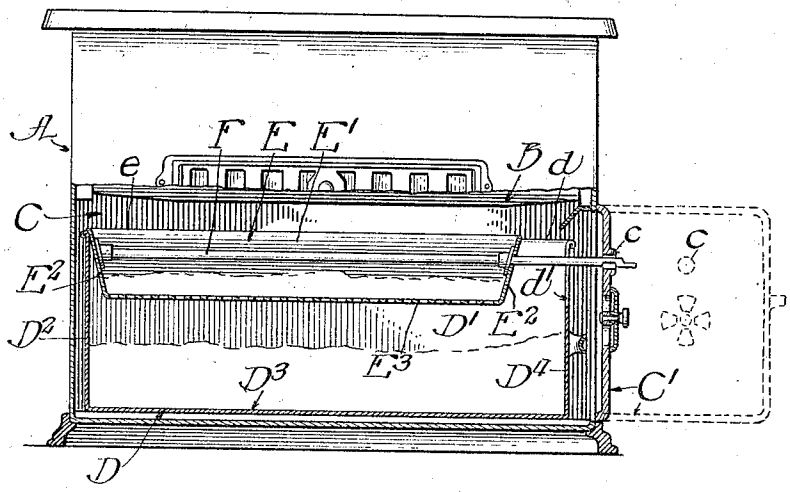
O. G. SAMUELSON & H. R. LINDQUIST.

ASH PAN.

APPLICATION FILED JAN. 9, 1911.

995,913. Patented June 20, 1911.

Fig. 1.



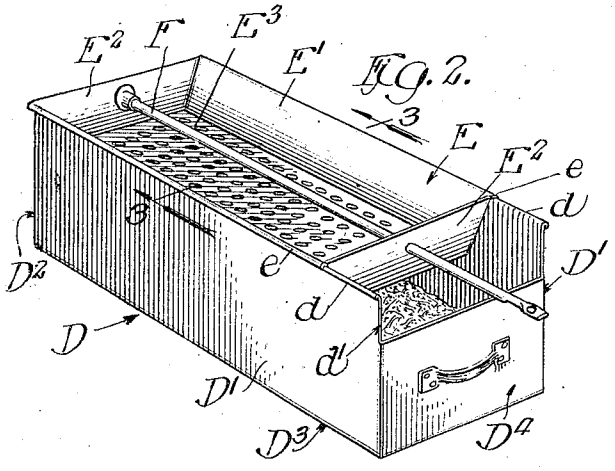


Fig. 2.

Fig. 5.

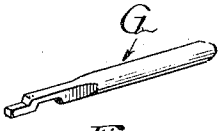
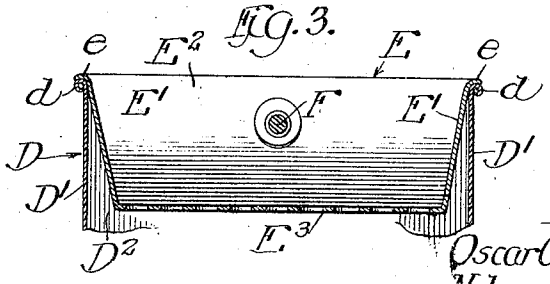


Fig. 4.

Fig. 3.



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UNITED STATES PATENT OFFICE.

OSCAR G. SAMUELSON AND HELMER R. LINDQUIST, OF CHICAGO, ILLINOIS.

ASH-PAN.

995,913. Specification of Letters Patent. Patented June 20, 1911.

Application filed January 9, 1911. Serial No. 601,540.

To all whom it may concern:

Be it known that we, OSCAR G. SAMUELSON and HELMER R. LINDQUIST, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ash-Pans; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to certain novel features of construction in ash pans adapted for use in stoves, ranges and the like, and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a view representing a side elevation of a range or stove provided with our improved ash pan, parts of the range wall and of the ash pan being broken away to show the inner construction. Fig. 2 is a perspective view of the ash pan removed from the range or stove. Fig. 3 is a transverse section through the ash pan on the line 3—3 of Fig. 2. Fig. 4 is a perspective view of the removable bar by means of which the sifter in the ash pan is operated. Fig. 5 is a longitudinal section through the removable operating bar and the fixed rod connected with the sifter of the ash pan, showing the means by which they are operatively connected.

In that embodiment of our invention illustrated in the drawings, A indicates a stove or range which may be of any usual or familiar construction.

B is the grate; C, the ash pit below the grate, and C^1, the door closing the opening into the ash pit through which the ash pan is adapted to be removed.

D indicates the ash pan. Said ash pan is proportioned in size to fit easily within the ash pit so that it may be readily withdrawn longitudinally through the door opening, and has side walls D^1, D^1, a rear end wall D^2, a bottom wall D^3, and a front end wall D^4. The side walls D^1 and the rear end wall D^2 are substantially of the same height, which is preferably about equal to the depth of the ash pit C. The front end wall D^4 is of less height than the side walls, being cut away at the top to leave an opening d^1.

E indicates a sifter which is mounted within the ash pan D so as to have endwise reciprocating movement therein. Said sifter consists of a shallow, open, rectangular vessel of substantially the width of the ash pan and having a length less than that of the ash pan by an amount equal to the distance through which the sifter is to be reciprocated. The sifter E has imperforate side and end walls E^1, E^1 and E^2, E^2, and a perforated bottom E^3. The perforations of the bottom are of such size as to permit the ashes to pass through them but are too small to permit the passage of the larger unburned particles of fuel. The upper edges of the side walls D^1, D^1 of the ash pan are constructed to form longitudinal rails *d*, *d* and horizontal, longitudinal flanges *e*, *e* are formed at the upper edges of the side walls E^1, E^1 of the sifter which flanges engage said rails *d*, *d*. The sifter thus substantially incloses the top of the ash pan so that particles falling from the grate will be intercepted by the sifter before they reach the ash pan.

F indicates a rod or bar extending the full length of the sifter and rigidly secured to the end walls thereof. Said bar projects forwardly beyond the front end wall E^2 of the sifter and extends through an aperture *c* in the door C^1 of the ash pit. Said bar is provided at its forward end with means for removably attaching to it an operating bar or handle G by means of which it may be given reciprocating backward and forward movement when the door C^1 is closed. Any convenient means may be provided for removably locking said bars together in a longitudinal direction as, for example, the familiar means illustrated in Figs. 4 and 5.

The operation of the device is apparent from the above description: The ash pan is placed in the ash pit in the usual manner with the sifter located as shown and described. The ashes and unconsumed parts of the fuel which fall from the grate drop into the sifter in the first instance, some of the ashes at the same time falling from the sifter into the ash pan below. When the ashes and unconsumed particles of fuel have accumulated in the sifter the operating bar or handle G is attached to the projecting end of the rod F and the sifter, while the ash pit door C^1 is closed, is rapidly reciprocated backward and forward on the rails *d*, *d*. This movement of the sifter causes the ashes to fall into the ash pan, leaving the unconsumed lumps of fuel in the sifter.

The door C^1 is then opened and the sifter withdrawn through the opening d^1 in the front end of the ash pan and through the ash pit doorway. The unconsumed lumps of fuel may be then put back into the grate while still hot. The sifter is then replaced in the ash pan, the ash pit door closed, and the bar G removed so that it may not become heated.

By the use of our device the unconsumed lumps of fuel may be separated from the ashes while still hot so that when they are returned to the hot coals of the grate they are in condition to burn with little loss of heat in bringing them to the point of combustion. This is of great advantage since considerable heat is wasted in again heating the unconsumed particles of fuel where, as is now the general practice, they are separated from the ashes after the latter have been removed from the stove and placed in a separate device, usually located in an alley or other place out of doors where they become cold. Another advantage of our device is that it may be operated with the ash pit door closed, so that noxious fumes and ash dust will not escape into the room during the operation of sifting out the ashes.

We claim as our invention:—

1. In a stove and the like, in combination with the grate, means inclosing an ash-pit below the grate and providing a doorway opening into said ash-pit, and a door closing the same, said door being provided with an aperture, an ash-pan located in said ash-pit and adapted for withdrawal through said doorway, said ash-pan having side, bottom and rear walls and a front wall having an opening at the top, an ash-sifter comprising a shallow, open vessel having a perforated bottom, said sifter being constructed to inclose the open top of said ash-pan but being shorter from front to back than said ash-pan, said sifter being of such depth that it may be withdrawn through said opening in the front wall of said ash-pan and being mounted within said ash-pan to have forward and backward sliding movement therein, and a bar rigidly connected to said sifter and projecting through said aperture in said ash-pit door.

2. In a stove and the like, in combination with the grate, means inclosing an ash-pit below the grate and providing a doorway opening into said ash-pit, and a door closing the same, said door being provided with an aperture, an ash-pan located in said ash-pit adapted for withdrawal through said doorway, said ash-pan having side, bottom and rear walls and a front wall cut away at the top to leave an opening, an ash-sifter comprising a shallow, open vessel having a perforated bottom and having imperforate side, front and rear walls, lateral flanges formed on the side walls of said ash-pan, said sifter being of such depth that it may be withdrawn through said opening in the front wall of said ash-pan but being shorter from front to rear than said ash-pan, a bar rigidly connected to said sifter and projecting through said aperture in said ash-pit door, and a handle adapted to be removably connected to the projecting end of said bar for reciprocating said ash-sifter.

In testimony, that we claim the foregoing as our invention we affix our signatures in the presence of two witnesses, this 5th day of January A. D. 1911.

OSCAR G. SAMUELSON.
HELMER R. LINDQUIST.

Witnesses:
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