

(No Model.)

J. B. CHADBORN & E. ANDROVETT.
ASH SIFTER.

No. 569,745.

Patented Oct. 20, 1896.

Fig. 1.

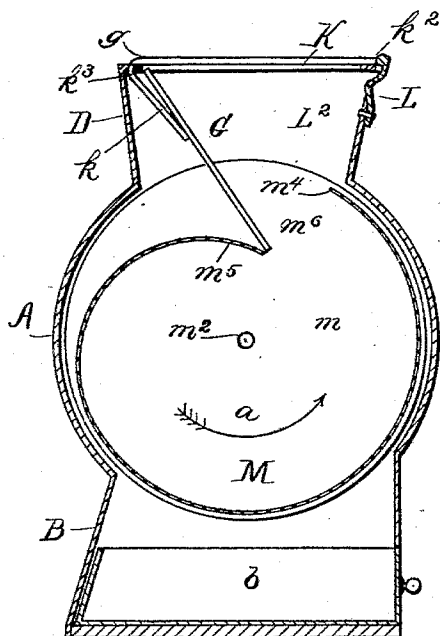


Fig. 2.

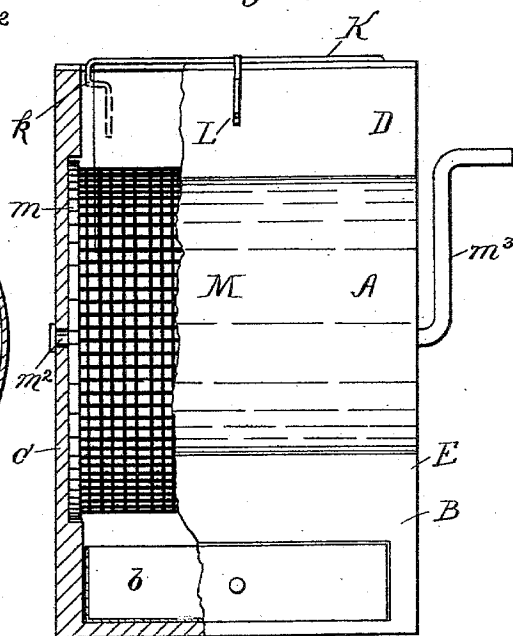
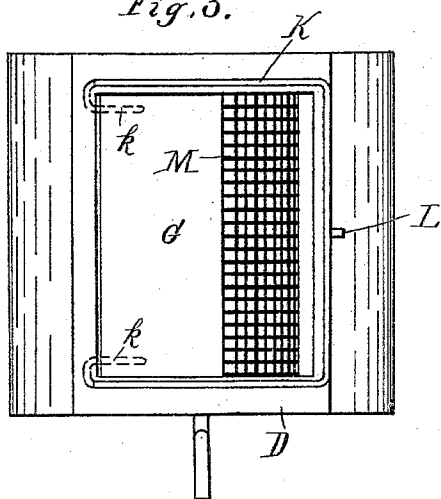


Fig. 3.



WITNESSES:

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ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 569,745, dated October 20, 1896.

Application filed March 14, 1896. Serial No. 583,163. (No model.)

To all whom it may concern:

Be it known that we, JOHN B. CHADBORN and EDWARD ANDROVETT, citizens of the United States, and residents of Newburg, in the county of Orange and State of New York, have invented certain new and useful Improvements in Ash-Sifters, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to what are known as "ash-sifters;" and the object thereof is to provide an improved device of this class whereby the cinders, portions of charred coal, coke, and other products may be quickly and easily separated from the ashes of a furnace, stove, or grate, a further object being to provide a device of this class which is novel in construction and operation, and which consists of a suitable casing, in which is mounted a revolvable cylindrical screen, which is also of novel construction, and into which the ashes, together with the charred coal, the cinders, and other products are placed; and with these and other objects in view the invention consists in the construction, combination, and arrangement of parts hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a transverse section of Fig. 2; Fig. 2, a side view of our improved ash-sifter with part of one side thereof broken away, and Fig. 3 a plan view.

In the practice of our invention we provide a casing the central portion of which is cylindrical in form, as shown at A, and said cylindrical portion is arranged longitudinally of the casing and about the middle thereof, and below said cylindrical portion is a rectangular base B, in the bottom of which is mounted a drawer *b*, and above the cylindrical portion the casing is also rectangular in form, as shown at D, and the ends C and E are vertical and parallel, as shown in Fig. 2.

The rectangular top D of the casing, which

is open, is provided with a door G, and secured adjacent to the top D are the arms *k* of a spring-frame K, which is composed of strong spring-wire bent into a rectangular or square form, and which is placed over the opening in the top D, which is similar in form, and which is adapted to be held in the position shown in Fig. 1 by a spring-catch L, which operates in connection therewith, as shown at *k*².

When the wire frame K is held in the position shown in Figs. 1 and 3, the door G will extend inwardly and downwardly, as shown in said Fig. 1, and it will be observed that the arms *k* of the spring-frame K are passed through the back of the top of the casing at *k*³.

Mounted in the cylindrical portion A of the casing is a convolute screen M, which is composed of wire-mesh or any preferred and similar material, and which is provided with circular end pieces *m*, through which passes a shaft *m*², one end of which is provided with a crank *m*³, by which the screen is revolved.

One side of the screen M is secured to the end pieces near the outer edge thereof, as shown at *m*⁴ in Fig. 1, and said screen is carried around said end pieces about three-quarters of the circumference thereof, and then bent inwardly, as shown at *m*⁵, and the door G is adapted to rest upon this inwardly-curved portion *m*⁵ of the screen.

In operation the ashes, cinders, charred coal, coke, and other substances are poured into the screen through the opening in the top of the casing and, striking upon the door G, slide downwardly into the convolute screen, and the door G is then raised by the frame K, so as to close the opening in the top of the casing, in which operation the frame K is thrown backwardly, and the door G is held in the closed position by the spring-catch L, which is provided with an inwardly-directed shoulder or projection L² for this purpose.

The screen-cylinder is then revolved in the direction of the arrow *a*, (shown in Fig. 1,) and in this operation, as will be understood, the ashes, cinders, and other substances remain in the bottom of the screen, and the

ashes are sifted therethrough into the drawer *b*, and the cinders, charred coal, coke, and similar products or articles remain in the screen. When the ashes are all sifted out
 5 in the above-described operation, the drawer *b* is emptied and replaced, after which the screen is revolved in the opposite direction, and in this operation all the cinders, charred coal, coke, and similar articles will be dis-
 10 charged or emptied into the drawer *b* and may then be removed therefrom. This operation is rendered possible by reason of the form of the convolute screen *M* and the manner in which it is connected with the circular
 15 end pieces *m* and the open space *m'* between the separate sides of the screen, and whenever it is desired to place more ashes within the screen the spring-frame *K* is again lowered into the position shown in Fig. 1, in
 20 which position the door *G* drops downwardly and again rests upon the inclined sides *m'* of the convolute screen.

Our improved sifter may be used for sifting flour and other articles as well as ashes;
 25 and this device is simple in construction and operation and is perfectly adapted to accomplish the result for which it is intended, and it is evident that changes in and modifications of the construction herein described
 30 may be made without departing from the spirit of our invention or sacrificing its advantages, and we reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the
 35 invention.

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

1. In a sifter the combination of a casing
 40 provided with a circular portion, a bottom portion provided with a removable drawer and a top portion having an opening therein, said cylindrical casing being provided with a convolute sifter which is mounted therein,
 45 directly beneath said opening and which is composed of a cylindrical screen connected with circular end pieces, one side of the screen being connected to the end pieces at or adjacent to the perimeter thereof and being carried partially around the same and the opposite
 50 side being inwardly curved and the upper portion of said casing being provided with a downwardly-moving door adapted to close the opening and also to be held in a downwardly-inclined position so that it rests upon
 55 the inwardly-curved side of the screen and means for holding said door closed, substantially as described.

2. In an ash-sifter, the combination of a
 60 casing provided with a circular or cylindrical portion, a bottom portion provided with a removable drawer, and a top portion provided with an opening, said cylindrical casing being provided with a convolute sifter
 65 which is mounted therein directly under the

feed-opening, and which is composed of a convolute screen connected with circular end pieces, one side of the screen being secured to the end pieces at, or adjacent to the perimeters thereof, and being carried partially
 70 around the same, and the opposite side being inwardly curved and said upper portion being provided with a door which is adapted to close the opening therein, and also to be held in a downwardly-inclined position, so that it
 75 rests upon the inwardly-curved side of the screen, and said door being supported by a rectangular spring-frame which surrounds the opening in the top of the casing, and which is provided with arms which extend
 80 therethrough, to which the door is secured, substantially as shown and described.

3. In an ash-sifter, the combination of a casing provided with a circular or cylindrical
 85 portion, a bottom portion provided with a removable drawer and a top portion provided with an opening, said cylindrical casing being provided with a convolute sifter which is mounted therein and which is composed of a convolute screen connected with
 90 circular end pieces, one side of the screen being secured to the end pieces at, or adjacent to the perimeters thereof, and being carried partially around the same, and the opposite side being inwardly curved and said
 95 upper portion being provided with a door which is adapted to close the opening therein, and also to be held in a downwardly-inclined position so that it rests upon the inwardly-curved side of the screen, and said door being
 100 supported by a rectangular spring-frame which surrounds the opening in the top of the casing, and which is provided with arms which extend therethrough, to which the door is secured, and said convolute screen being
 105 provided with a shaft which extends therethrough, and through the casing and which is provided at one side with a crank by which it is revolved, substantially as shown and described.

4. In an ash-sifter, substantially as herein shown and described, the combination of a casing *A* having a cylindrical portion arranged longitudinally and centrally thereof,
 115 a rectangular base portion *B*, in the bottom of which is mounted a drawer *b*, the upper portion *D* of said casing being rectangular and open, and provided with a door *G* adapted to depend into the casing, and forming a chute for the material introduced, and also
 120 to close the opening in the top, said door being secured to arms *k* of the rectangular spring-frame *K* arranged in the opening in said top *D*, and which is adapted to be held in position by a spring-catch *L* secured to
 125 one side of the casing, which also is adapted to engage the free edge of the door to retain the same in a closed position, and circular head-pieces *m* mounted on the shaft *m'*, which passes through the cylindrical portion of the
 130

casing, and is provided with a crank-handle
*m*³, and a convolute screen secured to said
end pieces and having an open face between
the ends thereof, through which the material
5 is introduced thereinto, all constructed and
adapted to operate as herein set forth.

In testimony that we claim the foregoing as
own invention we have signed our names, in

presence of the subscribing witnesses, this
9th day of March, 1896.

JOHN B. CHADBORN.
EDWARD ANDROVETT.

Witnesses:

ISAAC ARNOT,
FREDERICK THEALL.