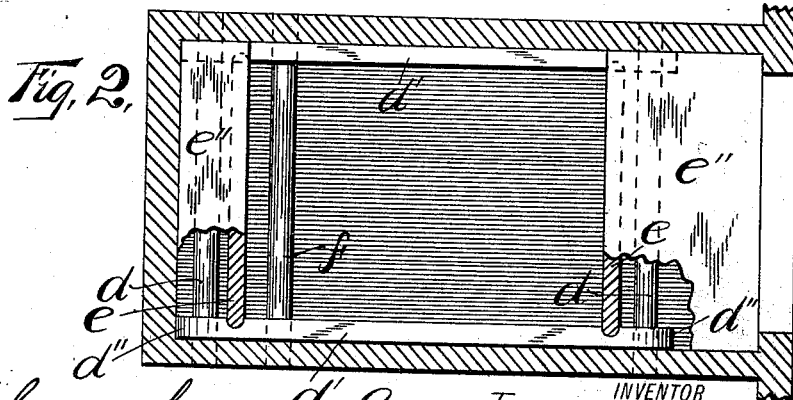
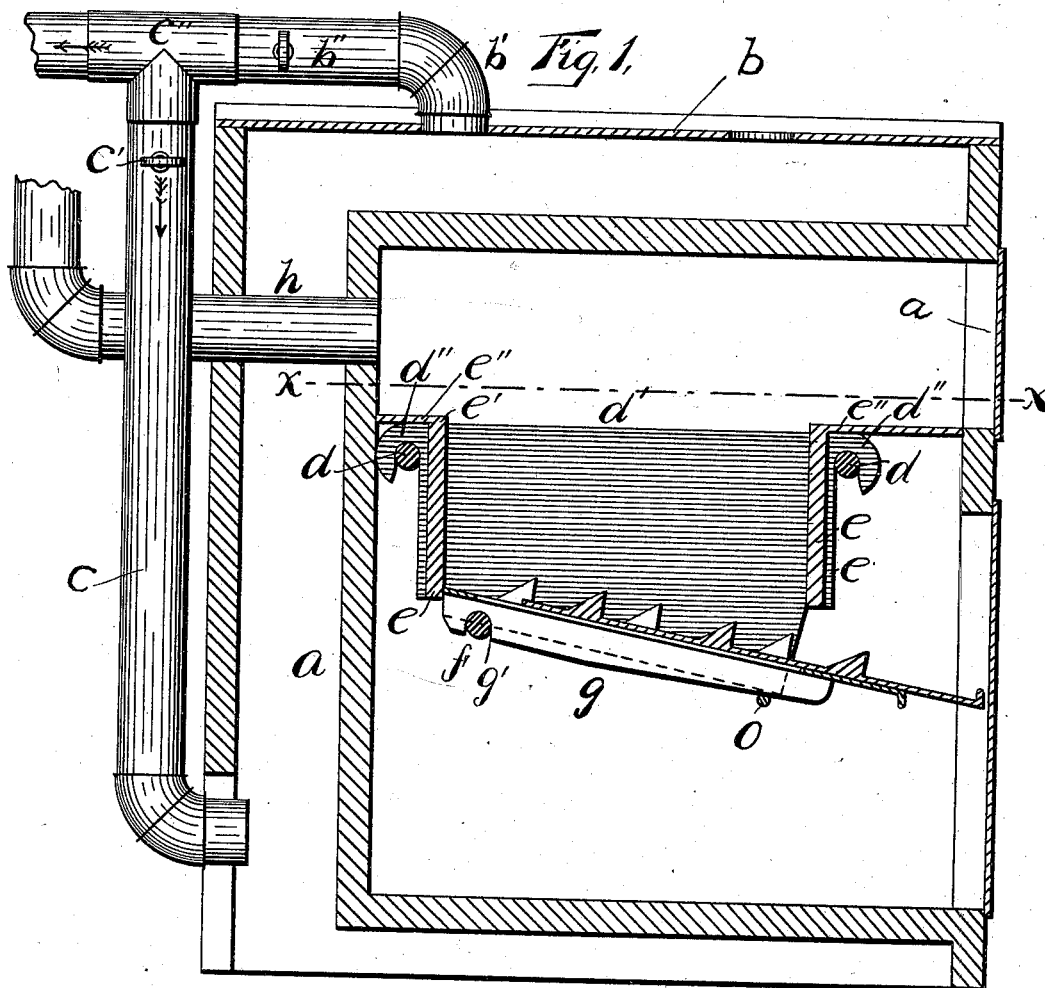


No. 647,161.

Patented Apr. 10, 1900.

I. SILVERNAIL.
HEATING APPARATUS.
(Application filed Nov. 4, 1899.)

(No Model.)



WITNESSES:
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UNITED STATES PATENT OFFICE.

ISAAC SILVERNAIL, OF SYRACUSE, NEW YORK.

HEATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 647,161, dated April 10, 1900.

Application filed November 4, 1899. Serial No. 735,753. (No model.)

To all whom it may concern:

Be it known that I, ISAAC SILVERNAIL, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and
5 useful Improvements in Heating Apparatus, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in
10 heating apparatus, having more particular reference to the construction of the fire-pot.

My object is to construct a fire-box for a heating apparatus so arranged that the several parts of the fire-pot may be readily removed and a new one inserted when the old one
15 is worn out or burned out and in the several other new and novel features of construction and operation which are hereinafter described, and specifically set forth in the claims hereunto annexed. It is constructed as follows, reference being had to the accompanying drawings, in which—

Figure 1 shows a vertical section of a furnace constructed in accordance with my invention. Fig. 2 is a section on line *x x*, Fig. 1, with the grate removed and part of the laterally-extending end pieces broken away.

Similar letters of reference indicate corresponding parts.

30 *a* is the body of the furnace, having a coal-chute *a'* in the ordinary way, and *b* is the jacket, having the hot-air pipe *b'* leading therefrom and provided with a damper *b''*.

35 *c* is a pipe opening into the jacket *b* at the bottom and provided with a damper *c'*, said pipe *c* forming a union with the hot-air pipe *b'* at the point *c''*.

40 Within the body of the furnace are rods *d*, extending transversely across the same, and *d'* are the side pieces of the fire-box, having their upper ends *d''* constructed hook-shaped, so as to pass over and rest upon the rods *d*, and by which the side pieces are supported.

The side pieces *d'* are provided at each end with vertical grooves *e*, and *e'* represents end
45 pieces forming a shoulder *e''*, adapted to engage with said groove and be held by passing over onto the top of the projecting end *d'* of the side pieces.

f is a rod extending transversely within the
50 furnace at the lower inner end of the fire-pot.

g is the base portion of the grate and is provided with a notch *g'* at its inner end, as shown at Fig. 1, and is adapted to rest upon the rod *f*. The forward end of the grate is
55 held in a vertical position by pins *o*, extending from each side of the furnace, and the distance between the grate and the lower end of the end piece *e'* allows for the vertical movement and adjustment of the grate.

60 *h* is the smoke-pipe leading from the combustion-chamber.

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

1. A furnace of the class described having transverse rods mounted therein, side pieces having hooks at their upper edges adapted to engage with the said rods to form the side
70 pieces of the fire-pot, and end pieces adapted to be supported in the side pieces, as set forth.

2. A furnace of the class described, comprising a shell having transverse rods secured therein, side pieces having hooks at their upper
75 ends adapted to engage with said rods, vertical grooves in the inner face of said side pieces, and end pieces having laterally-extending arms and adapted to engage with said grooves and extend over the transverse rod,
80 and a grate as set forth.

In witness whereof I have hereunto set my hand this 1st day of November, 1899.

ISAAC SILVERNAIL.

Witnesses:

MILDRED M. NOTT,
HOWARD P. DENISON.