G. F. HALLEY.

Screen.

No. 204,147. Patented May 28, 1878.

Fig. 2.

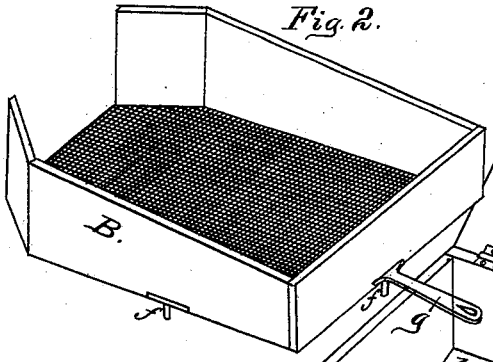


Fig. 1.

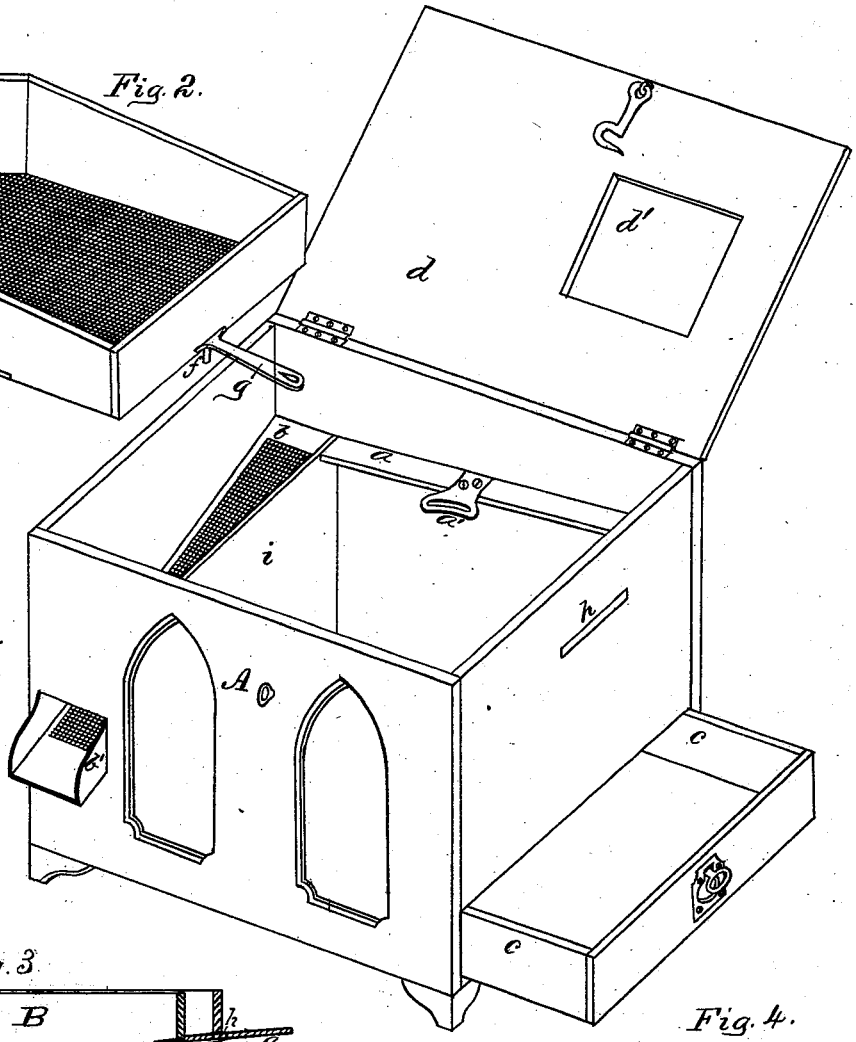


Fig. 3.

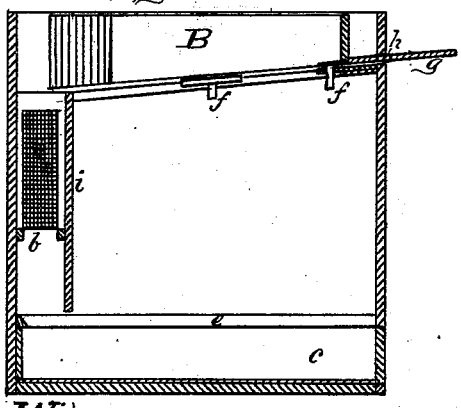
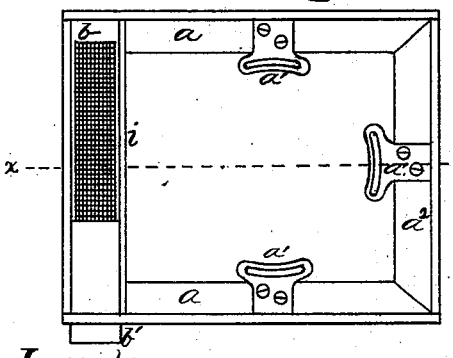


Fig. 4.



Witnesses.

D. P. Comb

Lor Bacon

Inventor.

George F. Halley

UNITED STATES PATENT OFFICE.

GEORGE F. HALLEY, OF PRINCETON, NEW JERSEY.

IMPROVEMENT IN SCREENS.

Specification forming part of Letters Patent No. **204,147**, dated May 28, 1878; application filed April 1, 1878.

To all whom it may concern:

Be it known that I, GEORGE F. HALLEY, of Princeton, Mercer county, in the State of New Jersey, have invented certain new and useful Improvements in Screens for Screening Ashes and other substances; and the following, in connection with the accompanying drawing, is sufficient to give a complete understanding thereof.

My invention is designed, principally, for screening coal-ashes, but it may be used for other purposes also; and it consists in certain details of construction, as will be hereinafter described, and pointed out in the claims.

Referring to the drawing, Figure 1 represents a view, in perspective, of the case of my improved screen with the screen or separator removed therefrom. Fig. 2 is a similar view of the screen or separator removed from its case. Fig. 3 is a vertical section, with the cover removed, on the line *x* of Fig. 4; and Fig. 4 is a plan of the case with screen removed.

A is the case or box, provided on the inside with inclined ways or supports *a a*, which are connected at their front end by a transverse support, a^2. These ways are provided with slotted ears a^1 a^1 a^1, as shown in Figs. 1 and 4, into which project pins *f f f* on the under side of the screen. (Shown in Figs. 2 and 3.) At the rear end of the box is a second screen, *b*, which is stationary, and arranged at such an inclination as to allow the coal or other substances to be screened to roll off readily without danger of clogging. This screen *b* projects at its lower end through the side of the box, and terminates in a spout, *b'*, to conduct the screened coal into a receptacle to be placed thereunder. Adjacent to the screen *b*, and running transversely through the box, is a partition, *i*, which prevents the coal from rolling off the screen *b* and dropping into the ash-pan *c* in the bottom of the box. This partition *i* does not extend entirely down to the bottom of the box, space being left between it and the bottom for the ash-pan *c*, which, in this case, is made in the shape of a drawer, as shown in the drawing, and which extends the whole length of the box, so as to catch the ashes from the secondary screen *b*. This drawer or pan, if made of wood, should be metal-lined, so as to prevent ignition from hot ashes; but it may, if desired, be made entirely of sheet metal. On the inside of the box or case are placed beveled strips *e*, to prevent the ashes from falling between the side of the box and the ash pan or drawer.

The main screen or separator B is made in the shape of a box, with a portion of one of its ends cut out to provide a passage for the coal. The bottom is of woven wire, and may be of any mesh desired, according to the material to be screened.

I may here remark that I contemplate in practice to provide several interchangeable screens or separators for each box, so that one may be removed and another substituted, to suit the particular purpose for which it is to be used.

On opposite sides of the bottom, and at one end, if desired, of this screen B, are pins or studs *f*, adapted to enter the slots of the ears a^1 in the case, by which the screen is retained in position and guided in its movements when being operated. At the end of the screen is a handle, *g*, which, when the screen is in position, projects through a slot or opening, *h*, in the end of the box, as shown in Fig. 3, and is of sufficient length to be conveniently grasped by the hand of the operator.

The box A is provided with a hinged cover, *d*, which has an opening, *d'*, as shown in Fig. 1, through which the material to be screened is poured upon the screen. This opening may be provided with a sliding cover for tightly closing it to prevent the escape of dust or ashes; or a hopper may be placed thereon, provided with a suitable cover, hinged or sliding, as may be preferred.

In operating this device the coal to be screened is poured upon the screen through the opening *d'* in the cover, and said opening is then tightly closed, to prevent the escape of dust or ashes. The handle *g* is then seized, and the screen vibrated, by which the ashes are shaken through the bottom, and the coal rolls down and escapes through the opening at the end and falls upon the secondary screen *b*, through which any remaining ashes will fall into the ash box or pan, and the coal will roll down and be delivered thoroughly sifted from the spout *b'*.

By means of the slotted ears a^1 and the pro-

jecting pins or studs *f* on the screen I obtain the same motion as if the screen were vibrated upon a central pivot without obstructing the passage of the ashes to the ash-box, and the ready removal of one screen and the substitution of another is permitted.

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

1. The ears a^1, arranged at the sides of the box and provided with curved slots, in combination with pins *f*, projecting from the under side of the screen B, as and for the purposes stated.

2. A screen for screening coal-ashes or other substances, provided with a handle, *g*, and pins or studs *f* on its under side, and having a wire bottom and an opening at one end to permit the escape of the coal therefrom, as shown.

GEORGE F. HALLEY.

Witnesses:
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THOMAS N. WALSH.