C. E. DEVERMANN.

ASH SIFTER.

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915,078. Patented Mar. 16, 1909.

Fig. 1.

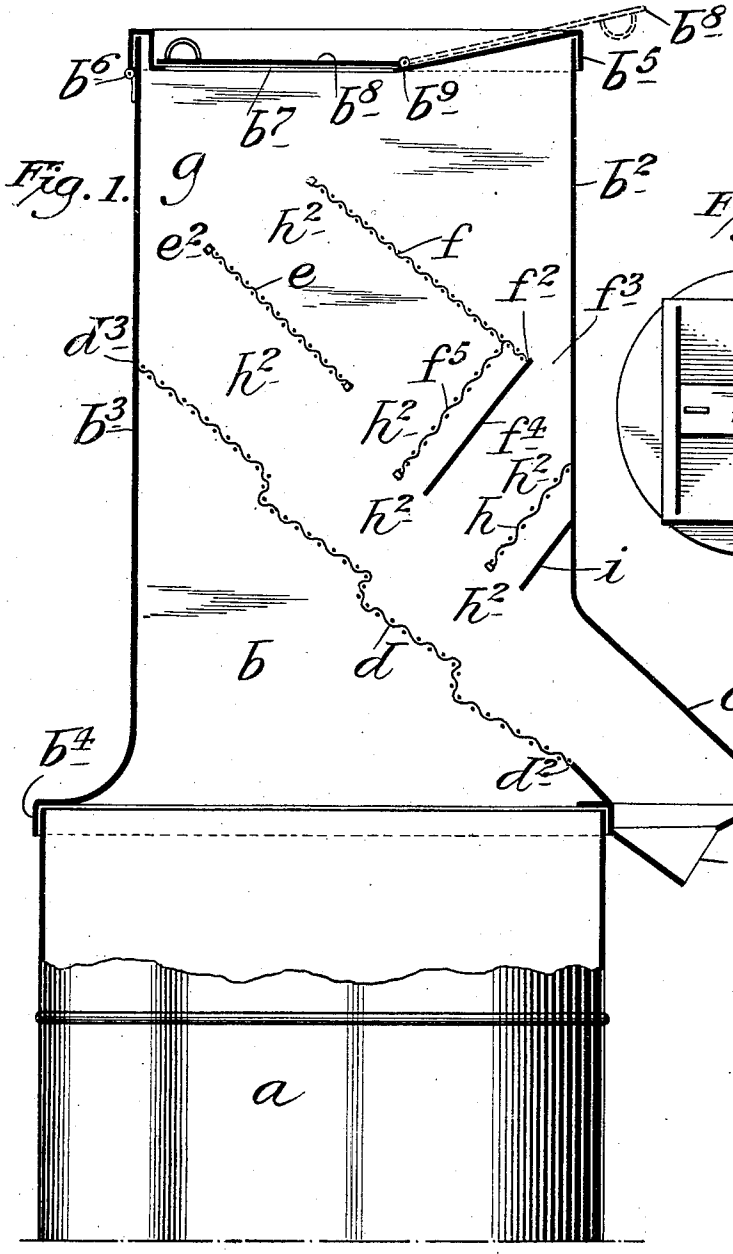
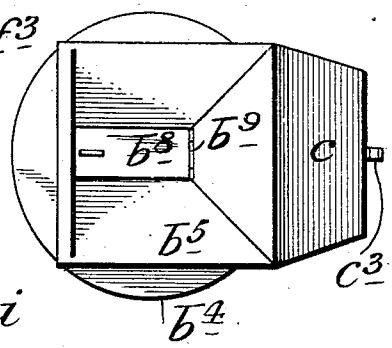


Fig. 2.



WITNESSES

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ASH-SIFTER.

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To all whom it may concern:

Be it known that I, CHARLES E. DEVERMANN, a citizen of the United States, and residing at Van Nest, New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Ash-Sifters, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to devices for sifting coal ashes so as to separate cinders, charred coal and other substances therefrom; and the object of the invention is to provide an improved device of this class which is simple in construction and comparatively inexpensive, and which may be conveniently used for the purpose specified without creating a great amount of dust at the point where the sifter is used, and by means of which the cinders, charred coal and similar substances may be quickly separated from the ashes, said cinders, charred coal and the like, and said ashes being deposited in separate receptacles prepared therefor.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Figure 1 is a central vertical section of my improved sifter and showing the same placed on an ash barrel, can or like receptacle, and, Fig. 2 a plan view of the sifter detached or removed from the barrel, can or other receptacle, and on a smaller scale than Fig. 1.

In the drawing forming part of this specification, I have shown at a a barrel, can or similar receptacle, on which is placed my improved ash sifter b, and for the purpose of this description the side b^2 of said sifter will be called the front thereof, and the side b^3 the back thereof. The body portion of the sifter b is preferably rectangular in cross section, and the base thereof is provided with a circular depending flange or rim b^4 adapted to rest upon and inclose the top of the barrel or can a, and said body portion of the sifter is also provided with a cap b^5 which is preferably movable and also preferably hinged at one side as shown at b^6, and the cap b^5 is substantially hopper-shaped in form, the front portion thereof and the opposite sides being inclined inwardly and downwardly to an opening b^7 in the back and central portion of said cap, and the aperture b^7 is provided with a closure device b^8, the front end portion of which is hinged at b^9, and said closure device may be turned into the position shown in dotted lines in Fig. 1 so as to open the aperture b^7, or it may be turned into the position shown in full lines, whenever desired, so as to close said aperture. The body portion of the sifter is also provided at the front and at the bottom thereof with a downwardly and outwardly ranging discharge chute c having a discharge opening c^2, and the chute c is provided with a hook c^3 from which a bucket may be suspended so as to catch the charred coal, cinders and similar substances discharged through the chute c as hereinafter described.

Within the body portion of the sifter is placed a transverse stepped screen d which ranges from the bottom of the chute c at d^2 upwardly and backwardly to the back of the sifter at a point d^3 about midway of the height of said body portion of the sifter, and above the rear portion of the sifter b is placed another screen e which ranges parallel with the upper portion of the screen d, and between the rear edge of which and the back of the body portion of the sifter is an open space e^2, and the screen e extends downwardly and forwardly to about the middle of the body portion of the sifter.

Above the screen e and forwardly thereof is placed another screen f between the upper rear edge of which and the back of the sifter is a space g, the dimensions of which are much greater than the space e^2, and the distance between the screen f and the screen e is about the same as the distance between the screens e and d. The screen f extends downwardly and forwardly to a predetermined point at f^2 between which and the front wall of the sifter is a space f^3, and the front edge of the screen f connects with a plate f^4 which extends downwardly and backwardly at an angle to the screen f of about 90 degrees, and ranging rearwardly of the plate f^4 is a screen f^5 parallel therewith, and at a predetermined distance therefrom.

Arranged forwardly of and below the plate f^4 is a screen h which is parallel with the plate f^4, and which extends downwardly and backwardly from the front wall of the body portion of the sifter, and arranged forwardly of the screen h and extending downwardly and backwardly from the front wall of the body portion of the sifter is a plate i parallel with the screen h.

Between the screens d, e and f, and between the plate f^4 and the screen h, and between the screens f^5 and h and the screen d, and between the plates f^4 and i and the screen d are spaces h^2 of sufficient dimensions to permit the passage of charred coal, cinders and the like material, and the spaces at f^3, g and e^3 are for a similar purpose.

The operation will be readily understood from the foregoing description, when taken in connection with the accompanying drawing and the following statement thereof. In practice the door b^8 in the bottom of the hopper-shaped cap b^5 is opened as shown in dotted lines in Fig. 1, and ashes, cinders, charred coal and like material are dumped into the top of the sifter and said material falls on the screens d, e and f and rolls forwardly and downwardly thereover. That part of the material that falls on the screen e rolls downwardly and forwardly and part of the ashes pass through said screen and fall onto the screen d and the coarser part of said material rolls off of said screen e and some of it strikes the screen f^5 and the balance falls onto the screen d, and that part of the material which strikes the screen f^5 is also thrown downwardly and backwardly onto the screen d. That part of the said material which falls on the screen f rolls downwardly and forwardly and the ashes or finer part thereof falls through said screen onto the screens e and f^5 and onto the screen d, and the part of the ashes or finer material that fall on the screen f also passes through said screen and strikes on the plate f^4 and is thrown downwardly and backwardly onto the screen d, while the coarser part of the material that falls on the screen f rolls downwardly and forwardly and off of said screen and against the screen h and onto the screen d. A portion of the ashes from the screen f will fall onto the screen h and a small part thereof will pass through the screen h and strike the plate i, and this material will also be thrown downwardly and backwardly onto the screen d. It will therefore be observed that all of the material that is dumped into the top of the screen body sooner or later falls upon the screen d and the coarser material that falls from the screens e, f and h onto the screen d shakes the said screen d and causes it to pass all the finer material therethrough, while the charred coal, cinders and other coarse substances pass downwardly over said screen and out through the discharge spout c.

My improved sifter is simple in construction and operation and involves no movable mechanical parts, and is not liable to get out of order or need repair.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is;—

1. An ash sifter adapted to be placed on a barrel or other receptacle and provided at its front and at the bottom thereof with a downwardly and outwardly directed discharge chute, a screeen ranging upwardly and backwardly from the bottom wall of said chute to the back wall of the sifter, and other screens arranged transversely of the body portion of the sifter above and in front of the last named screen and parallel therewith, and between which and the back wall and front wall of the sifter are open spaces, the uppermost screen being extended downwardly and forwardly of the screen thereunder, and connecting at its front edge with a downwardly and backwardly inclined plate rearwardly of which is placed a screen parallel therewith.

2. An ash sifter adapted to be placed on a barrel or other receptacle and provided at its front and at the bottom thereof with a downwardly and outwardly directed discharge chute, a screen ranging upwardly and backwardly from the bottom wall of said chute to the back wall of the sifter, and other screens arranged transversely of the body portion of the sifter above and in front of the last named screen and parallel therewith, and between which and the back wall and front wall of the sifter are open spaces, the uppermost screen being extended downwardly and forwardly of the screen thereunder, and connecting at its front edge with a downwardly and backwardly inclined plate rearwardly of which is placed a screen parallel therewith, the front body portion of the sifter being also provided forwardly of and below said plate with a screen parallel with said plate, and forwardly of which and separated therefrom is arranged another plate parallel therewith.

3. An ash sifter adapted to be placed on a barrel or other receptacle and provided at its front and at the bottom thereof with a downwardly and outwardly directed discharge chute, a screen d ranging upwardly and backwardly from the bottom of said chute to the upper back wall of the sifter, other screens e and f arranged transversely of the body portion of the sifter and above and in front of the last named screen, and beginning at different and predetermined points forwardly of and above the rear end of the last named screen, all of said screens

ranging downwardly and forwardly, and being parallel and at predetermined distances apart, and the last named screens terminating rearwardly of the front wall of the sifter, said sifter being also provided with a hopper-shaped cap having an opening in the rear portion thereof provided with a hinge cover.

In testimony that I claim the foregoing as my invention I have signed my name in presence of the subscribing witnesses this 8th day of February, 1908.

CHARLES E. DEVERMANN.

Witnesses:

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M. E. DOODY.