(No Model.)

C. T. SCHOEN.

ASH PIT FOR FURNACES.

No. 347,522. Patented Aug. 17, 1886.

FIG. 1.

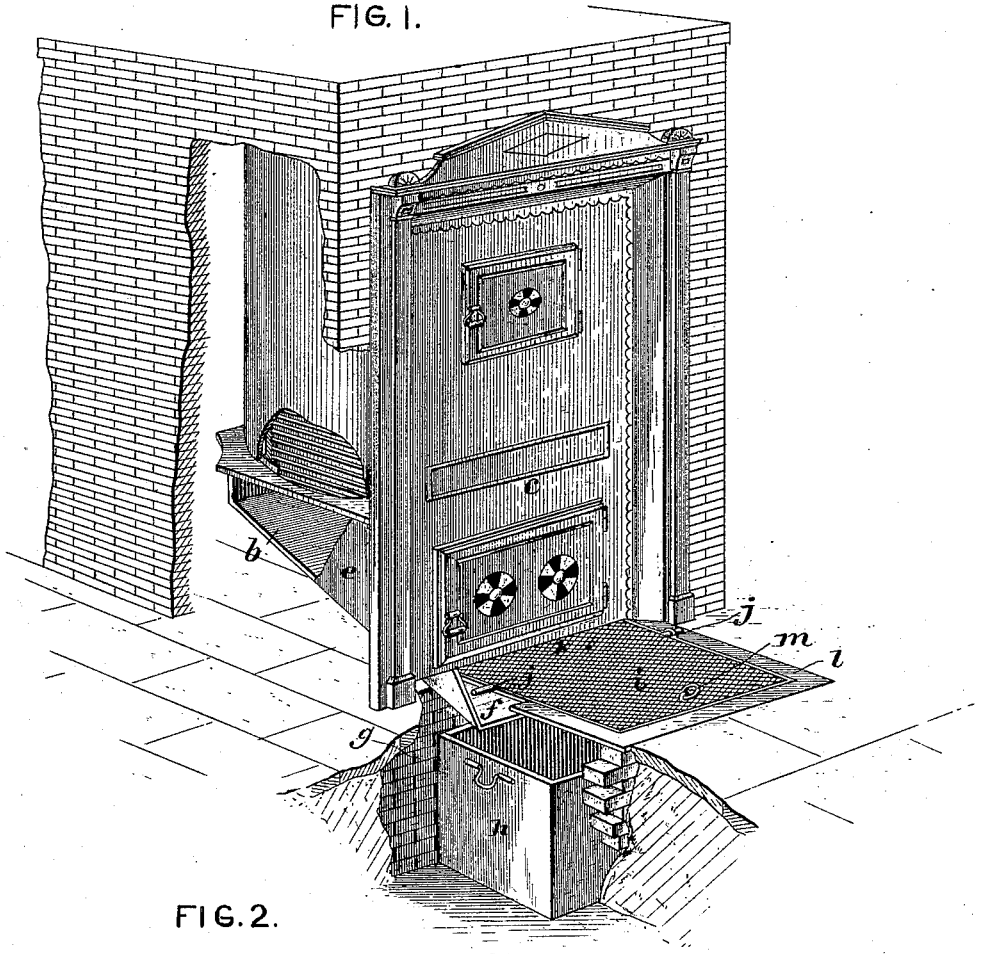
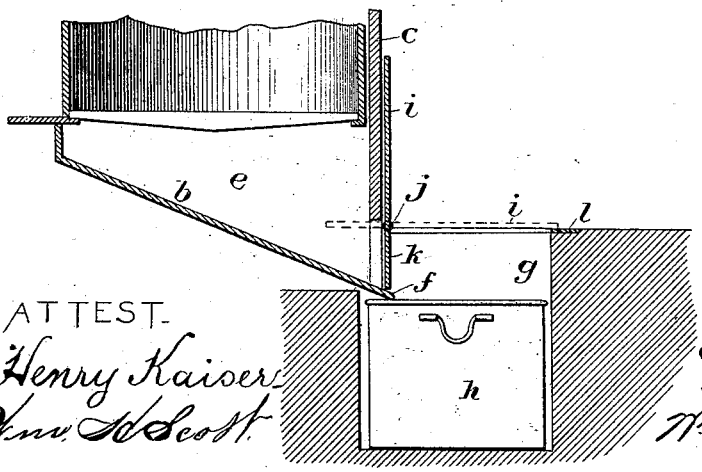


FIG. 2.



ATTEST.
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UNITED STATES PATENT OFFICE.

CHARLES T. SCHOEN, OF PHILADELPHIA, PENNSYLVANIA.

ASH-PIT FOR FURNACES.

SPECIFICATION forming part of Letters Patent No. 347,522, dated August 17, 1886.

Application filed May 1, 1886. Serial No. 200,772. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. SCHOEN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Ash-Pits for Furnaces, of which the following is a full, clear, and exact description.

The object of this invention is to provide heating apparatus with means for cleaning or clearing itself of ashes as they are made. As is well known, the ash-pit of furnaces is usually also the draft-inlet, and hence in order to insure a good draft this pit must be kept clean, which in former inventions could only be done by frequent attendance and use of a shovel to remove the ashes. Furthermore, when ashes are allowed to pile up under and in contact with the grate, their heat has a very injurious effect upon the grate itself, burning it out more rapidly and choking the draft. The removal of hot ashes to bins or barrels is a fruitful source of fires. The manual labor required in shoveling out ashes under old plans, and the dirt and dust incident to such plans, have been always a serious drawback to furnaces for heating dwellings. These objections, so far as I am aware, have obtained against furnaces heretofore used, and the purpose and end of my invention is to overcome them.

My invention therefore consists of a furnace which clears or cleans itself of ashes as they are made and conducts them to a receptacle outside of the furnace, whence and in which they may be removed from the building, all as I will now proceed to particularly set forth and claim.

In the accompanying drawings, in the two figures of which like parts are similarly designated, Figure 1 is a perspective view of sufficient of a bricked furnace for house-warming purposes to illustrate my invention, and Fig. 2 is a vertical section.

The furnace may be of any approved construction throughout; but beneath its grate *a*, I arrange a chute, *b*, highest at its inner end and the inner end of the grate, and inclining downwardly and outwardly to the front door, *c*, of the furnace, so that the ashes as they are made fall down this inclined chute and are carried away from beneath the grate, and consequently their accumulation under the grate is prevented. This chute has the closed rear wall, *d*, and the closed sides *e*, and its mouth *f* projects to a level with or slightly beyond the door to prevent the ashes from falling off the chute and direct them out of the furnace. This construction, therefore, insures proper draft to the grate.

In front of and outside the furnace, and in line with the chute, is arranged an underground pit, *g*, to contain an ash-pan, *h*, which receives the ashes as they come from the chute. This pit is covered by a door, *i*, hinged at *j* toward its rear end, so as to leave a projecting portion, *k*, extending into the chute. When the door *i* is raised, as in full lines, Fig. 2, to gain access to the ash-pan for its removal, then its projecting portion *k* extends across the mouth of the chute vertically, and closes it against the escape of ashes until the pan may be emptied and replaced and the door closed again. The door *i* may be pivoted in a metallic frame, *l*, surrounding the mouth of the pit *g*, as indicated in the drawings, and said door may also be provided with a ring, *m*, for operating it. The chute is made of iron plate, and hence increases the heat-radiating surface of the furnace, its capability of self-cleaning always leaving it free of ashes. The incoming draft, however, keeps it at such a temperature as to preclude its being burned out by the heat from the grate.

An additional very great advantage of this self-cleaning ash-pit is that it prevents the banking up of ashes beneath and in contact with the grate, and so prevents the burning out of the grate from beneath. By means of my self-cleaning ash-pit, also, the draft to the fire is always free and unobstructed, and the fire may thus be kept bright and fresh. The ashes may be discharged directly into the pit and removed therefrom with a shovel as the pit is filled.

I do not claim a stove or a stove attachment or adjunct having the wall of the stove or a partition therein back of the grate inclined to discharge the ashes into the ash-pit. In my invention the chute is constructed as an article of manufacture that may be applied to the grate-frame entirely independent of the walls

of the heater, and to any kind of heater, and so, also, the ash-pit is independent of the furnace or heater itself.

What I claim is—

1. The combination, with a furnace-grate, of a combined inclined air-induct and ash-discharge chute arranged directly beneath and connected with such grate, and slanting from its rear toward its front, and having its discharge end at the front, and an ash-pit at such discharge end arranged outside of and away from the furnace, and a hinged cover for said ash-pit, serving also as a cut-off for the chute, substantially as described.

2. The combination, with a furnace-grate, of an inclined chute arranged directly beneath it and opening outside the furnace, so as to convey the ashes as they are made immediately away from the grate and outside the furnace, an underground pit in front of the furnace to contain an ash-pan arranged to receive the ashes from the chute, and a hinged door for such pit adapted, when raised, to uncover the pit and at the same time to close the chute, substantially as described.

In testimony whereof I have hereunto set my hand this 28th day of April, A. D. 1886.

CHARLES T. SCHOEN.

Witnesses:
THOMAS M. BELL,
THOS. F. BELL.