

No. 613,002.

Patented Oct. 25, 1898.

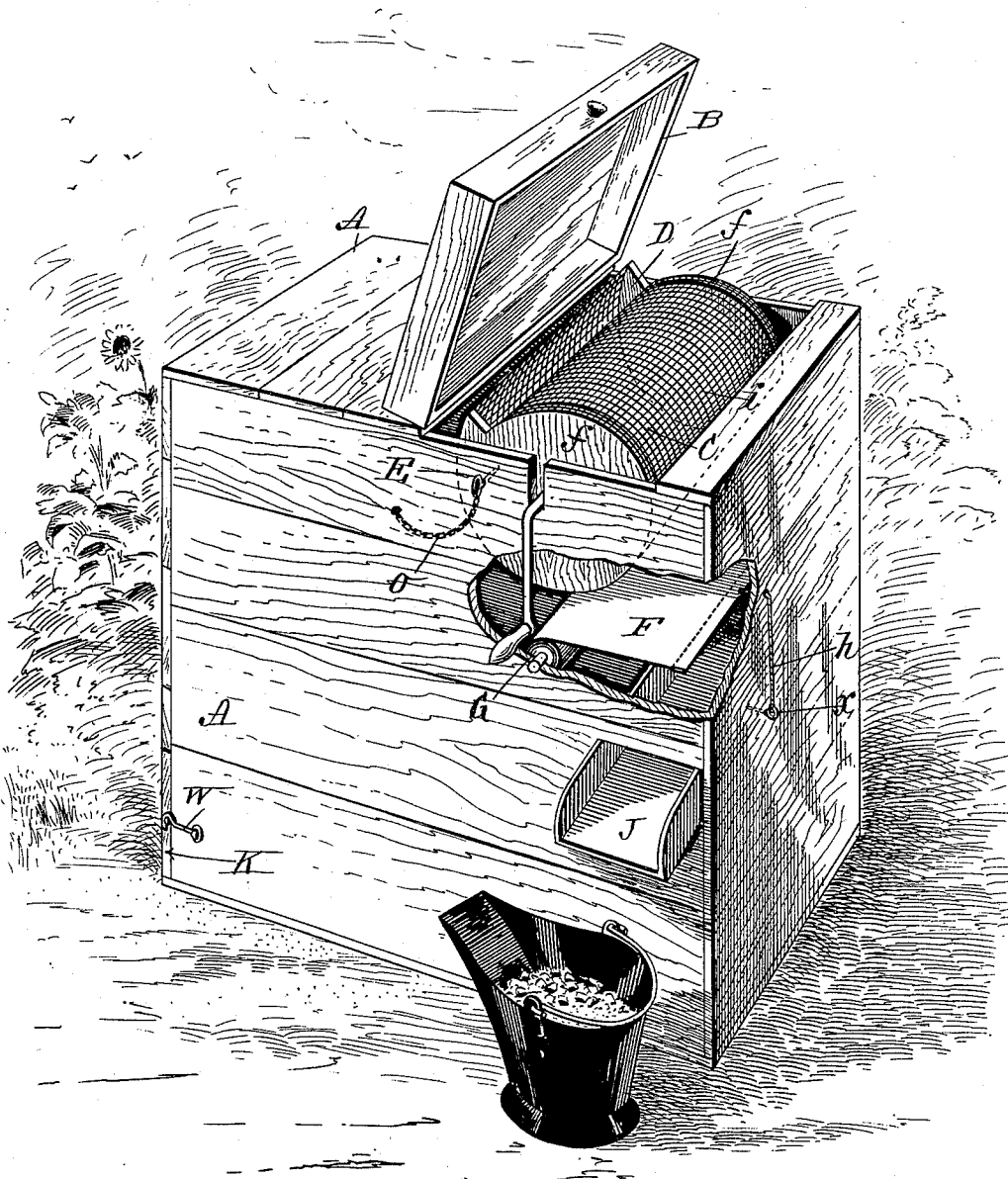
S. ABERCROMBIE.
ASH SIFTER.

(Application filed July 29, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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2 Sheets—Sheet 2.

Fig. 3.

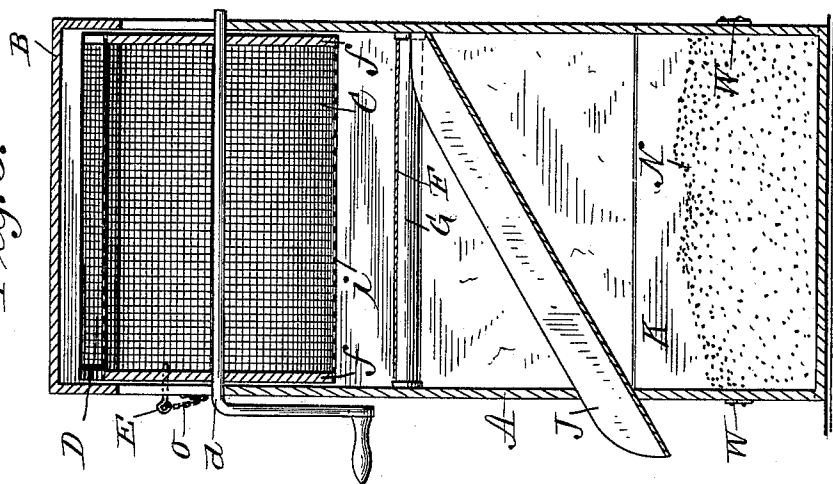
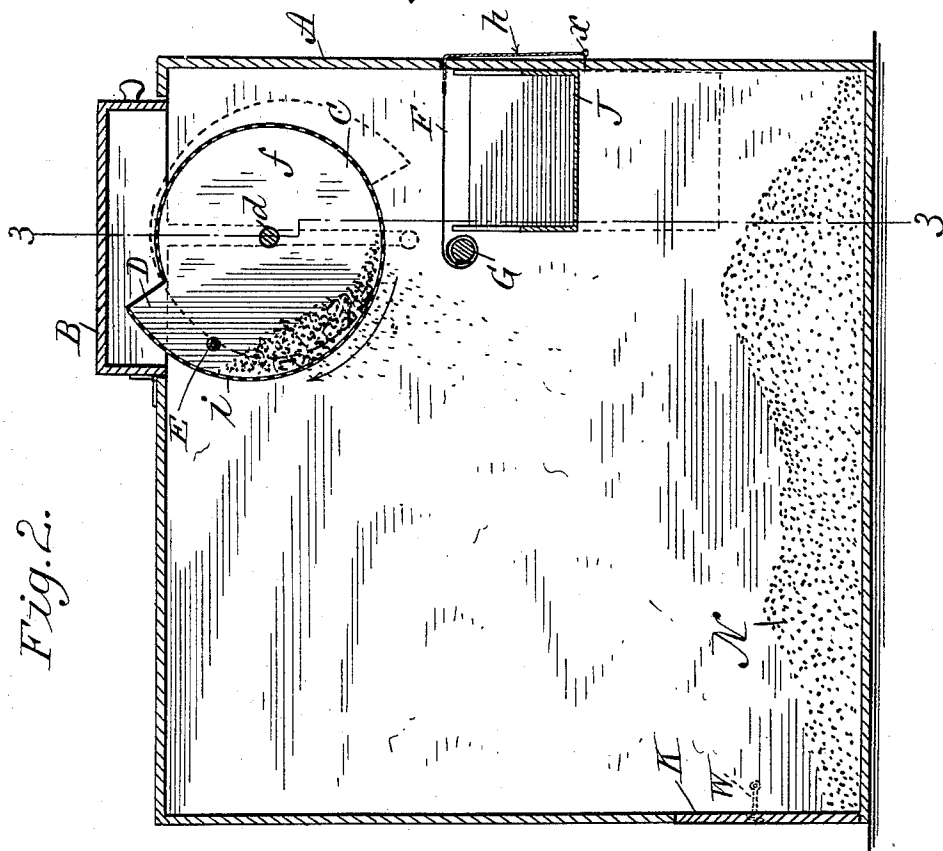


Fig. 2.



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UNITED STATES PATENT OFFICE.

STILLMAN ABERCROMBIE, OF MITTINEAGUE, MASSACHUSETTS.

ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 613,002, dated October 25, 1898.

Application filed July 29, 1897. Serial No. 646,283. (No model.)

To all whom it may concern:

Be it known that I, STILLMAN ABERCROMBIE, a citizen of the United States of America, residing at Mittineague, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Ash-Sifters, of which the following is a specification.

This invention relates to ash-sifting machines, the object being to provide an improved device for said purpose in respect to means for effectually perfecting the separation of ashes from the partially-burned coal and for economically disposing of the sifted substance in discharging the same from the cylinder and preventing the mixture again of the sifted substances and the ashes; and the invention consists in the peculiar construction and arrangement of the various elements of the device, all as hereinafter fully described, and more particularly pointed out in the claim.

In the drawings forming part of this specification, Figure 1 is a perspective view of an ash-sifting device embodying my improvements, the cover of the case thereof being shown open and a portion of the case on one side and at one end being partly broken away to expose to view certain of the devices contained therein. Fig. 2 is a central longitudinal section of Fig. 1, and Fig. 3 is a vertical section on line 3 3, Fig. 2.

Referring to the drawings, A is the ash-sifter case, of box form and of any suitable material, preferably of wood. Near the base of said case, at one side thereof, is a door K, which may be opened or removed for the purpose of taking the ashes N from the case. Said door is secured in place by a hook W or other suitable means. A hinged cover B is attached on the top of the case, as shown, to be swung upward clear of the sifting-cylinder C or to be shut down over the latter. The said ash-sifting cylinder C is supported on a shaft *d*, having a crank thereon, as shown, having bearings in said sifter-case A, two heads *f*, of eccentrically-circular or involute form, fixed on said shaft, and a wire-cloth or open-work cover *i*, secured to the borders of said heads, thereby leaving a receiving and discharging opening D between the separated extremities of said cover extending longitu-

dinally the entire length of said sifting-cylinder C on one side, between the heads thereof, through which the sifted matter in the cylinder is discharged from the latter and the material to be sifted is supplied thereto in the manner hereinafter described. For the purpose of holding said sifting-cylinder C in the position illustrated in the drawings, with said opening D upward, so that matter that is intended to be sifted thereby shall be poured into said discharge-opening D, a stop-pin E is provided which passes through the side of the sifter-case A and enters a suitable recess in one head of said cylinder. When said stop-pin is removed to free the cylinder for rotation, it is held connected to the case by the chain *o*, as shown. Within said sifter-case A, near the periphery of said sifting-cylinder C, is fixed an inclined discharge-trough J, one end of which projects through one side of said case, as shown, which trough is adapted to receive, as below described, the sifted material from the cylinder and conduct it into any suitable receptacle therefor outside the case, either an ordinary coal-hod, as shown, or any other suitable article. It is found in practice that the cylinder when about to be discharged of its sifted contents may unintentionally be so operated that more or less of the contents thereof may fall through said discharge-opening D therein before the edge of the latter shall have been brought over the said trough J, and to obviate the waste and inconvenience that might arise from the said unintentional dropping of the sifted contents, whereby they would be again mixed with the ashes in the lower part of the case, and to prevent the ashes when dropping from the cylinder from falling into said trough, an apron F, which may be extended more or less between said cylinder and trough, is provided, of coarse cloth or of fine wire-cloth, which is wound on a spring-actuated roller G, substantially of the construction of an ordinary curtain-roller, and said apron is held in a horizontal position, (unrolled,) more or less, partly under the sifting-cylinder C and extending partly over the said trough J, as shown in the drawings, by a cord or chain *h*, which is attached to the end of said apron F and extends through an opening in the end of said case. Therefore by

drawing said cord or chain outwardly through said opening in the case and securing its end to the latter in any suitable way or by a pin *x*, entering holes in the case, the said apron 5 is held in the position shown, more or less unrolled; but when the emptying of the cylinder is completed and is about to be again charged with ashes to be sifted the apron is permitted to be partly wound upon the roll G, 10 as aforesaid, by the spring contained therein, thereby leaving the space under the cylinder, between the latter and the trough J, nearly clear, so that the ashes which may be sifted therethrough can fall into the bottom of the 15 sifter-case, from whence they are removed, as aforesaid.

When sifting ashes, it is found desirable to draw the free end of the apron F about half-way between its winding-roller G and the ad- 20 joining side of the discharge-trough J and there secure it, thus preventing ashes that may drop from the side of the cylinder adjoining the side of the trough from dropping into the latter. By permitting the apron to 25 roll upon the roller before drawing it over the trough, as shown in Fig. 1, the ashes lodged thereon will fall off.

The operation of the above-described device is as follows: In order to charge the cyl- 30 indier C with material which is to be sifted, it is turned by the crank to the position shown in the drawings, whereby the opening D is upward, and the cylinder is secured in that position while being filled by said stop-pin E, 35 which passes through the side of the case and engages with one head of the cylinder C, as described. The material is then poured into said opening in such quantity as may be desired. The cover B is shut against the top of 40 the case, tightly covering the cylinder, and the apron F is partly rolled onto the said roller G, as above set forth. The operator now taking hold of the crank of the cylinder draws said stop-pin E out of engagement with the

latter and rotates the cylinder, turning to the 45 right, as indicated by the arrow in Fig. 2, and this movement of the cylinder serves to keep the contents while being operated upon substantially as shown in said last-named figure, thus preventing any escape of the contents 50 thereof through said opening D, for the reason that said contents fall downward toward the base of the interior of the cylinder. After having sufficiently rotated the cylinder to clean the contents of its ashes the said apron 55 G is extended and secured in the position between the cylinder and the trough J, as shown in the drawings. The cylinder C is now rotated in the opposite direction to which it was for sifting the matter, and since the con- 60 tents of the cylinder will follow the direction of the wire-cloth cover thereof said contents will, as soon as the opening D is brought around over said apron F, be discharged into said trough and partly upon said apron, as 65 described, and finally be discharged into a suitable receptacle.

Having thus described my invention, what I claim, and desire to secure by Letters Pat- 70 ent, is—

The inclosing case A provided with an opening through its top for the insertion of the sifter, the cover B for closing the opening after the sifter has been inserted into position, and the sifter C of involute form, combined with 75 the spout J located in the front end of the box and partially to one side of the sifter, the spring-roller G located under the bottom of the sifter and to one side of the trough, and the apron F which is wrapped around the 80 roller and which is adapted to be drawn across the top of the spout so as to prevent anything from falling therein, substantially as shown and described.

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