

No. 763,410.

PATENTED JUNE 28, 1904.

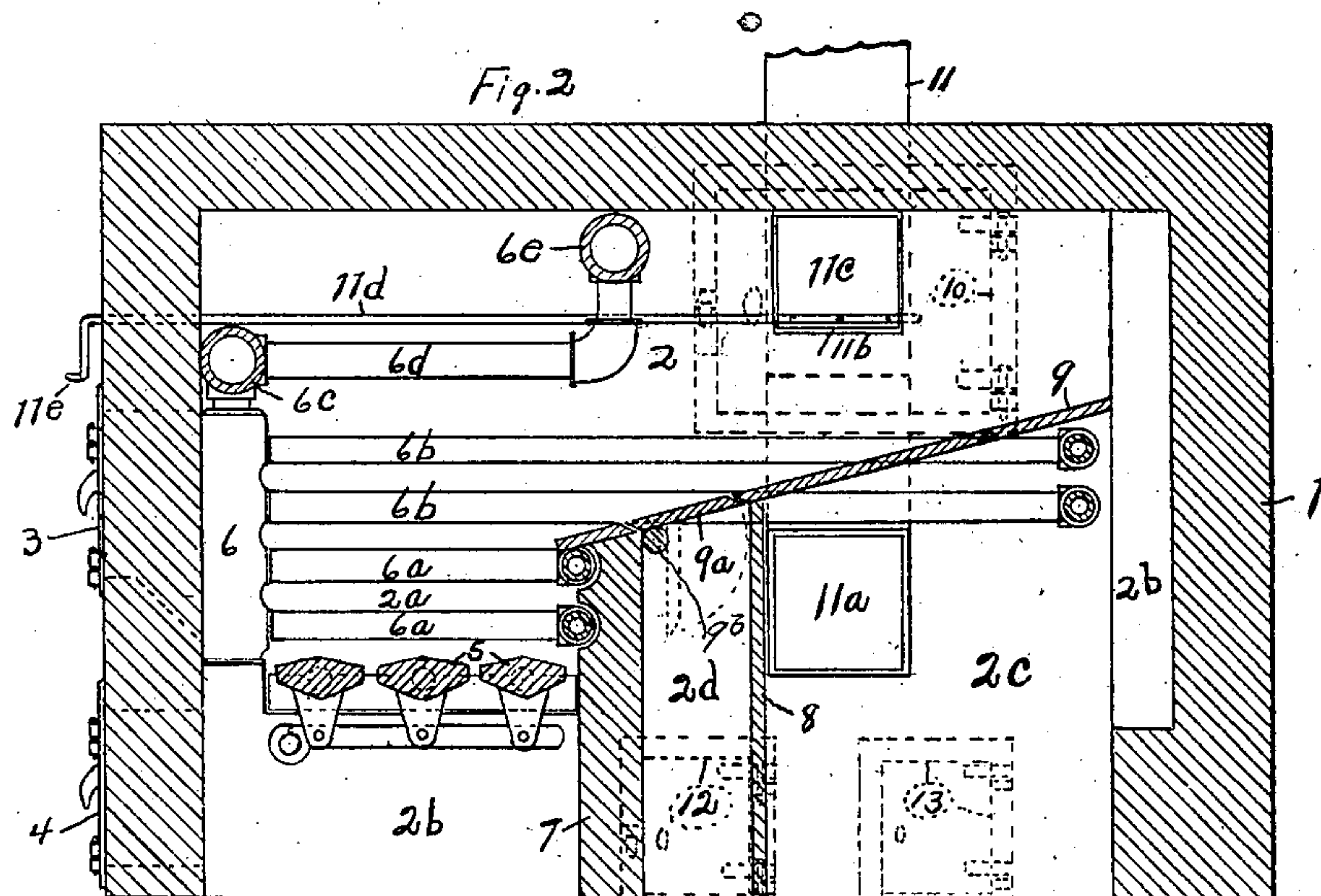
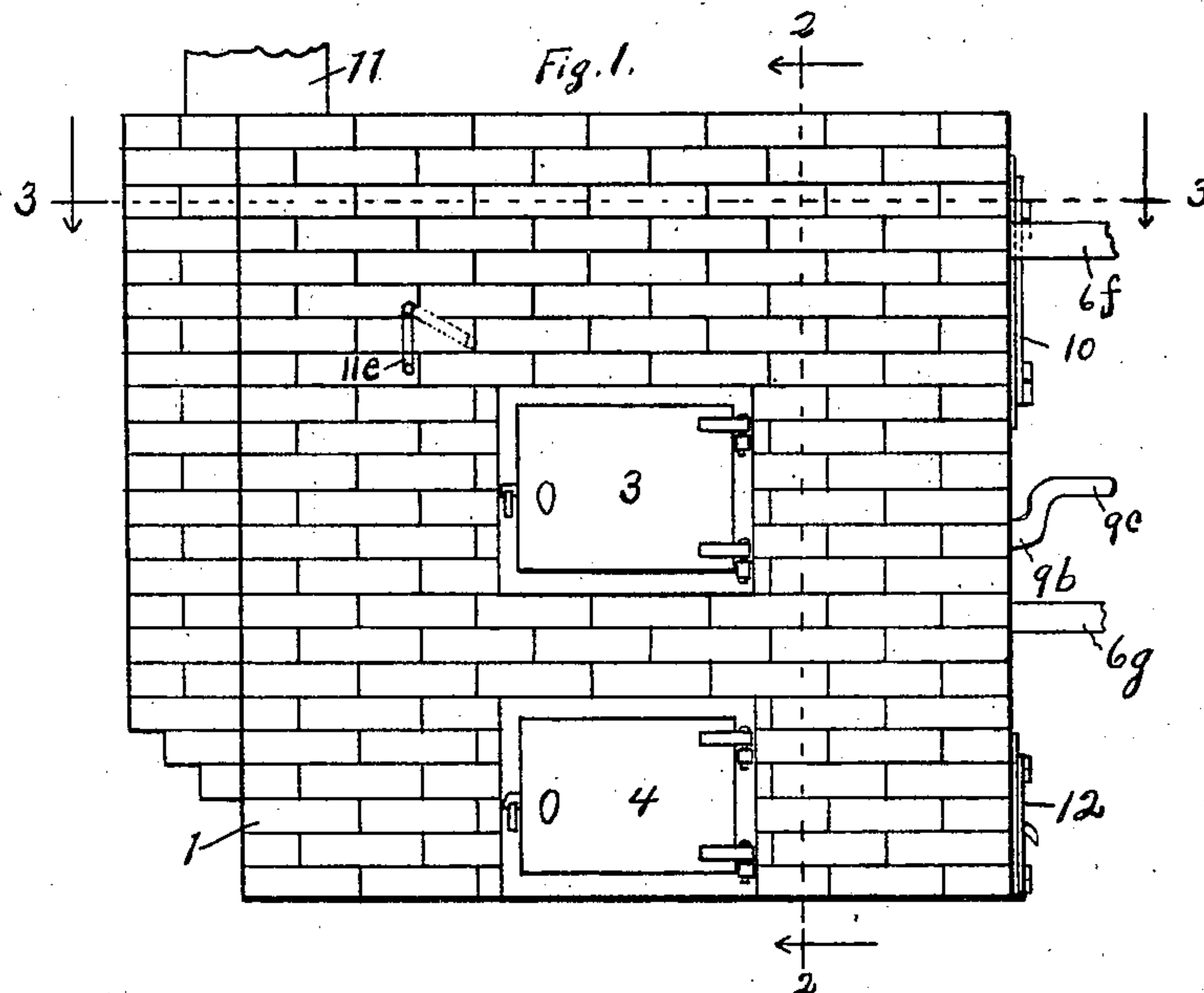
A. LONG.

WATER HEATER AND GARBAGE CREMATORY.

APPLICATION FILED JAN. 12, 1904.

NO MODEL.

2 SHEETS--SHEET 1.



WITNESSES:

B B Collins

L. Bennett

INVENTOR

Albert Long

B4

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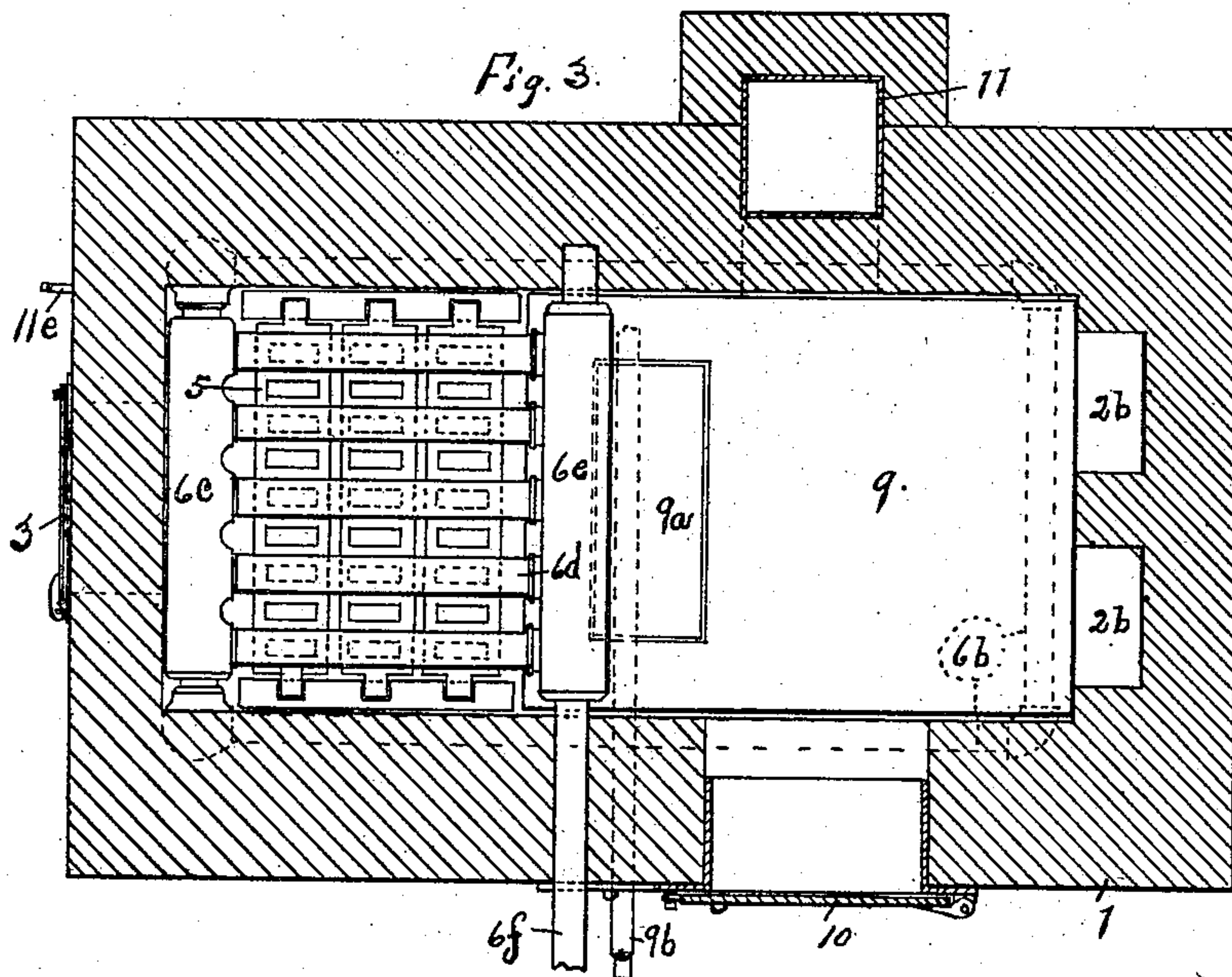
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UNITED STATES PATENT OFFICE.

ALBERT LONG, OF CHICAGO, ILLINOIS.

WATER-HEATER AND GARBAGE-CREMATORY.

SPECIFICATION forming part of Letters Patent No. 763,410, dated June 28, 1904.

Application filed January 12, 1904. Serial No. 188,679. (No model.)

To all whom it may concern:

Be it known that I, ALBERT LONG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have
5 invented certain new and useful Improvements in Water-Heaters and Garbage-Crematories, of which the following is a specification.

My invention relates to improvements in a
10 combined water-heater and garbage-crematory.

The object of my improvement is to provide a water-heater in which garbage may be burned without throwing it directly into the fire by which it is to be consumed.

15 A further object is to provide a way of disposing of the ashes, &c., left from the consumed garbage without passing it through the fire-box.

Having the foregoing and other objects of
20 novelty and utility in view, I have produced a combined water-heater and garbage-crematory the preferred construction of which is described in detail in the following specification and in the accompanying drawings, in
25 which—

Figure 1 is a view in elevation of the exterior front end of my water-heater and garbage-crematory. Fig. 2 is a view in elevation and partly in section, taken on the line 2 2 of
30 Fig. 1; and Fig. 3 is a view taken on the line 3 3 of Fig. 1.

Referring to the drawings in detail, 1 represents the inclosing wall, which may be made of brick or other non-combustible material
35 and within the upper portion of which is a chamber 2. In the front portion of the wall are two doors, indicated by the numerals 3 and 4, respectively, the former communicating with the fire-box 2^a and the latter with the
40 ash-pit 2^b underneath the grate 5. Located in each one of the front corners of the chamber 2 is a water-pipe header 6. The said headers communicate with each other through the pipes 6^a and 6^b and through the header 6^c.
45 The pipes 6^a extend along the ends and rear of the fire-box, while pipes 6^b extend to and along the inside of the rear portion of the wall. The headers 6 and the pipes 6^a and 6^b are supported by the wall, in which they are
50 partially embedded. Above the fire-box are

several pipes 6^d, which connect the header 6^c with a header 6^e, to the right-hand end of which is connected the outlet or hot-water pipe 6^f. The inlet or cold-water-supply pipe 6^g is connected with the lower pipe 6^a. Back
55 of the fire-box is a bridge-wall 7, made, preferably, of fire-brick. To the rear of this bridge-wall and extending parallel therewith is a sheet-iron partition 8. Resting upon the upper edge of the bridge-wall and the partition
60 8 and upon the upper cross-pipe 6^b is an iron plate 9, extending across the chamber from wall to wall and from the rear edge of the fire-box to the rear wall. Located in an opening formed in this plate is a trap-door 9^a,
65 mounted on and operated by a rod 9^b, which extends through the right-hand portion of the wall, as shown in Fig. 1, and has a handle 9^c on its outer end, to which a suitable weight or counterbalance may be secured to hold the
70 trap-door in the position desired. That part of chamber 2 which is located directly above the plate is hereinafter called a "garbage-chamber." Formed on the inside of the rear portion of the wall opposite the rear edge of
75 the plate are two flues 2^b, which afford communication between the garbage-chamber and the hot-air chamber 2^c below the plate. In the left-hand portion of the wall, as shown in
80 Fig. 1, is a smoke-stack 11, which communicates with the hot-air chamber 2^c and the garbage-chamber through the openings 11^a and 11^b, respectively. The opening 11^b is provided with a damper 11^c, which has a rod 11^d,
85 which projects through the front wall and has a handle on its outer end. In the right-hand portion of the wall above the plate is a door 10. After the inlet-pipe and the outlet-pipe have been suitably connected with a cold-water supply and a hot-water tank, respectively,
90 and a fire provided in the fire-box the operation is as follows:

Garbage is passed through the doorway 10 and deposited on the plate, where it is dried and burned by the heat which passes from
95 the fire-box over the garbage, thence down through the flues 2^b into the hot-air chamber, heating the plate, and thus burning the garbage from top and bottom simultaneously, the smoke passing into the chimney through
100

the opening 11^a except when the damper 11^c is opened to provide a more direct draft while putting in garbage or building fires. Thus the garbage is consumed without being thrown
 5 into or in any way interfering with the fire. If any portion of the garbage remains unconsumed after exposure to the heat, the same may be drawn into the fire, if desired, by means of a rake inserted through the front
 10 door 3. Any ashes, tin cans, or the like which remain on the plate may be dropped through the trap-door into the ash-chamber 2^d and from thence removed through the door 12 in the right-hand wall. Excess soot or refuse which
 15 collects in chamber 2^c may be removed through the door 13. The heat from the fire-box and that generated from the burning of the garbage is communicated to the water-pipes and in turn to the water as the latter enters
 20 through the inlet or cold-water pipe and passes out through the outlet or hot-water pipe.

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

1. In a combined water-heater and garbage-crematory comprising an inclosing wall having therethrough suitable doorway-openings, a fire-box, water-pipes surrounding the fire-
 30 box and having an inlet and an outlet extending through the wall, a bridge-wall back of said fire-box, a partition back of said bridge-wall and extending parallel therewith, an ash-chamber between the bridge-wall and said
 35 partition, a plate sloping upwardly and rearwardly from the top of the bridge-wall and adapted to support garbage deposited thereon and having therethrough an opening above said ash-chamber, a trap-door adapted to close
 40 the opening in the plate, means for operating said trap-door, a garbage-chamber arranged above said plate, a hot-air chamber below the plate, a flue at the rear of the plate and connecting the garbage-chamber and the hot-air chamber,
 45 a smoke-stack communicating with the hot-air chamber and with the garbage-cham-

ber, and a damper adapted to close the communication between the smoke-stack and the garbage-chamber.

2. A combined water-heater and garbage-crematory comprising an inclosing wall having therethrough suitable doorway-openings, a fire-box, water-pipes surrounding the fire-box and having an inlet and an outlet extending through the wall, a plate sloping upwardly
 55 and rearwardly from the back of the fire-box and adapted to support garbage deposited thereon, a garbage-chamber arranged above said plate, a hot-air chamber below the plate, a flue at the rear of the plate and connecting
 60 the garbage-chamber with the hot-air chamber, and a smoke-stack communicating with the hot-air chamber and with the garbage-chamber.

3. In a device of the character described, 65 an inclosing wall provided with suitable doorway-openings, a fire-box, a plate extending rearwardly from the back of the fire-box and adapted to support garbage thereon, a garbage-chamber arranged above said plate, a
 70 hot-air chamber below the plate, a flue connecting the said chambers and a smoke-stack communicating with the hot-air chamber and with the garbage-chamber.

4. In a device of the character described, 75 an inclosing wall provided with suitable doorway, a fire-box, a plate extending rearwardly from the back of the fire-box and adapted to support garbage deposited thereon and having therethrough an opening, a trap-door adapted
 80 to close said opening, means for operating said trap-door, a garbage-chamber arranged above said plate, a hot-air chamber below the plate, and a smoke-stack communicating with the hot-air chamber. 85

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

ALBERT LONG.

Witnesses:

O. K. TREGO,
 R. J. SMITH.