(No Model.)

W. T. ADAMS.

ASH SIFTER.

No. 346,340. Patented July 27, 1886.

Fig. 1.

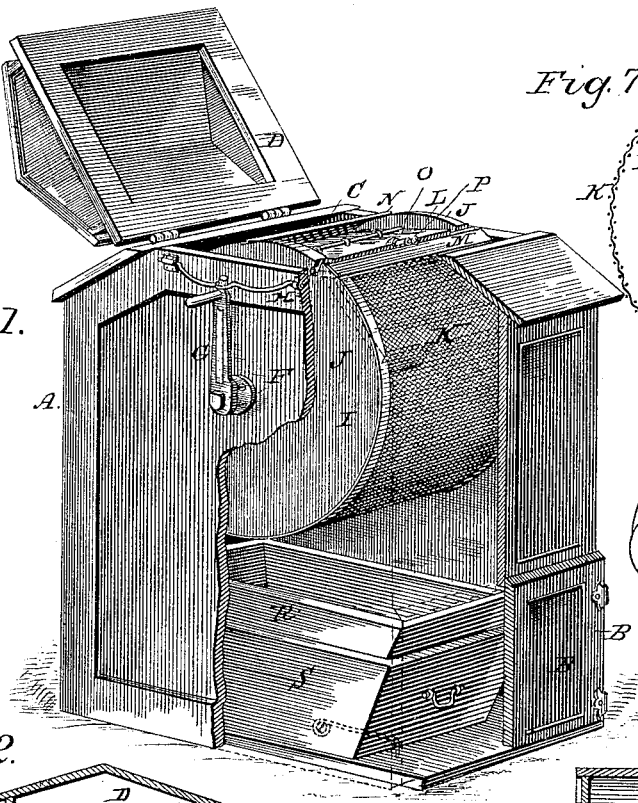


Fig. 7.

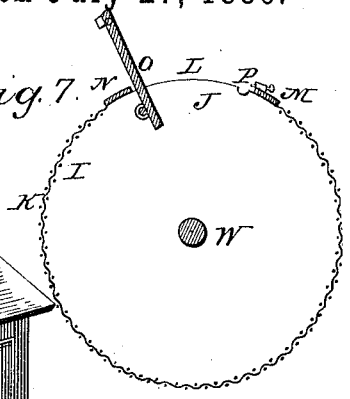


Fig. 4.

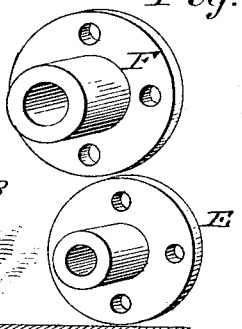


Fig. 2.

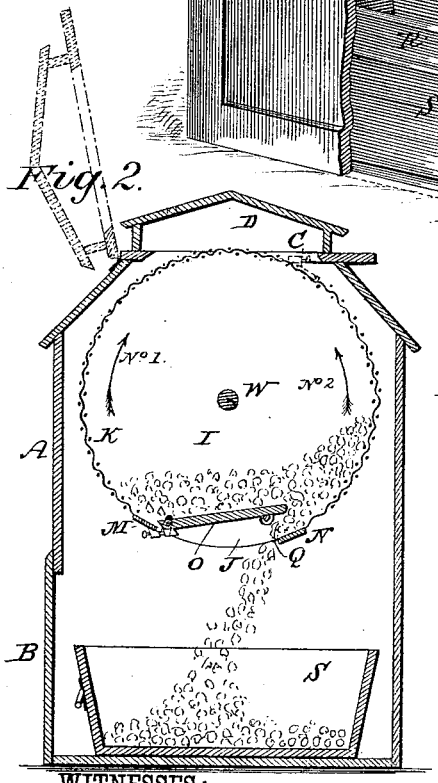


Fig. 3.

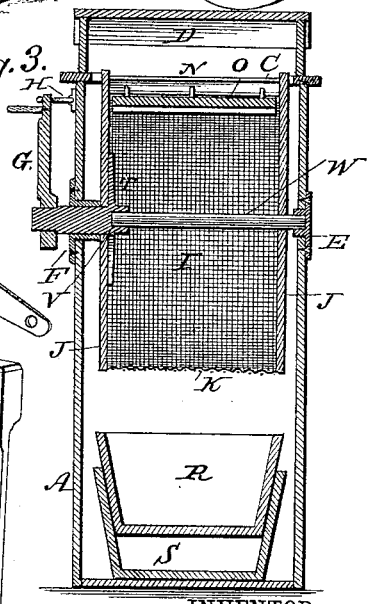


Fig. 5.

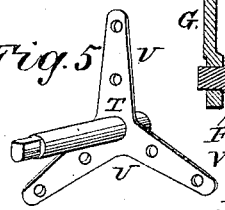
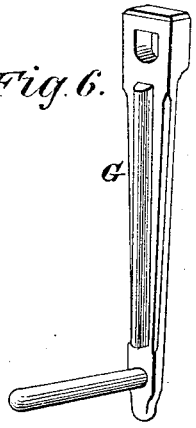


Fig. 6.



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ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 346,340, dated July 27, 1886.

Application filed November 13, 1885. Serial No. 182,718. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. ADAMS, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Improvement in Ash-Sifters, of which the following is a full, clear, and exact description.

My invention is an improved ash-sifter; and it consists in certain features of construction and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a perspective view of my sifter, parts being broken away. Figs. 2 and 3 are vertical transverse and longitudinal sections of my machine. Fig. 4 is a detail view of the bearings of the main frame. Fig. 5 is a detail view of the spider; Fig. 6, a similar view of the crank, and Fig. 7 a detail transverse section of the cylinder.

The main frame is shown as consisting of a case, A, having a door, B, at its lower end, an opening, C, in its top, and a cover, D, for closing the opening C. Bearings E F are provided opposite each other in the sides of the box. The bearing E is a socket fitted to receive one end of the shaft, while bearing F is open or tubular, so the shaft may project through it.

The cylinder, hereinafter described, is journaled in the main frame, and has a crank, G, which may be held by a latch, H. This latch is formed of wire, having its ends pivoted to the frame so as to swing up or down, and provided between its ends with a loop or staple shaped portion fitted and arranged to rest over the end of the crank and hold the latter, and with it the cylinder, from revolving when so desired.

The cylinder I is formed with end plates, J, and a rim or cover, K, of wire-netting, as shown. This cover K is formed with an opening, L, and has re-enforcing plates at the edges M and N of such opening. A gate, O, is pivoted to the cylinder, and has one end extended in position to close the edge M of the opening L, and its other end is extended within the cylinder past the edge N of the opening. This is accomplished by pivoting the gate at such point as to provide an extension in rear of its pivot, as thereby the gate may open wide to admit the coals and like substances to be sifted. It will be noticed that when the cylinder is adjusted to the position shown in Fig. 1, in which it is shown secured by the latch, the gate may be raised, as shown in Fig. 7, and the ashes to be sifted poured into the opening so formed. The gate is then lowered and secured by latches P, as shown, or an ordinary turn-button might be substituted for such latches, the downward movement of the forward end of the gate being limited by suitable stops. This may be accomplished by lateral studs on the gate entering grooves or notches in the edges of end plates, J, as shown most clearly in Fig. 7, or by the free end of the gate resting upon the re-enforcing plate M. When the gate is closed, if the cylinder be revolved in the direction indicated by the arrow No. 1 in Fig. 2, the ashes will be sifted through the meshes of the rim or cover, but the coals will not be discharged. When the ashes have all been sifted out, the motion of the cylinder is reversed after the ashes have been removed from the top drawer to that indicated by arrow No. 2, when the cinders will be discharged through the space Q, between the rear end of the gate and the adjacent edge of the opening through the cylinder. As this space Q opens in a circumferential direction reverse to that indicated by arrow 1, none of the ashes or coals will be discharged through such space when the cylinder is revolved in the direction indicated by the arrow 1; but such discharge will only occur when the direction of motion is reversed.

To conveniently collect both ashes and coals I provide an ash-box, R, and a coal-box, S, which are placed in and removed from the case through the door B. The ash-box is constructed to fit removably in the coal-box, as shown in Fig. 3. In use, when sifting the ashes, the boxes are as shown in Fig. 3, and when such operation is completed the box R, containing the ashes, is removed and the coals are discharged into the box S. If a second quantity of ashes is to be sifted, the box R may be again placed in box S, and so on until one or both of the boxes are filled with ashes.

I form the spider T with a radial plate or plates, U, which are lapped against and secured to one of the side plates of the cylinder. This spider has its outer end supported in bearing F, and is provided in its inner end with a socket, V, for one end of the shaft W, the other end of which extends through the

screen and is supported in the socket-bearing E, all of which is most clearly shown in Fig. 3. By this construction the shaft W may be conveniently replaced when worn, and there is provided a simple, secure, and convenient manner of supporting the cylinder. This construction also avoids the necessity of separate castings for each size of machine, as it is only necessary to provide shafts W of different lengths, and similar spiders, T, for different-sized machines.

It will be noticed that one end of gate O is pivoted to the end plates radially in from and near to one edge of the opening L, while its other end is adjustable to and from the other edge of said opening, and that latch devices are provided for securing it to such edge when desired. By pivoting this gate near to but separate from one edge of the opening L a sufficient space is provided between the pivoted end of the door and the adjacent edge of the opening to permit the discharge of the cinders, and the movable end of the gate may be turned through and out of said opening, to serve as a guide and facilitate the pouring of cinders, ashes, &c., into the cylinder, to be sifted. To enable this adjustment of the gate into position to serve as a guide it is pivoted approximately radially in from one edge of the opening. In order to permit such arrangement of the pivot and at the same time prevent the ashes passing out between the pivoted end of the gate and the adjacent edge of the opening, I extend the gate rearwardly beyond the pivot, as shown.

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

1. A sifting-cylinder having its rim or cover provided with an opening, combined with a gate pivoted within the cylinder, the pivot thereof being arranged radially in from and near to one edge of the opening in the cylinder, and the gate being extended rearwardly beyond the pivot, and the movable end of the gate being adjustable to and from the edge of the opening opposite the one adjacent the pivot of the gate, and latch devices whereby to secure the movable end of the gate, substantially as and for the purposes specified.

2. The combination, with the main frame having a tubular and a socket bearing, of the cylinder having axial openings, the spider secured to such cylinder and having a socket in its inner end, and its outer end supported in the tubular bearing of the main frame, and provided with means whereby it may be turned, and a shaft extended through the cylinder and having one end supported in the socket-bearing of the main frame and its other end in the socket of the spider, substantially as set forth.

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