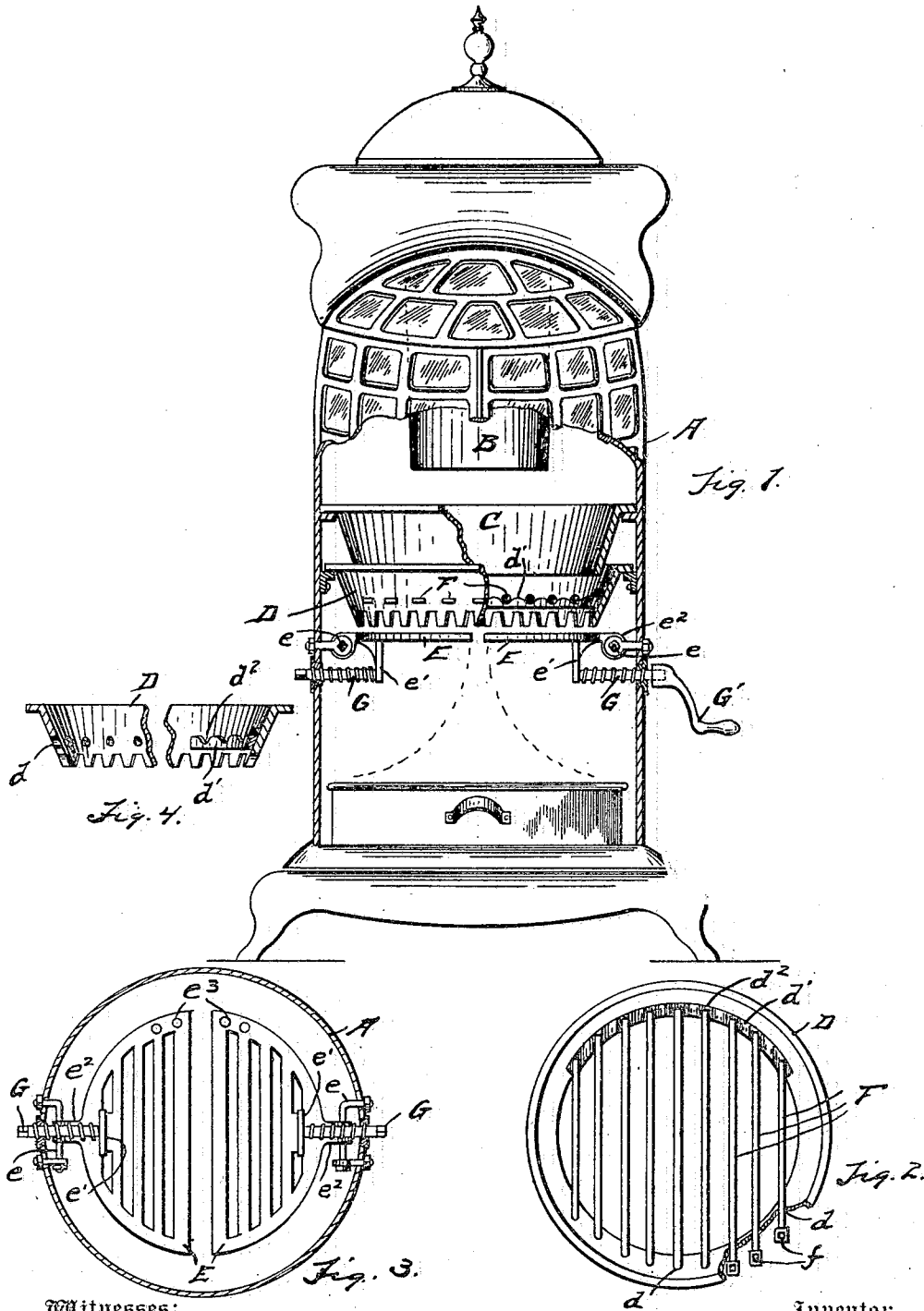


No. 809,701.

PATENTED JAN. 9, 1906.

S. KNAPP.
FIRE POT AND GRATE.
APPLICATION FILED FEB. 24, 1905.



Witnesses:
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STEFAN KNAPP, OF DETROIT, MICHIGAN.

FIRE-POT AND GRATE.

No. 809,701.

Specification of Letters Patent.

Patented Jan. 9, 1906.

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To all whom it may concern:

Be it known that I, STEFAN KNAPP, a subject of the Emperor of Germany, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Fire-Pots and Grates; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to fire-pots and grates for stoves or furnaces, being more particularly adapted for use in such stoves or furnaces as are provided with a magazine in which fuel is stored and automatically fed to the fire in the fire-pot.

The object of my invention is to provide means whereby the clinkers and ashes that accumulate in the lower part of the fire-pot may be completely removed without interfering with the fire in the fire-pot or the fuel in the magazine. Kindling may also be introduced into the fire-pot more easily than has heretofore been possible. I attain these objects in a manner hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 is a sectional elevation of a stove, clearly showing my improved fire-pot and grate. Fig. 2 is a plan view of the auxiliary fire-pot with the retaining-bars in position. Fig. 3 is a bottom view of the grate. Fig. 4 is a sectional view of the auxiliary fire-pot.

Similar letters refer to similar parts throughout the several views.

A is a stove of the ordinary type provided with a magazine B, a fire-pot C, an auxiliary fire-pot D, and a grate E. The fire-pot C is of the usual pattern and is made of some fire-resisting material. The auxiliary fire-pot D is ordinarily made of cast-iron and is so supported within the stove that the lower edge of the fire-pot C is slightly lower than the upper edge of the auxiliary fire-pot D. A number of holes d are provided through the front of the auxiliary fire-pot, and at the rear is arranged a ledge d' , as is clearly shown in Figs. 2 and 4. The ledge d' has corrugations d'' , corresponding to the holes d in the front of the auxiliary fire-pot D.

F indicates a series of bars that at certain times are inserted through the holes d with the inner ends resting in the corrugations d'' in the ledge d' , thus practically forming a grate

for the fire-pot C. The corrugations d'' properly space the bars at the rear of the auxiliary fire-pot D. Each bar F is formed with a hole f in one end, in which any suitable instrument may be inserted to withdraw it from the fire-pot.

The grate E is made in two parts, which are of similar construction and are hinged at their respective sides of the stove-casing, as indicated at e . A screw G is provided at each side of the stove, whereby each half of the grate E may be dropped, as indicated by dotted lines in Fig. 1, from a horizontal position under the auxiliary fire-pot D to a position practically parallel with the walls of the stove. Each half of the grate E is provided with a lug e' , which by reason of the weight of the grate and any material that is upon it rests against the inner end of the screws G. By turning these screws by any means, such as the crank G', the grate may be made to open away from or close toward the auxiliary fire-pot D.

The hinge-pin e is somewhat longer than the width of the hinge part e'' on the grate in order that the grate may be given a lateral movement for shaking out the ashes. This may be accomplished by any one of several means, one of which I have indicated at e'' in Fig. 3. These are simply holes through the front edge of the grate wherein any suitable instrument may be inserted and the grate shaken.

The operation of my device is as follows: Under ordinary conditions, with fire in the fire-pot and fuel in the magazine, the grate may be given a slight lateral movement for the removal of ashes. Should clinkers form in the auxiliary fire-pot, the bars F are inserted and the grates dropped, as indicated in Fig. 1, thus freeing the auxiliary fire-pot and grates from such material, and the bars F act as a grate for the fire-pot C, retaining the fire in the fire-pot and the fuel in the magazine practically undisturbed. Should it become necessary to start a new fire when the magazine is full, the bars F are inserted as before and the grates dropped and returned nearly to a horizontal position, when kindling may be placed on the upper surface and lighted. The grates thereupon being returned to their proper position under the auxiliary fire-pot, the fire is brought closely under the fresh fuel resting on the bars F.

What I claim is—

1. In combination with a stove or furnace provided with a magazine, a fire-pot, an aux-

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iliary fire-pot, a series of bars adapted to rest in supports with which the auxiliary fire-pot is provided, said supports being so arranged that the bars, when in position, are below the fire-pot and equidistant from each other, a grate below the auxiliary fire-pot, said grate being in two parts, hinged to opposite sides of the stove-casing, each part being provided with a lug on its under side, and a screw threaded through each side of the stove-casing, below the grate, adapted to bear against the lugs on said grate, substantially as shown and described.

2. In combination with a stove or furnace provided with a magazine, a fire-pot, an auxiliary fire-pot, a series of bars adapted to rest in supports with which the auxiliary fire-pot is provided, said supports being so arranged that the bars, when in position, are below the fire-pot and equidistant from each other, a

grate below the auxiliary fire-pot, said grate being in two parts, each of which is provided with a perforated hinge member, a hinge-pin of greater length than the width of said perforated member and upon which said member is mounted to slide and to turn, said hinge-pin being rigidly secured to the stove-casing, each part of the grate being provided with a lug on its under side, and a screw threaded through each side of the stove-casing, below the grate, adapted to bear against the lugs on said grate, substantially as shown and described.

In testimony whereof I sign this specification in the presence of two witnesses.

STEFAN KNAPP.

Witnesses:

JOHN GALLOWAY,
CHAS. E. WISNER.