No. 632,280. Patented Sept. 5, 1899.

L. E. PULSIFER.

ASH SIFTER.

(Application filed Apr. 19, 1899.)

(No Model.) 2 Sheets—Sheet 1.

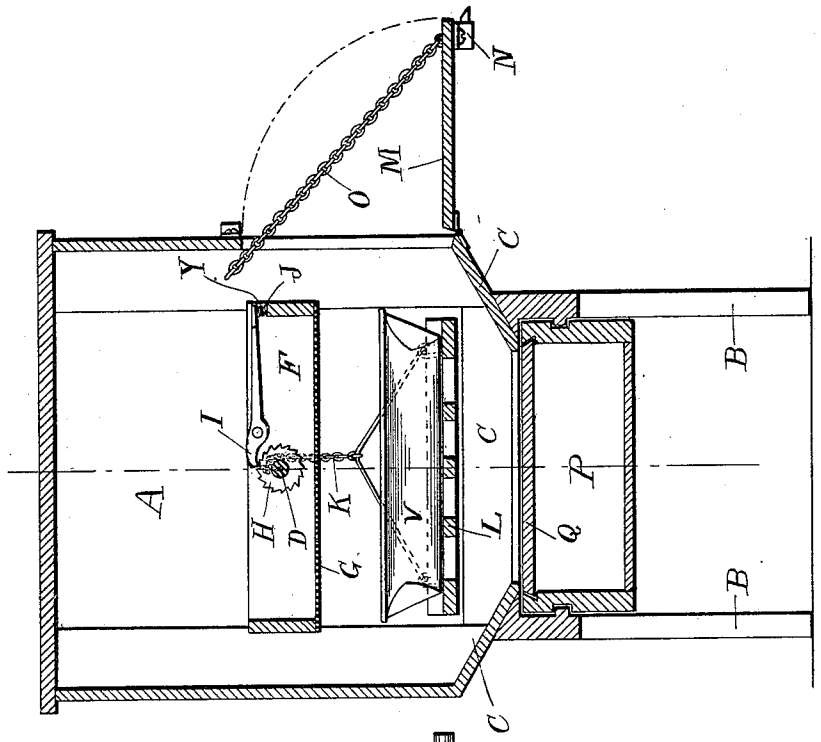

Fig. 2.

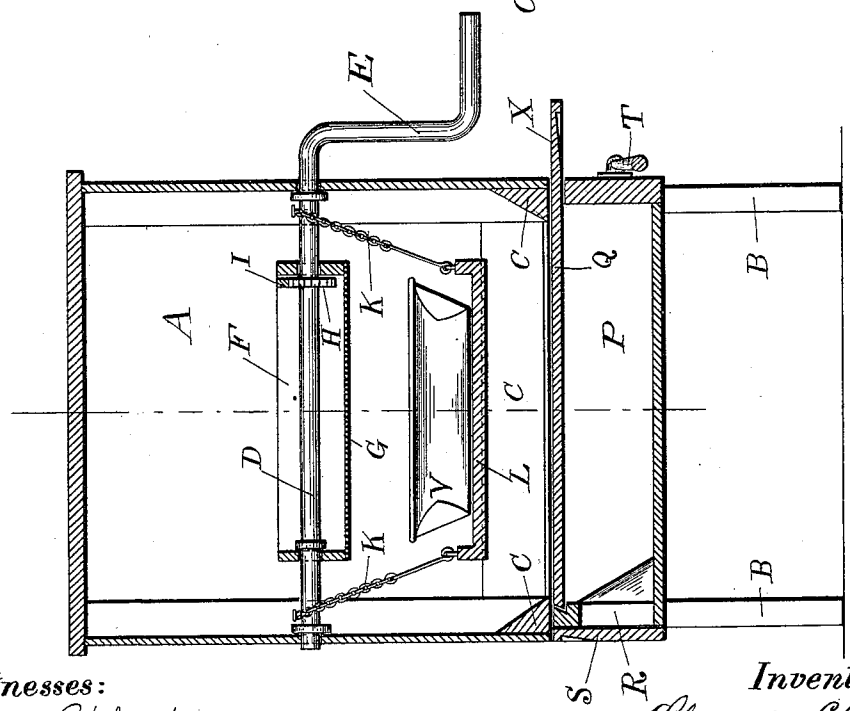

Fig. 1.

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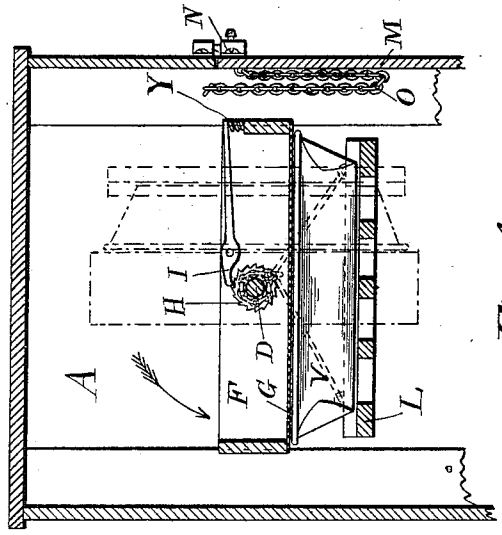

Fig. 4

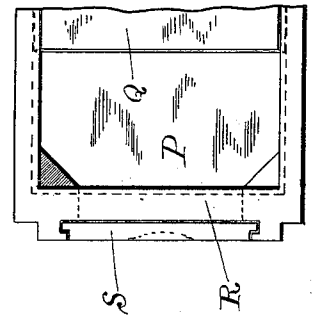

Fig. 5

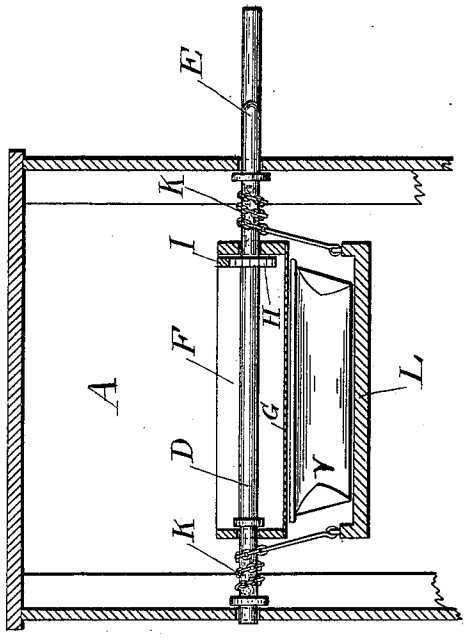

Fig. 3

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UNITED STATES PATENT OFFICE.

LLEWELLYN EMERSON PULSIFER, OF PARIS, MAINE.

ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 632,280, dated September 5, 1899.

Application filed April 19, 1899. Serial No. 713,689. (No model.)

To all whom it may concern:

Be it known that I, LLEWELLYN EMERSON PULSIFER, a citizen of the United States, residing at Paris, in the county of Oxford and State of Maine, have invented certain new and useful Improvements in Ash-Sifters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in ash-sifters.

It is designed to provide an ash-sifter which while in use is entirely closed and in which the cinders are retained constantly in the pan during the entire process of sifting.

It is also designed to enable a pan of any ordinary dimensions to be used in a given sifter.

In the drawings herewith accompanying and making a part of this application, Figure 1 is a vertical sectional view with the shaft and ratchet in elevation. Fig. 2 is a transverse vertical sectional view of same. Fig. 3 is a vertical sectional view similar to Fig. 1, showing the pan and screen in operative position, parts being broken away. Fig. 4 is a view similar to that shown in Fig. 2, parts being broken away and the door closed; and Fig. 5 is a plan view of the rear end of the box, showing the movable end slide.

The same letters of reference refer to like parts.

In said drawings, A represents a suitable housing which may be mounted on supports B, the lower portion of the housing terminating in inclined walls C to direct the ashes into the ash-box below. Mounted in the housing is a shaft D, terminating on the outside in a crank E. Loosely secured on said shaft is a frame F, to the bottom of which is secured a screen-cloth G. On the shaft is a ratchet H, and in the side of the frame is pivoted a pawl I, adapted to engage therewith. Beneath the free end of the ratchet is a spring J, which is designed normally to hold the pawl in engagement with the ratchet. Supported on the shaft by flexible chains K is a carrier L, upon which is to be placed the pan V, containing the ashes to be sifted. The length of the chains should be sufficient to allow ample room for the insertion of pans of different heights between the screen and the carrier, and in order that when the chain is wound around the shaft, as hereinafter explained, it may wind evenly it is found advantageous to have the chain extend diagonally, so that it will wind a single coil on the shaft and never one coil upon another. The pawl being of necessity located outside the center of the frame, it is necessary to provide some means for restoring the balance. This may be done in any convenient manner—as, for example, by cutting away a portion of the frame on that side on which the lever is located, as seen at Y, Fig. 2.

In the housing is made a door M, which for convenience should be adjacent to the sifting mechanism. The door may be provided with a suitable latch N and has a flexible supporting-chain O, one end secured to the frame and the other to the door, to permit the door when open to assume a substantially horizontal position, as seen in Fig. 2. This serves as a shelf to place the ash-pan on preparatory to inserting it through the housing upon the carrier.

In the bottom of the housing is a closed ash-box P, having at the top a sliding door Q, projecting through the housing, as seen at X, Fig. 1, and at the rear end an opening R, said opening being covered by a vertical slide S. Said drawer may be provided with a handle T on the outside, and the drawer is arranged so that when it is removed from the housing it takes with it the top and end slides and may be carried by the handle in an absolutely-closed condition, so that no ashes can be spilled while being transferred from the housing to the ash-barrel.

The operation of my improved device is as follows: The ash-pan containing the ashes and cinders to be sifted is placed through the door upon the carrier when the carrier is down in the position shown in Figs. 1 and 2. The crank is turned, and thereby the flexible chains which support the carrier are wound around the shaft, causing the carrier, with its pan, to rise until the pan comes into contact with the screen on the bottom of the frame, and when the top of the pan contacts with the screen the winding is checked and the screen, pan, and carrier are rotated in the direction and in the manner indicated by the arrow in Fig. 4, the pawl and ratchet pre-

venting any reverse movement of the screen mechanism. When it is desired to release the pan, it is necessary to press down upon the end of the pawl, thus disengaging it from the ratchet, and the crank is turned in the opposite direction, if, indeed, the weight of the pan on the carrier is not sufficient of itself to cause the carrier to descend again into the position shown in Figs. 1 and 2, and thus permit the pan to be removed. Of course nothing but fine dust will escape through the mesh of the screen, the cinders when the sifting is completed remaining still in the pan.

It will be evident that pans of any reasonable size and shape, limited only by the area of the screen, can be used.

The advantages of the closed ash-box are that during the operation of sifting the top slide may be withdrawn from over the box, but not entirely out of the housing, which renders it impossible for any dust or ashes to escape from the housing, that pans of different size may be used, and that when the sifting is completed and the slide pushed in the box, with the ashes, can be carried about without danger of spilling and emptied without covering the person with dust.

Having thus described my invention and its use, I claim—

1. In an ash-sifter, a housing, a rotary shaft mounted therein, a screen loosely mounted on said shaft, a carrier adapted to hold an ash-pan, and flexible supports connecting said carrier to said shaft, whereby, by the rotation of said shaft, the carrier is caused to reciprocate relative to said screen.

2. In an ash-sifter, a housing, a rotary shaft journaled therein, a screen loosely mounted on said shaft, means for normally preventing the backward rotation of said shaft, a carrier adapted to hold an ash-pan, and flexible supports connecting said carrier with said shaft, whereby, by the rotation of said shaft, the carrier is caused to reciprocate relative to said screen.

3. In an ash-sifter, a housing, a rotary shaft journaled therein, a screen loosely mounted on said shaft, a carrier adapted to hold an ash-pan, and flexible supports connecting said shaft and carrier, said supports inclining downwardly and inwardly, whereby on turning the shaft the supports are wound in a single coil upon the shaft and the carrier is maintained constantly in a horizontal position.

4. In an ash-sifter, a housing, a rotary shaft journaled therein, a counterbalanced screen mounted on said shaft, a pawl-and-ratchet mechanism adapted to lock the screen against backward rotation, a carrier adapted to hold an ash-pan, and flexible supports connecting said carrier and shaft, whereby the carrier is caused to approach the screen by the rotation of the shaft.

In testimony whereof I affix my signature, in presence of two witnesses, this 10th day of April, 1899.

LLEWELLYN EMERSON PULSIFER.

Witnesses:
CLAYTON K. BROOKS,
WALTER L. GRAY.