No. 682,491. Patented Sept. 10, 1901.

J. A. PAYNE & J. F. FERGUSSON.

ASH SIFTER.

(Application filed Jan. 12, 1901.)

(No Model.)

Fig. 1.

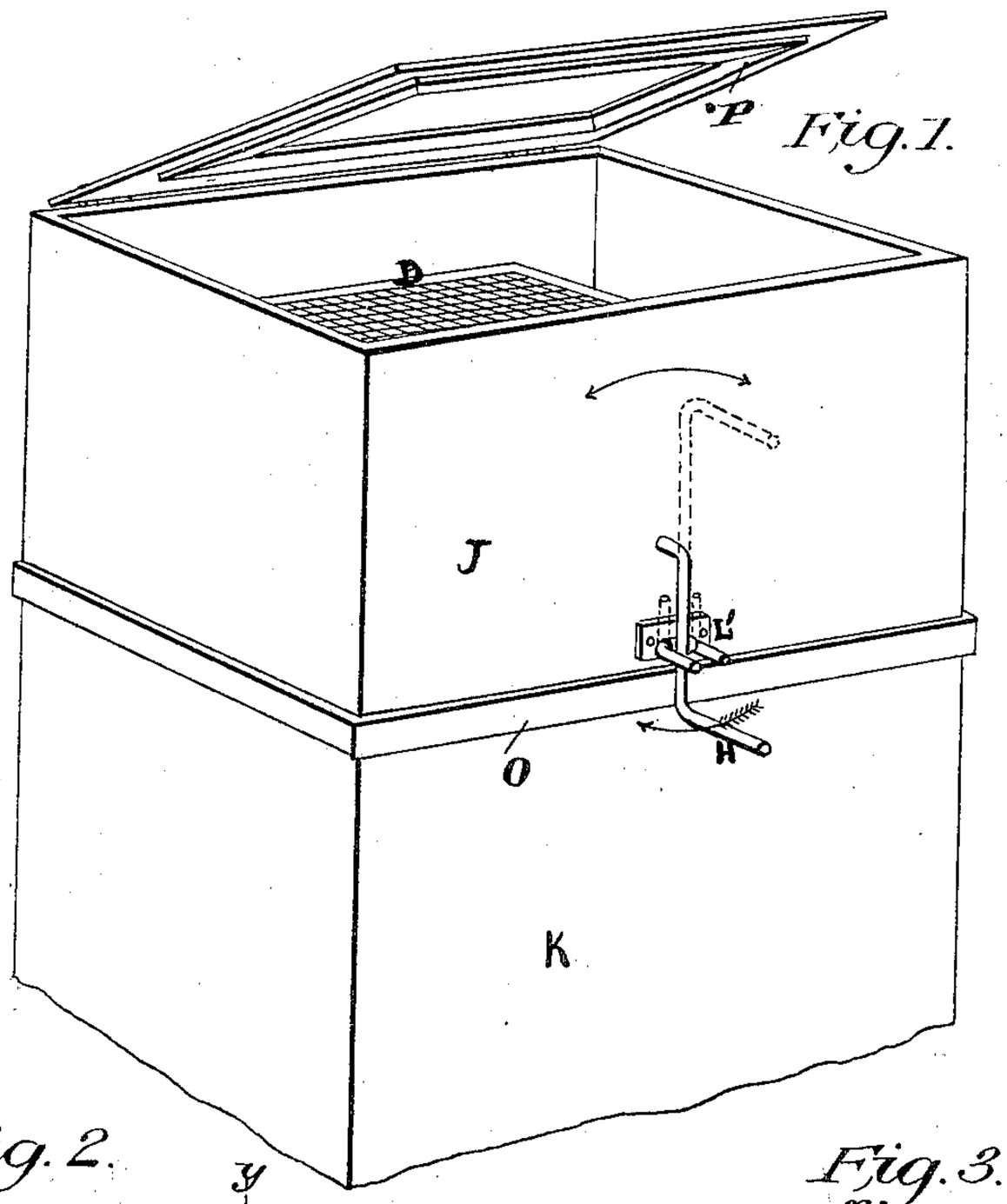


Fig. 2.

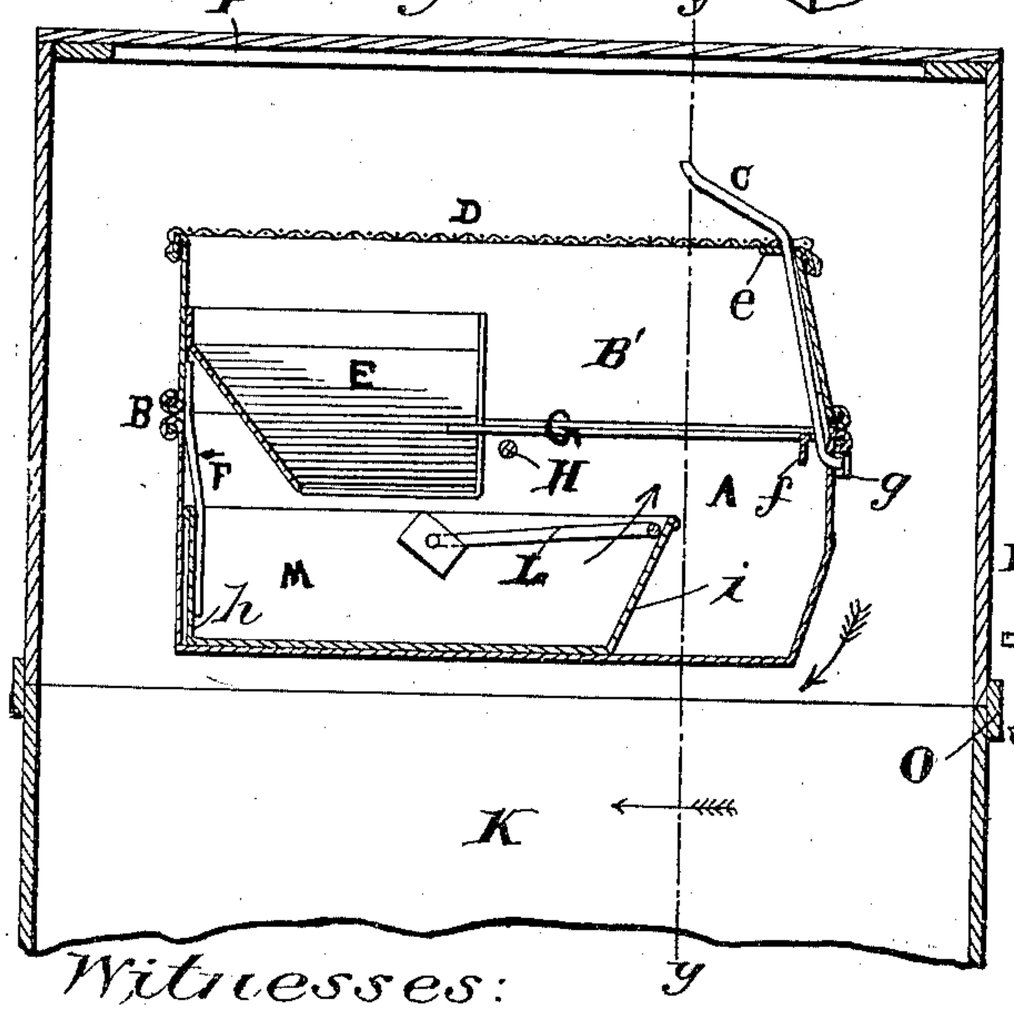
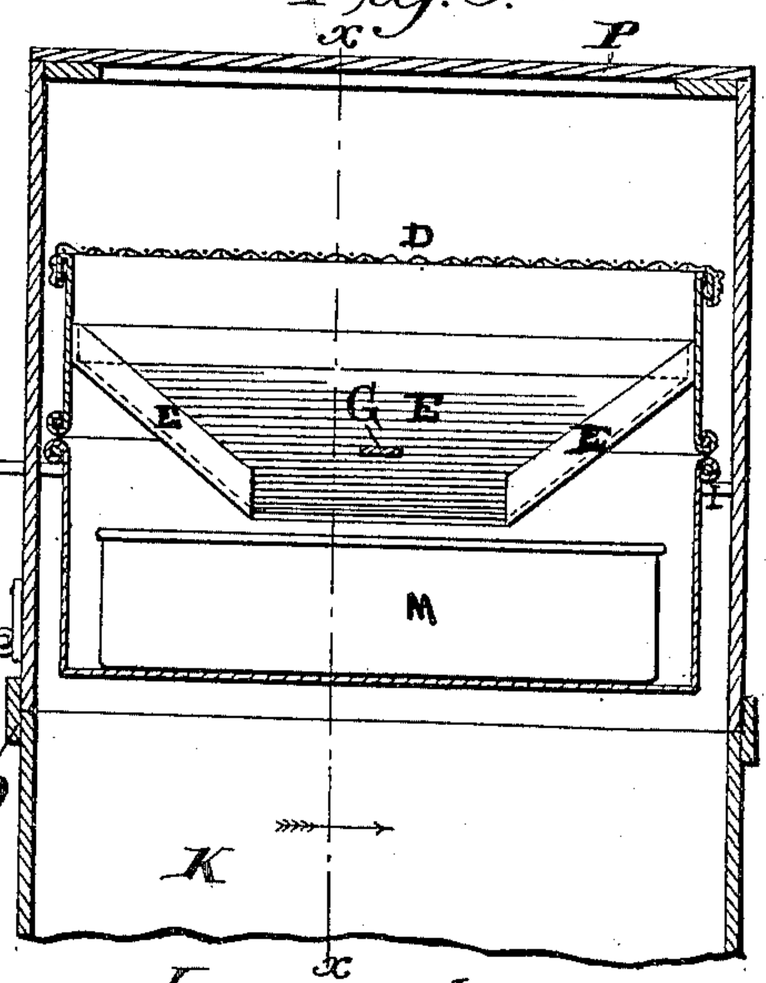


Fig. 3.



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UNITED STATES PATENT OFFICE.

JOSEPH A. PAYNE AND JAMES F. FERGUSSON, OF GLOUCESTER, MASSACHUSETTS.

ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 682,491, dated September 10, 1901.

Application filed January 12, 1901. Serial No. 43,088. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH A. PAYNE and JAMES F. FERGUSSON, citizens of the United States, residing at Gloucester, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Ash-Sifters, of which the following is a specification.

Our invention relates to improvements in ash-sifters, and pertains to a device hereinafter shown and described.

One object of our invention is to provide a sifter in which an ash-pan is inserted in the device, the ashes sifted, and the cinders returned to the pan.

Another object of the invention is to provide a sifter of the character described in which ash-pans of different sizes may be inserted without adjusting the device.

A still further object is to provide a simple, cheap, and durable sifter which will fully accomplish the above results.

In the accompanying drawings, Figure 1 is a perspective view of our device with the lid partly raised. Fig. 2 is a longitudinal sectional view of our device, taken on the line $x\ x$ of Fig. 3. Fig. 3 is a transverse sectional view of our device, taken on the line $y\ y$ of Fig. 2.

Referring now to the drawings, K is a supporting frame or box which is adapted to receive the ashes as they are separated from the cinders. Resting upon said box K is a second box or frame J, having a strip O on the outside of the lower edge and projecting therebelow, whereby the upper section J telescopes the lower section K and prevents the same from slipping therefrom. The upper end of the frame J is open and provided with a cover P, hinged thereto, and within the upper section J is the sifting mechanism, which consists of two sections made of any desired material, but preferably of sheet-iron. The lower section A is made with its bottom, sides, and ends solid and has hinged thereto by means of hinges B of any desired form an upper section B′, which has its top entirely open and over which is stretched the wire-netting D of the ordinary form used in all sifters for the above purpose. The forward end of the section B′ has at its top and bottom inwardly-projecting portions *e* and *f*, in which is journaled the S-shaped locking member *c*, having the lower crooked end adapted to swing into a recess *g* in the lower section, whereby the two sections are locked together while in operation.

The rear end of the upper section B′, adjacent to the hinges B, has secured thereto a forwardly and downwardly projecting chute E, which extends within the lower section and about half-way its length when the two sections are locked together. Secured to the same end of the upper section and beneath the chute E is a downwardly slightly outwardly curved arm F, which may be made of spring metal and under which the rear end H of the ash-pan M rests, whereby the pan is prevented from shifting its position within the lower section when in operation. The said pan is provided with a handle L, by means of which it is carried. The lower forward end of the upper section has secured thereto a bar G, extending horizontally rearwardly within the chute E, but not connected thereto, for the purpose of supporting the outer end *i* of the ash-pan M when the device is reversed for the purpose of sifting.

The lower section A of the sieve has secured on each side outwardly-extending trunnions I, which are journaled in the front and back walls of the upper section J of the frame, whereby the sifter is horizontally journaled to rotate in a transverse vertical plane in the frame or section J. The trunnion at the front of the frame extends therethrough and has connected therewith or made as a part thereof an operating-crank H, which is normally held downwardly by means of a clip L′, which consists of a U-shaped piece of wire adapted to straddle the crank H and adapted to swing out of the path thereof to allow the crank to swing upwardly, as shown in dotted lines in Fig. 1. The lower section K may have a drawer or opening, as desired, for the purpose of removing the ashes therefrom.

The operation of our device is as follows: The cover P is raised and the upper curved portion of the lock *c* is moved, so that the lower curved end will travel out of the opening *g* of the lower section of the sieve, and the upper section is swung backward, so that

the ash-pan full of ashes can be inserted, with its rear end *h* under the spring F. The upper section is then lowered and locked to the lower section and the cover P is lowered. The crank on the outside of the frame J is released and turned in the direction of the arrow, as shown in Fig. 1. As the crank is turned the ashes leave the pan, as indicated by arrow in Fig. 2, and drop upon the wire-netting D, the crank then being in the position shown in dotted lines, Fig. 1. The crank is then oscillated back and forward, thus thoroughly separating the cinders from the ashes. When the pan is in the reversed position, the outer end rests upon the bar G. After thoroughly sifting the contents of the pan by oscillating the crank H the crank is continued on its rotation and the cinders travel on the wire-netting to the chute E, and upon a complete circle of the crank the cinders are conveyed back to the pan, the lever or crank locked, and the pan removed as inserted.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A sifter comprising a supporting-frame, a sieve rotatably mounted within said frame and composed of an upper section and a lower section hinged together, the entire top of the upper section having a sifting-surface, and a chute carried by one end of the said upper section and extending within the lower section, substantially as described.

2. A sifter comprising a supporting-frame, a sieve rotatably mounted within said frame and composed of an upper section and a lower section hinged together, an ash-pan within the lower section, a downwardly-projecting arm carried by the upper section and engaging one end of the pan, a chute carried by one end of the upper section and extending within the lower section, and means for rotating said sieve, substantially as described.

3. A sifter comprising a supporting-frame, a sieve rotatably mounted within the frame, and consisting of an upper section and a lower section hinged together, an ash-pan within the lower section, an arm adapted to engage the rear end of said pan, a transverse bar upon which the opposite end of the pan is adapted to rest, and a chute carried by the upper section, substantially as described.

4. A sifter comprising a frame, a sieve rotatably mounted within said frame, and composed of an upper section and a lower section, hinged together, an ash-pan within the lower section, and means carried by the lower portion of the upper section for supporting the ash-pan within the lower section, substantially as described.

5. A sifter comprising a frame, a sieve rotatably mounted within the frame and composed of an upper section and a lower section, hinges connecting two adjacent sides of said sections, a lock securing the opposite adjacent edges, an ash-pan within the lower section, a downwardly-extending arm carried by the upper section and engaging one end of said pan, a horizontal bar carried by the upper section and adapted to support the opposite end of the pan, when the pan is in the reversed position, a chute secured to one end of the upper section and extending within the lower section, and a wire-netting covering the upper open end of the said upper section, substantially as described.

6. A sifter comprising a frame, a rotatably-mounted sieve within the frame, and composed of an upper section and a lower section hinged together, the top of the upper section covered with a wire-netting, an ash-pan within the lower section, a chute carried by one end of the upper section and converging and extending within the lower section, a clip carried by the upper section and adapted to grasp one wall of the pan within the lower section, and a bar for supporting the opposite wall when the pan is in reversed position, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

JOSEPH A. PAYNE.
JAMES F. FERGUSSON.

Witnesses:
W. E. TUCKER,
HENRY A. NORWOOD.