

No. 701,885.

Patented June 10, 1902.

E. H. HOPKINS.

RETORT.

(Application filed Oct. 18, 1901.)

(No Model.)

Fig. 1.

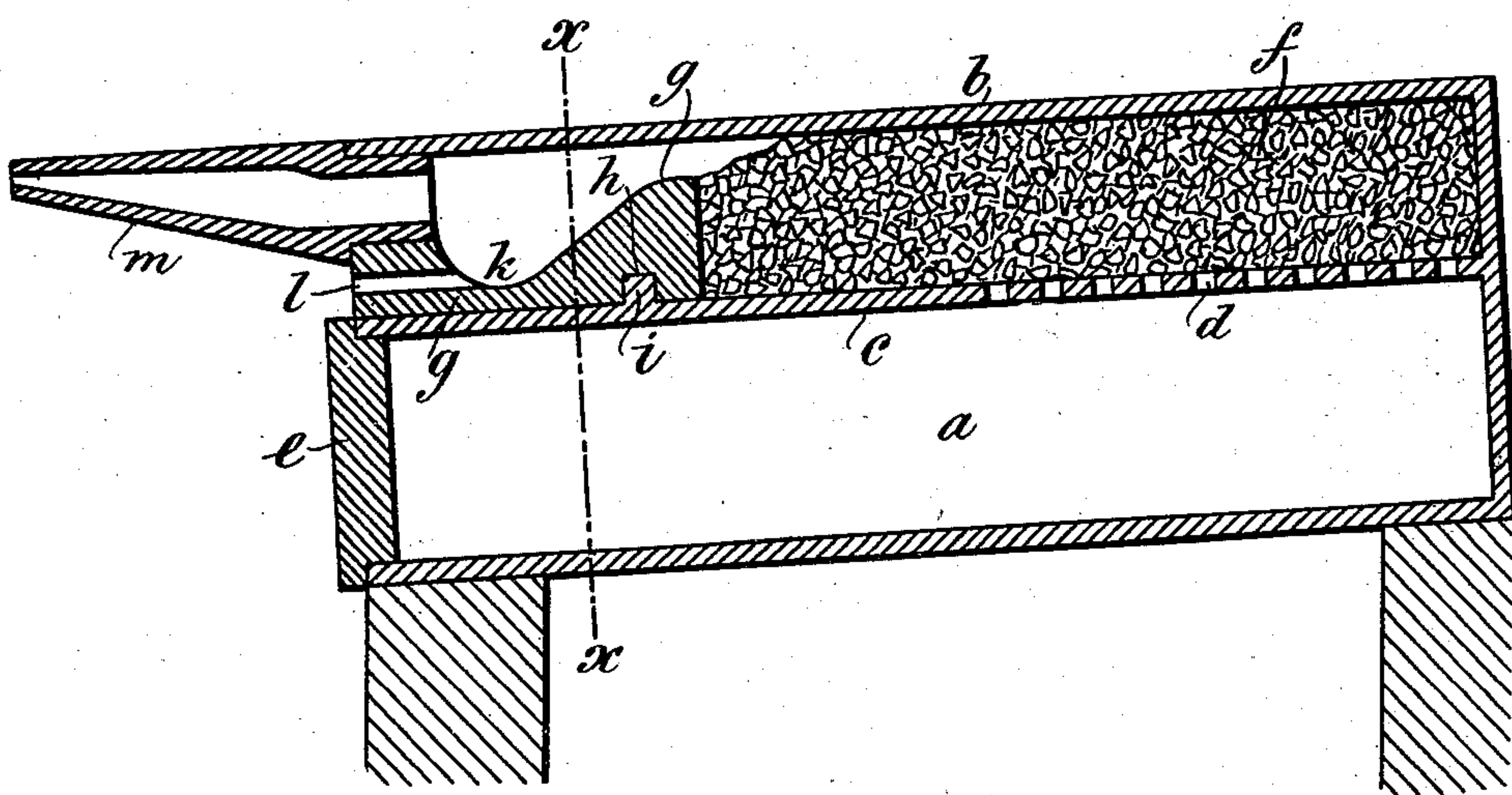
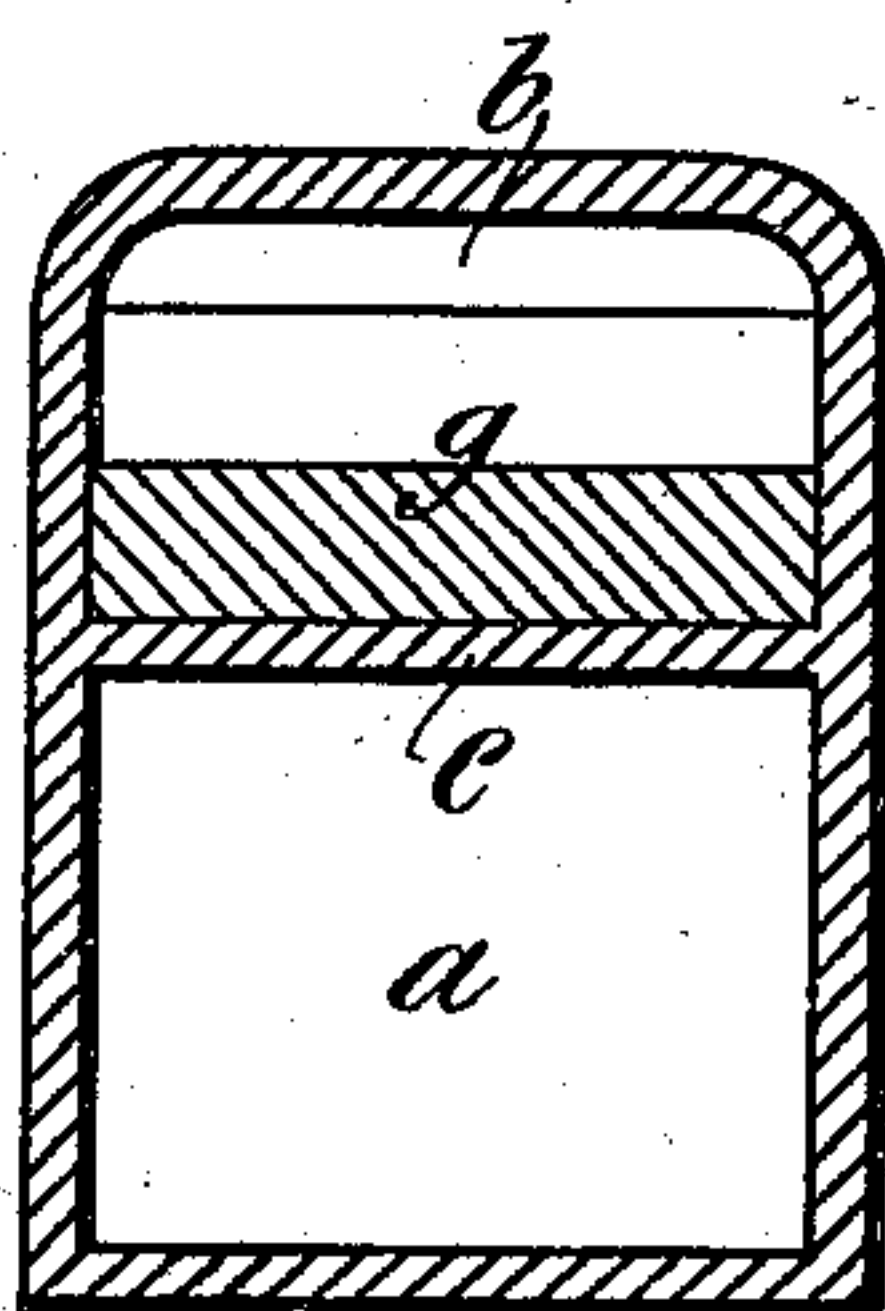


Fig. 2.



Witnesses.

A. M. Perkins.
R. Ellsworth.

Inventor.

Ernest Henry Hopkins,
By his Attorneys,

Baldwin Davidson & Wright.

UNITED STATES PATENT OFFICE.

EVAN HENRY HOPKINS, OF SOUTH KENSINGTON, ENGLAND.

RETORT.

SPECIFICATION forming part of Letters Patent No. 701,885, dated June 10, 1902.

Application filed October 18, 1901. Serial No. 79,091. (No model.)

To all whom it may concern:

Be it known that I, EVAN HENRY HOPKINS, clerk in holy orders, a subject of the King of Great Britain, residing at 32 Redcliffe Square, South Kensington, in the county of Middlesex, England, have invented certain new and useful Improvements in Retorts, of which the following is a specification.

The object of this invention is to construct a retort suitable for the distillation of zinc-lead ores. The ores are mixed with a certain quantity of carbonaceous material and placed in the retort. The products of distillation are passed upward through a filter of incandescent carbon, whereby the zinc is obtained in a state of purity, the lead remaining behind in the retort.

Figure 1 is a longitudinal section; and Fig. 2 is a transverse section on the line xx , Fig. 1, of a retort made in accordance with this invention.

The retort is divided into two chambers a and b by a partition c , which is perforated with small holes d for about two-thirds of the space, leaving about one-third, the part near the opening, unperforated. The lower chamber a is for the reception of the charge of the ores and carbonaceous material and is pro-

vided with a door e , by means of which it can be hermetically closed. The upper chamber b is partially filled with fine lumps of charcoal or coke f , well pressed together and kept from falling apart by a block g , which is secured in position by means of the groove h , fitting over the projection i . In the block g is a cavity k for the reception of the zinc, which becomes molten after after passing from the incandescent carbon. l is a plug-hole for tapping the zinc. A condenser m is also provided to lead away any gases or uncondensed zinc.

The retort is made of a fire-resisting material, preferably clay.

What I claim is—

The combination of a retort, a partition perforated with small holes at its inner end, dividing the retort into two chambers, fine lumps of carbonaceous material in the upper chamber, and a block in the upper chamber holding the fine lumps in position and having a cavity for the reception of the zinc.

EVAN HENRY HOPKINS.

Witnesses:

J. H. WHITEHEAD,
F. C. WEATHERLY.