(No Model.) 2 Sheets—Sheet 1.

P. W. ELLIOTT.

HEATING STOVE OR FURNACE.

No. 567,126 Patented Sept. 8, 1896.

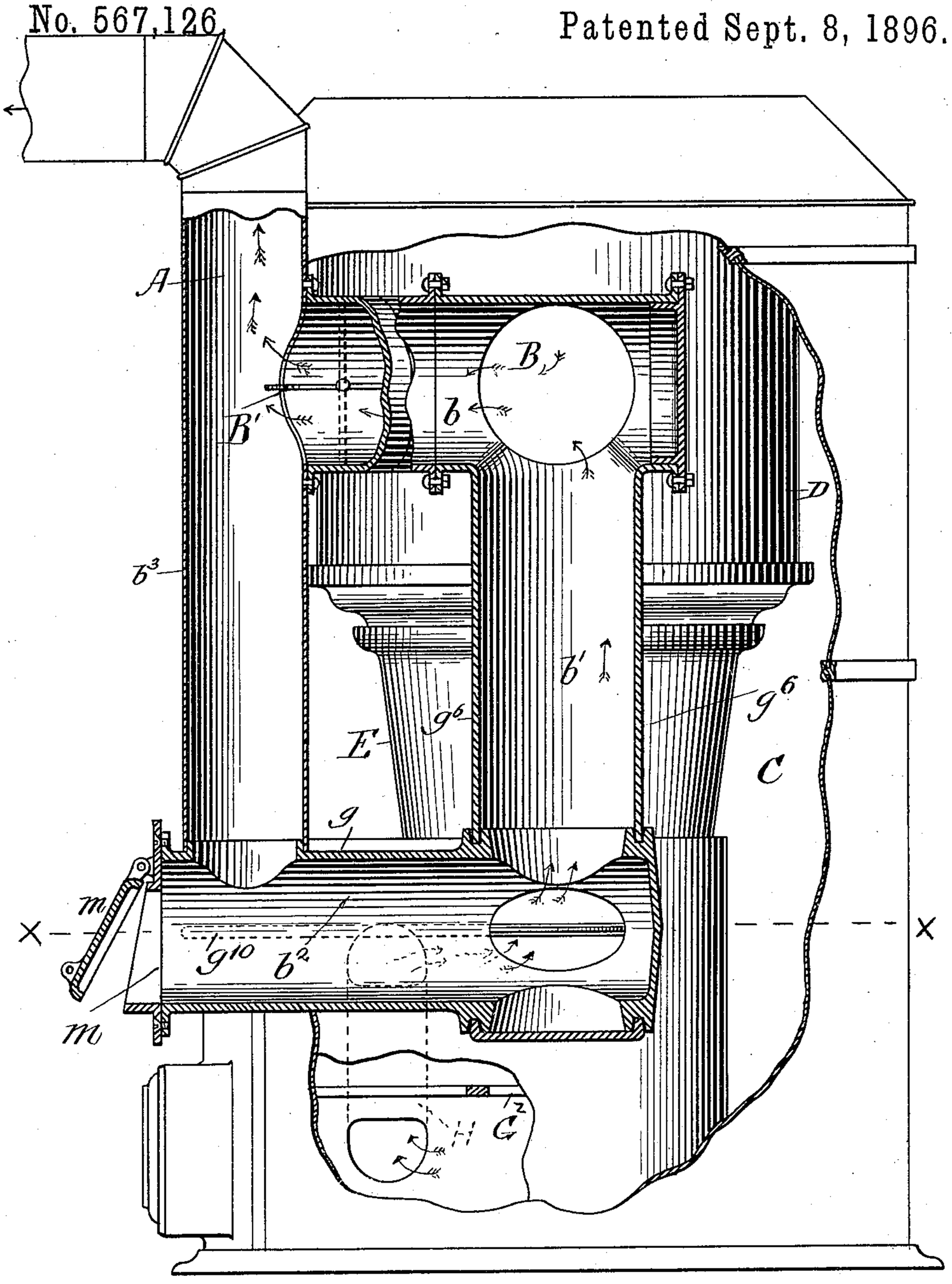

Fig. 1.

WITNESSES

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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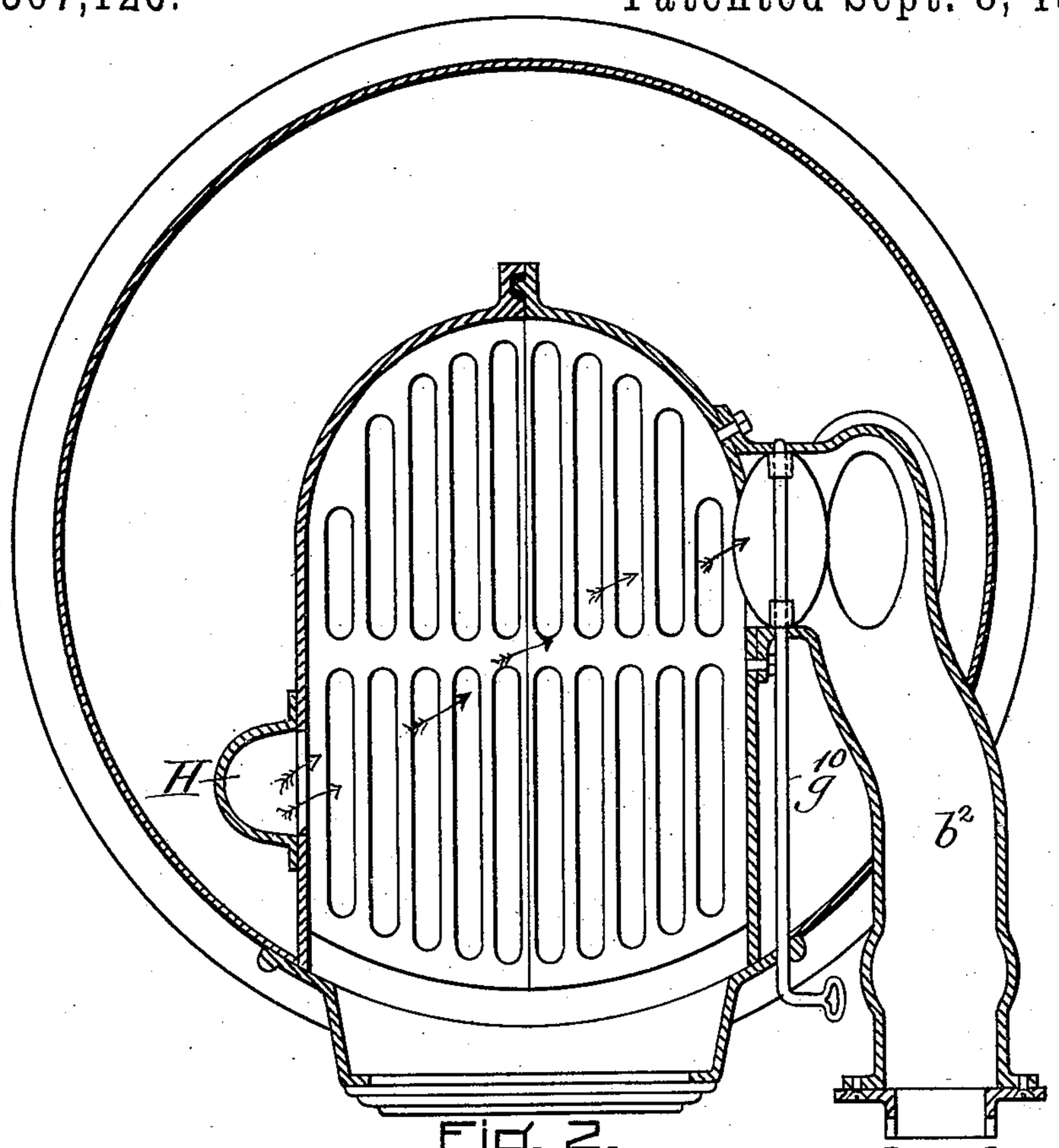

Fig. 2.

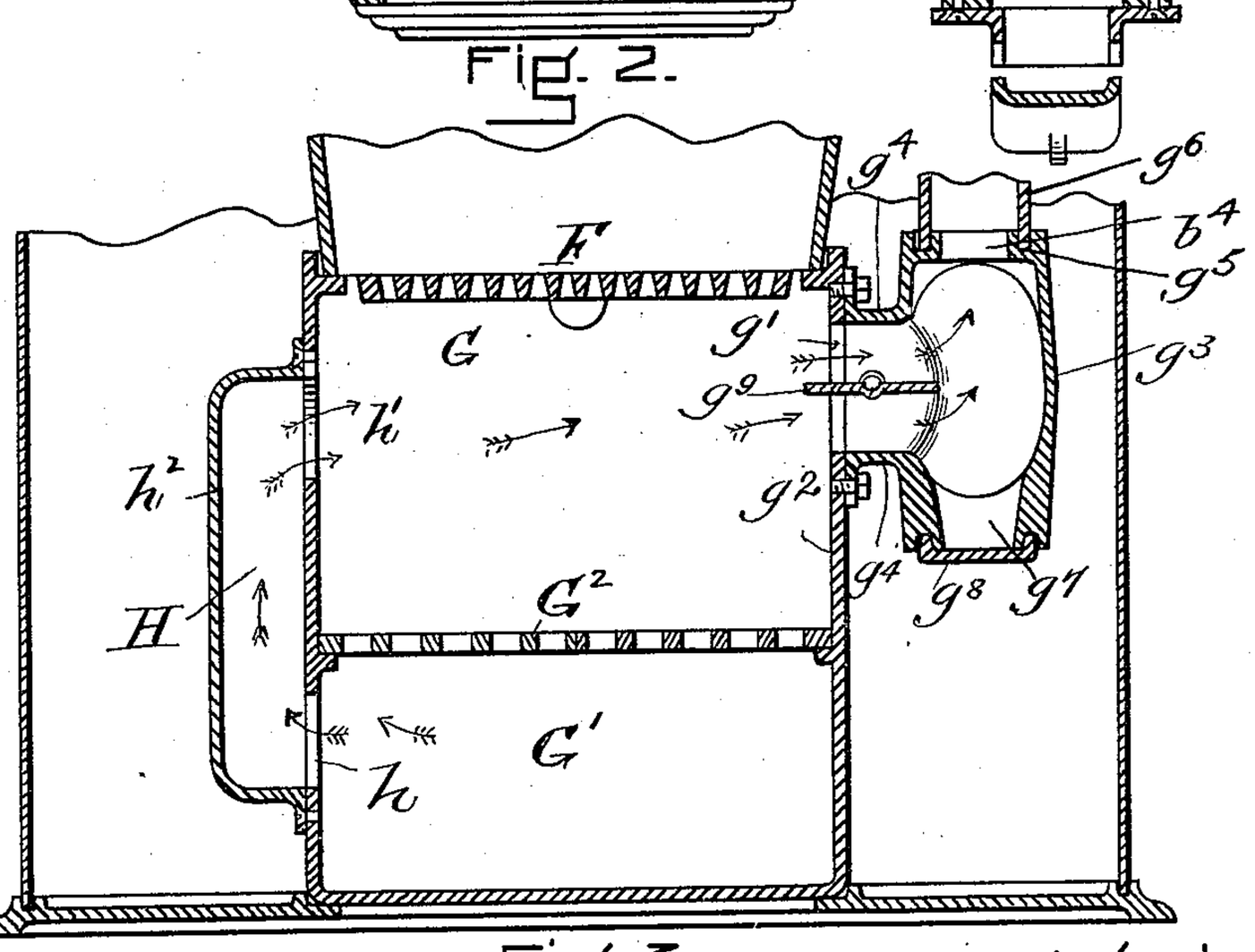

Fig. 3.

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UNITED STATES PATENT OFFICE.

PERCIVAL W. ELLIOTT, OF READING, MASSACHUSETTS, ASSIGNOR TO THE HIGHLAND FOUNDRY COMPANY, OF BOSTON, MASSACHUSETTS.

HEATING STOVE OR FURNACE.

SPECIFICATION forming part of Letters Patent No. 567,126, dated September 8, 1896.

Application filed July 30, 1894. Serial No. 518,908. (No model.)

To all whom it may concern:

Be it known that I, PERCIVAL W. ELLIOTT, a citizen of the United States, residing at Reading, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Heating Stoves or Furnaces, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The invention relates to the following-described means for preventing the escape of dust and ashes from the ash-pit of the furnace while it is being shaken or the ashes sifted, and it is represented as applied to a heating stove or furnace having a sifting-grate.

In the drawings, Figure 1 is a view, partly in vertical section and partly in elevation, of enough of a heating-furnace having the features of my invention to show its construction and application. Fig. 2 is a view in horizontal section upon the dotted line x x of Fig. 1. Fig. 3 is a view in vertical section at substantially a right angle to that of Fig. 1.

Referring to the drawings, A represents the pipe leading to the chimney-flue. The outlet B to the combustion-chamber is connected directly with said pipe A by the passage b and indirectly by the downward vertical passage b', the horizontal passage b^2, and the upward passage b^3. These passages b b' b^2 are in pipes upon the side of the furnace, and the uptake b^3 is in a downward extension of the pipe A.

C is the heating-chamber of the furnace; D, the wall of the combustion-chamber; E, the fire-pot wall, and F is the grate forming the bottom of the fire-pot. G is the upper ash-pit, and G′ the lower ash-pit. G^2 is an ashes-sifting grate separating the lower from the upper ash-pit.

The upper ash-pit G is connected with the side of the pipe g, forming the horizontal passage b^2, by the outlet g' upon its side near its back end, (see Fig. 2,) this outlet being provided by forming a hole in the plate g^2 and providing the box g^3 with a lateral flanged extension g^4, in which is a passage in continuation of the hole, and the flanges of which provide means for receiving the bolts which secure the box to the said plate g^2. This box is preferably cast integral with the pipe g, and it has in addition to the opening g' the opening b^4 into the passage b', the box having the recess g^5 about said opening to receive the lower end of the pipe g^6, forming the passage b'. The box also has the dust-receiving chamber g^7 in its lower portion, which opens downwardly, the opening being normally closed by the cap g^8. The box also has the damper g^9 in the passage g', which is operated by the rod g^{10}, extending forward to the front of the furnace. (See Fig. 2.)

To use the dust-escape, the damper g^9 is turned to the position represented in Fig. 3, and a draft is then established from the ash-pit through the passage g', either upward through the passage b' to the pipe A, or, if the main damper B′ be closed, through the passage b^2 to the uptake b^3. The lower ash-pit G′ is connected with the upper ash-pit chamber and near its top by the passage H, which opens from near the upper part of the lower ash-pit at h and extends outside both ash-pits to the point h', where it enters the upper ash-pit. This passage is formed by providing holes in the ash-pit wall at the desired places and bolting or otherwise attaching the casting h^2, which is open upon one side to the outer side of the wall. (See Figs. 2 and 3.) No damper is needed in this passage. The dust and ashes from the lower ash-pit when the damper g^9 is open are drawn from it through the flue or connection H into the upper ash-pit G.

The pipe g has at its front end an opening M, which serves two purposes—viz., that of a cold-air inlet and as a means by which dust and soot may be removed from the pipe and especially from its inner end adjacent to the passage g'. The said opening is regulated or closed by the damper or door m.

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

In a heating stove or furnace, the combination of the lower ash-pit G′, the passage H, the upper ash-pit G, the passage g' and the passage b^2, as and for the purposes described.

PERCIVAL W. ELLIOTT.

Witnesses:
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