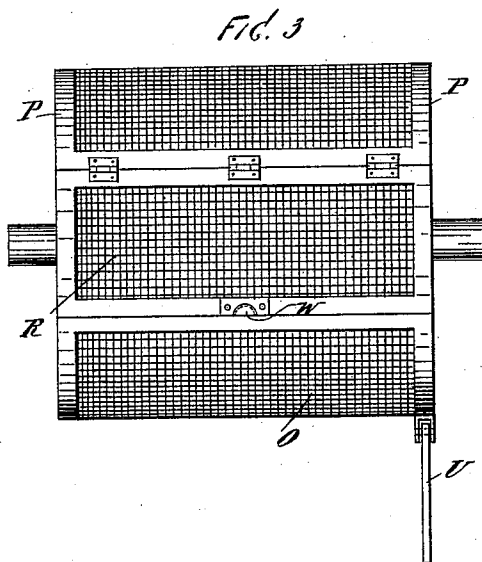
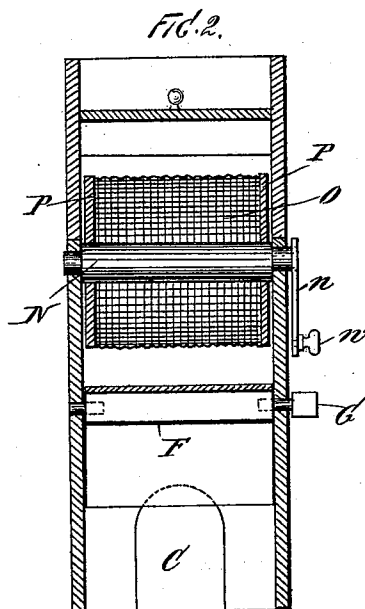
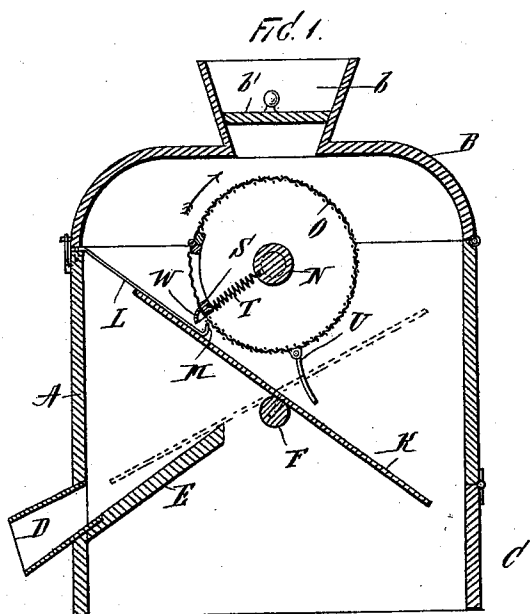


(No Model.)

R. S. THWAITE.
ASH SIFTER.

No. 568,383.

Patented Sept. 29, 1896.



WITNESSES:

John Buckler,
C. Lush.

INVENTOR

Robert S. Thwaite,
BY
Edgar Tate & Co.
ATTORNEYS.

UNITED STATES PATENT OFFICE.

ROBERT S. THWAITE, OF LITTLE FALLS, NEW JERSEY.

ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 568,383, dated September 29, 1896.

Application filed October 14, 1895. Serial No. 565,619. (No model.)

To all whom it may concern:

Be it known that I, ROBERT S. THWAITE, a citizen of the United States, and a resident of Little Falls, in the county of Passaic and State of New Jersey, 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 ash-sifters; and the object thereof is to provide an apparatus whereby the ashes may be separated from the cinders and the charred and coked portions of coal; and the object thereof is to provide an effective device of this class which is simple in construction and operation and comparatively inexpensive, while being at the same time well adapted to accomplish the result for which it is intended.

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

Figure 1 is a central longitudinal section of my improved ash-sifter; Fig. 2, a central transverse section with parts of the interior mechanism in full lines, and Fig. 3 a side elevation of a roller-sifter which I employ.

In the practice of my invention I employ a casing A, which is oblong and rectangular in form and provided with a hinged top or cover B, and in one end thereof with a hinged door C, and in the opposite end with a discharge-chute D, from which projects inwardly and upwardly an inclined plate E, which extends across the casing.

Mounted centrally and transversely of the casing is a roller F, at one end of which on the outside of the casing is handle G, and secured to the roller F is a plate K, and secured at or near the top of the casing, and preferably in vertical line with a discharge-chute D, is a plate-spring L, the inner end of which is provided with an upwardly-directed hook or projection M.

Mounted centrally and transversely of the casing, near the top thereof and in vertical line with a roller F, is a shaft N, the pinions of which extend through the sides of the casing, and to one of which is secured a crank-arm n, provided with a handle n'.

Mounted on or secured to the shaft N is a wire-screen drum O, which is cylindrical in form and provided with end plates or heads P, and formed in one side thereof is a hinged door R, which is held closed by a hook S, secured to a spring T, which is connected with the shaft N, and hinged to one of the heads P of the drum O is a curved arm U.

The edge of the side of the hinged door R, opposite the hinges and centrally thereof, is provided with a projection or hook W, and the operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings. The hinged top or cover B is provided with a hopper b, in which is placed a removable cup b', and the ashes, with the cinders and other articles or products mingled therewith, are poured into the drum O through the hopper b by revolving said drum until the hinged door R is beneath said hopper, and then raising said hinged door by means of a hook applied to the projection W. After the ashes and other substances have been placed within the drum the door R will be closed by the spring T, and the drum may be revolved by means of the crank n, as will be readily understood, in which operation the ashes will be sifted through the sides of the drum into the plate K and will fall into the bottom of the casing A, and in this operation the drum is revolved in the direction of the arrow shown in Fig. 1. When the ashes are all sifted through the drum, said drum is revolved in the opposite direction, and in this movement the hook M at the inner end of the plate-spring L will connect with the projection W on the door R and upon said door, and at the same time the arm U will strike the upper end of the plate K and depress the same into the position shown in dotted lines in said figure, and the cinders, charred coal, and similar products will pass out of the drum and through the chute, as will be readily understood.

The connection of the arm U with the head of the drum is such that when the latter is revolved in the direction of the arrow shown in Fig. 1 said arm will offer no obstruction thereto, and will slide over the plate K; but when the drum is turned in the reverse direction, to open the door and discharge the

cinders, said arm will strike the plate K and depress it into the position shown in dotted lines, as hereinbefore described.

5 My invention is not limited to the exact form, construction, and arrangement of parts herein shown and described, and I therefore reserve the right to make all such alterations therein and modifications thereof as fairly come within the scope of the invention.

10 Having fully described my invention, I claim and desire to secure by Letters Patent—

1. An ash-sifter, comprising a casing which is rectangular in form, and provided with a
15 hinged cover, in which is formed a hopper, a screen-drum mounted in said casing, below said hopper, said drum being provided with a hinged door and spring by which the door is held in the closed position, and said drum
20 being also provided with a hook or projection, a plate pivotally supported in said casing below said drum, a chute at one side of said casing, a plate-spring connected with the top of the casing, and projecting inwardly
25 and adapted to operate in connection with the hook or projection formed on the spring-door, said parts being constructed, combined and arranged, substantially as shown and described.

30 2. The combination in an ash-sifter of a

rectangular curved cover provided with a hopper and lid and in one side with a discharge-chute, on the inner end of which is secured an inclined plate extending toward the center of the casing, a screen-drum
35 mounted in said casing below the hopper, and provided with a spring-actuated door, and having a projection secured to the periphery thereof, a plate pivotally supported in the central portion of said casing and a spring-
40 plate secured to the top of the casing, and adapted to be engaged by said pivoted plate, said pivoted plate being operated by the projection upon the periphery of said drum, whereby the same is tilted upon the inclined
45 spring-plate upon every revolution of the drum, and means for operating the drum in one direction to sift the ashes, and in another direction to discharge the coal upon the inclined plate to the discharge-chute, substan-
50 tially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of the subscribing witnesses, this 12th day of October, 1895.

ROBERT S. THWAITE.

Witnesses:

C. GERST,
K. ENSLIE.