 is a vertical longitudinal section through line 2 2 of Fig. 3, and Fig. 3 is a horizontal section on a plane passing through line 3 3 of Fig. 1.

The furnace is intended to be heated by gas from an ordinary gas-generator in a manner similar to that employed in the Siemens system placed under the oven. The generator is not shown in the drawings.

R′, R², R³, and R⁴ are the gas-canals, and *a* and *g* the gas-pipes leading to and from the interior of the oven.

S is the chimney; *e*, the door for filling in the glass materials.

A is the melting-room, which is separated from clearing-room B by means of a double partition-wall, through which the glass passes by the hole or opening a^2, Fig. 2.

C is the working-room, which has the working holes or openings *b*, where the glass cylinders or tubes are prepared and blown out to a certain degree. This room C is separated from the clearing-room B by a floating beam, *c*, made of fire-proof clay, which beam serves to prevent unmelted particles and bubbles from getting into the working-room C.

a^4 are canals and openings for the cold air for cooling the walls and bottoms of the ovens.

Between the wall of the room C and the surrounding walls of room B is a plain short diagonal wall containing greater working-holes *b*′, for completing the blowing of the cylinders, and in front of these holes are placed the usual grooves, b^2, for swinging of the glass cylinders during the blowing of them. These holes *b*′ are used instead of another with separate fire, which commonly is used for this purpose. This arrangement is very economical, because the use of a separate oven may be dispensed with, and consequently the fuel for this oven may be spared.

The bottom in the melting-room A in the Siemens oven generally is made or constructed with a double layer of fire-proof-clay plates, resting with their corners on small stone pillars. These bottoms are deficient, because in a short time they are liable to become leaky. I therefore make this bottom in the melting-room also in the form of a vault, a^3, as shown in the drawings, which vault rests on foundation-stones in the surrounding walls or on pillars at the end walls and under the partition wall. (See drawing at a^5.)

I am aware that it is not broadly new to employ a trap or partition between the working and clearing chamber for preventing the entrance of bubbles into the working-room; hence I make no claim, broadly, to such construction.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a Siemens glass-melting oven, the combination, with a melting-room and a working-room separated by a partition having an opening at or near the bottom thereof, and a clearing-room in direct communication with the working-room, of work-holes located in the wall of the clearing-room, adapted to the completing of the glass cylinders or tubes, substantially as set forth.

2. In a Siemens glass-melting oven, the combination, with the melting-room, the work-

ing-room, a partition separating said rooms and having an opening at or near the lower edge thereof, and the clearing-room, of the floating beam made of fire-clay, forming a partition between the working and clearing rooms, for preventing unmelted particles and bubbles from entering the working-room, substantially as set forth.

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

HANS JACOB JACOBSEN.

Witnesses:
A. SEV. SYVERTSEN,
H. J. ROTHEIM.