

M. V. B. WHITE.

Ash-Sifter.

No. 213,721.

Patented Mar. 25, 1879.

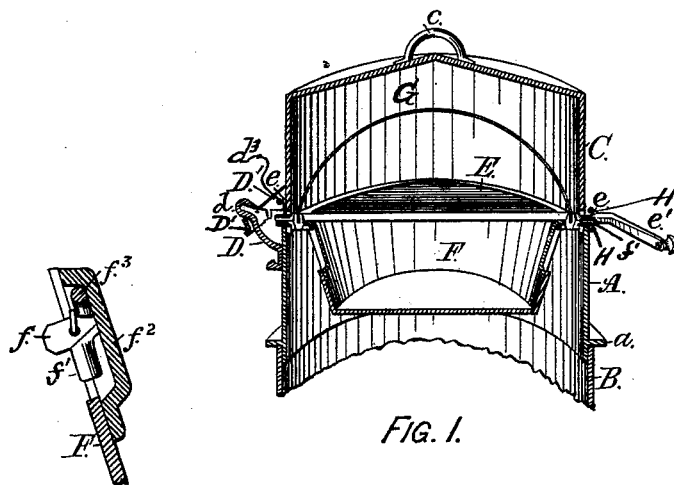


FIG. 1.

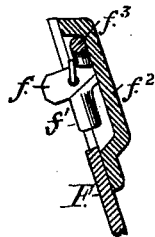


FIG. 3.

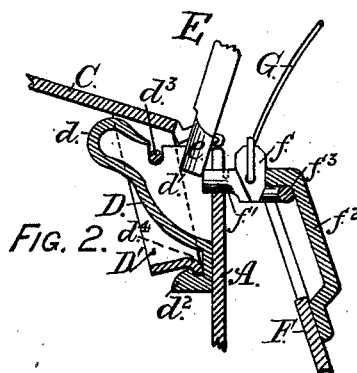


FIG. 2.

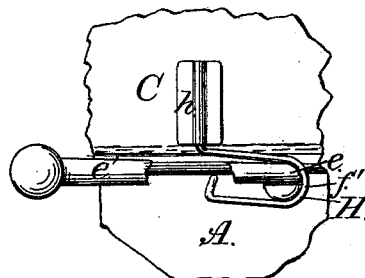


FIG. 4.

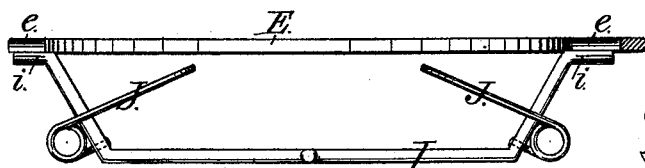


FIG. 6.

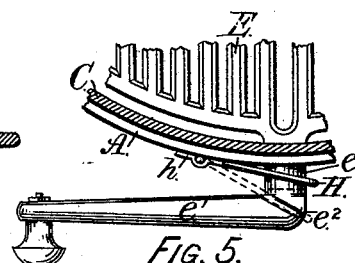


FIG. 5.

Witnesses,

E. J. Benham.

T. Pierce

Inventor,

MARTIN V. B. WHITE,

~by~

William H. Low,
Attorney.

UNITED STATES PATENT OFFICE.

MARTIN V. B. WHITE, OF ALBANY, NEW YORK.

IMPROVEMENT IN ASH-SIFTERS.

Specification forming part of Letters Patent No. 213,721, dated March 25, 1879; application filed November 22, 1878.

To all whom it may concern:

Be it known that I, MARTIN V. B. WHITE, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Ash-Sifters, of which the following is a full and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a vertical section of a perspective view of my improvement; Fig. 2, an enlarged and detached section of details of hinge for the casing and bail-ear for ash-pan; Fig. 3, enlarged and detached details of bail-ear for ash-pan; Figs. 4 and 5, details of crank-handle and fastening device, and Fig. 6 a pan-holding frame for adapting the sifter for use with different ash-pans.

My invention consists of an ash-sifter constructed and arranged to operate in the manner hereinafter fully set forth.

As shown in the drawings, A represents the lower casing of the sifter, which I preferably make of metal in a cylindrical form. Near its lower end it has a flange, *a*, for supporting it on a barrel, B, or other suitable receptacle for the ashes. (Only a portion of this receptacle is shown in the drawings.) C is the cover of the sifter, made to fit closely in the top of the casing A, and of sufficient height to permit the sifting apparatus to revolve freely under its top.

The parts A and C are hinged together by a hinge of the peculiar construction shown. D, the lower part of said hinge, is secured to the casing A, and has at its back a projection, *d*, formed by the extension of the two side plates, *d*¹, (only one of said plates being shown in the drawings.) At its lower extremity a catch, *d*², is formed. D', the upper part of the hinge, is secured to the cover C, and is made of a loop form to pass over the projection *d* of the lower part. When the cover is closed, as shown in Fig. 1, it engages beneath said projection and secures the upper and lower parts of the casing together at that point. It is provided with a cross-pin, *d*³, which, when the cover is opened, engages in notches formed in the side plates, *d*¹, and serves as a pivot on which the cover turns. At its rear is a lip,

*d*⁴, which engages with the catch *d*² to hold the cover C while opened.

E is the screen, made preferably of cast-iron in the form of a grate. It is provided with semi-cylindrical trunnions *e*, arranged diametrically opposite to each other. One of said trunnions terminates in a crank-handle, *e*¹, whereby the sifter is operated.

F is the ash-pan, which has, at opposite points of its circumference, the adjustable bail-ears *f*, bearing the semi-cylindrical trunnions *f*¹, which, in conjunction with the like parts of the screen, complete the journals on which the sifting apparatus revolves. The bail-ears are arranged in openings made in the sides of the ash-pan, covered by the chambered caps *f*², in which the bail-ears are pivoted by the points *f*³, so as to turn into the chamber of the cap, as shown in Fig. 3, or to protrude from the sides of the pan, as shown in Figs. 1 and 2.

The bail G has both of its ends formed into eyes, which are elongated in the direction of the body of the bail. The holes in the ears *f* for receiving said bail are made close enough to the edge nearest the pivotal points *f*³ to permit the eyes of the bail to turn freely there, but at the apex of each ear sufficient material is left above the hole to prevent the bail from turning. By this arrangement, when the trunnion portions *f*¹ are depressed, as shown in Fig. 3, the narrow portion of the ears then being in the eyes of the bail, the bail can turn freely; but when the trunnions are extended the wide portion of the ears comes into the narrow space between the main and hook portions of the bail, and prevents the bail from turning, and locks it in a perpendicular position in relation to the ash-pan F, thereby rendering the ash-pan, when carried by its bail, exempt from any danger of turning to spill its contents when overloaded at one side.

When the bail-ears are turned down, as shown in Fig. 3, the bail may be turned over the outside of the ash-pan.

By this arrangement the ordinary ash-pans used in stoves may be adapted to use in conjunction with my invention, and, as illustrated in the drawings, the ash-pan F represents the circular ash-pan commonly used in base-burn-

ing heating-stoves with my improved bail-ears applied thereto.

Pivoted to the side of the cylindrical cover C is a clamping and locking device for fastening together the semi-trunnions e and f^1 when it is required to revolve the sifter, for locking the crank e^1 to hold the screen E in a horizontal position and prevent it from revolving, and for securing, in conjunction with the hinge hereinbefore described, the casing A and cover C together, so that the sifter may be carried by the handle c at the top of the cover. Said clamping device consists of a metallic piece, H, made in the form shown. Its upper end, serving as a pivot, turns in the socket h , secured to the cover C, and its lower end, made in the form of a bight, passes over the semi-trunnions at the crank side of the screen and holds them securely together while the sifter is revolved. For locking the screen and cover together, and preventing the screen from revolving, the piece H is thrown into the position indicated by the dotted lines in Fig. 5. It then enters a groove, e^2 , formed in the crank to receive it, locking the screen from revolving, at the same time releasing its hold of the trunnion f^1 , and leaving the ash-pan free.

The operation of my sifter is as follows: The screen E is locked to the cover C in the manner hereinbefore described, and both parts are turned back on the hinge D, where they are sustained by the catch d^2 and lip d^1 , as shown in Fig. 2. The ash-pan F, containing the débris to be sifted, is hung by its trunnions in bearings formed to receive them in the casing A. By extending the trunnions for this purpose the bail G is thrown into an erect position, as shown in Fig. 1. The cover is then closed by first raising it bodily to release the lip d^1 from the catch d^2 , and then turning it down on the pivot d^3 . The bail G, passing through the center slot of the screen E, is maintained therein during the operation of sifting.

When the cover is closed the clamping device H is moved out of the notch e^2 and over the semi-trunnions, so as to lock them together. In doing this the free end of the device H engages under the wired edge of the lower casing, (or other suitable catch fixed to said casing for this purpose,) and secures the casing and cover together, when the sifter may be carried by the top handle.

When the trunnions are locked, as described, the screen E rests upon the ash-pan F and forms a cover for it, as shown in Fig. 1. The ash-pan and screen are then rotated by the crank e^1 , thereby causing the contents of the pan to be violently agitated. During this operation the ashes and other fine particles placed in the ash-pan pass through the openings in the screen and are deposited in the barrel B, and the coal remains in the ash-pan.

After the sifting is effected the clamping device is shifted into the groove e^2 , so as to release the trunnion of the ash-pan. The cover C, carrying the screen E, can then be raised on the hinge D, leaving the ash-pan F, containing the screened coal, hanging in the casing A, from whence it can be readily removed for the purpose of emptying its contents.

In the modification shown in Fig. 6, I is a frame having a depression for receiving an ash-pan, and its ends terminating in semi-trunnions i , which trunnions serve the same purpose that the semi-trunnions f^1 do in the preceding description.

Ash-pans of different sizes and shapes may be inserted between the screen E and the depressed part of the frame I, and will be held up by the springs J against the screen during the operation of the sifter.

I claim as my invention—

1. The combination, with the casing A and cover C, connected by means of the hinge D, constructed as herein described, of the screen E, ash-pan F, and clamping device H, as and for the purpose herein specified.

2. The combination, with the cover C and clamping device H, as described, of the screen E, provided with semi-trunnions e , crank e^1 , and notch e^2 , as and for the purpose herein specified.

3. The combination, with the screen E of an ash-sifter, as herein described, of the frame I, provided with the semi-trunnions i and the springs J, as and for the purpose specified.

4. The combination, with the pan F, of the hinged bail-ears f , as herein described, and bail G, arranged to operate as herein specified.

MARTIN V. B. WHITE.

Witnesses:

WILLIAM H. LOW,
T. PIERCE.