

A. A. LISCOMB.
Ash-Sifters.

No. 153,971

Patented Aug. 11, 1874.

Fig: 1.

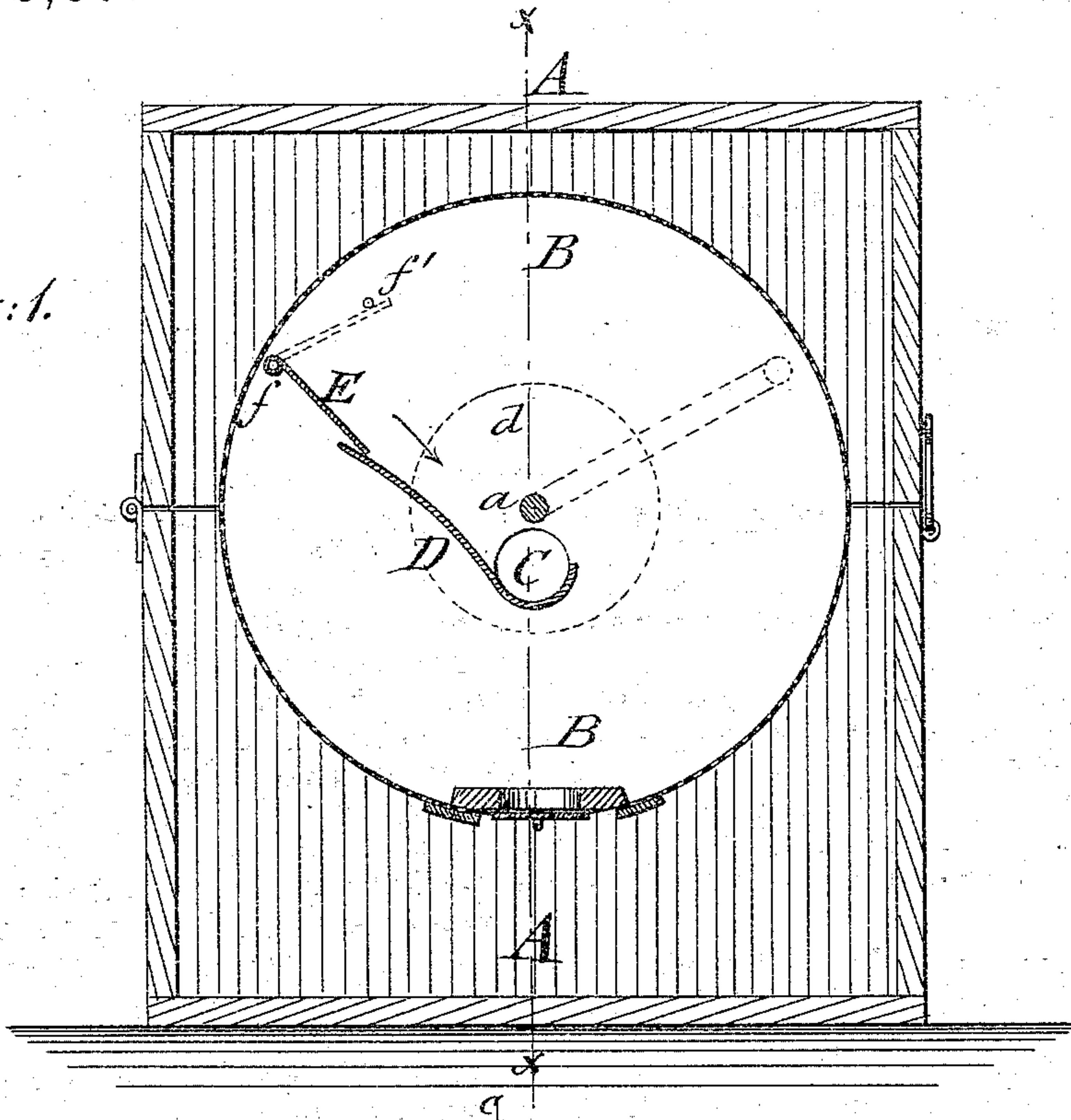
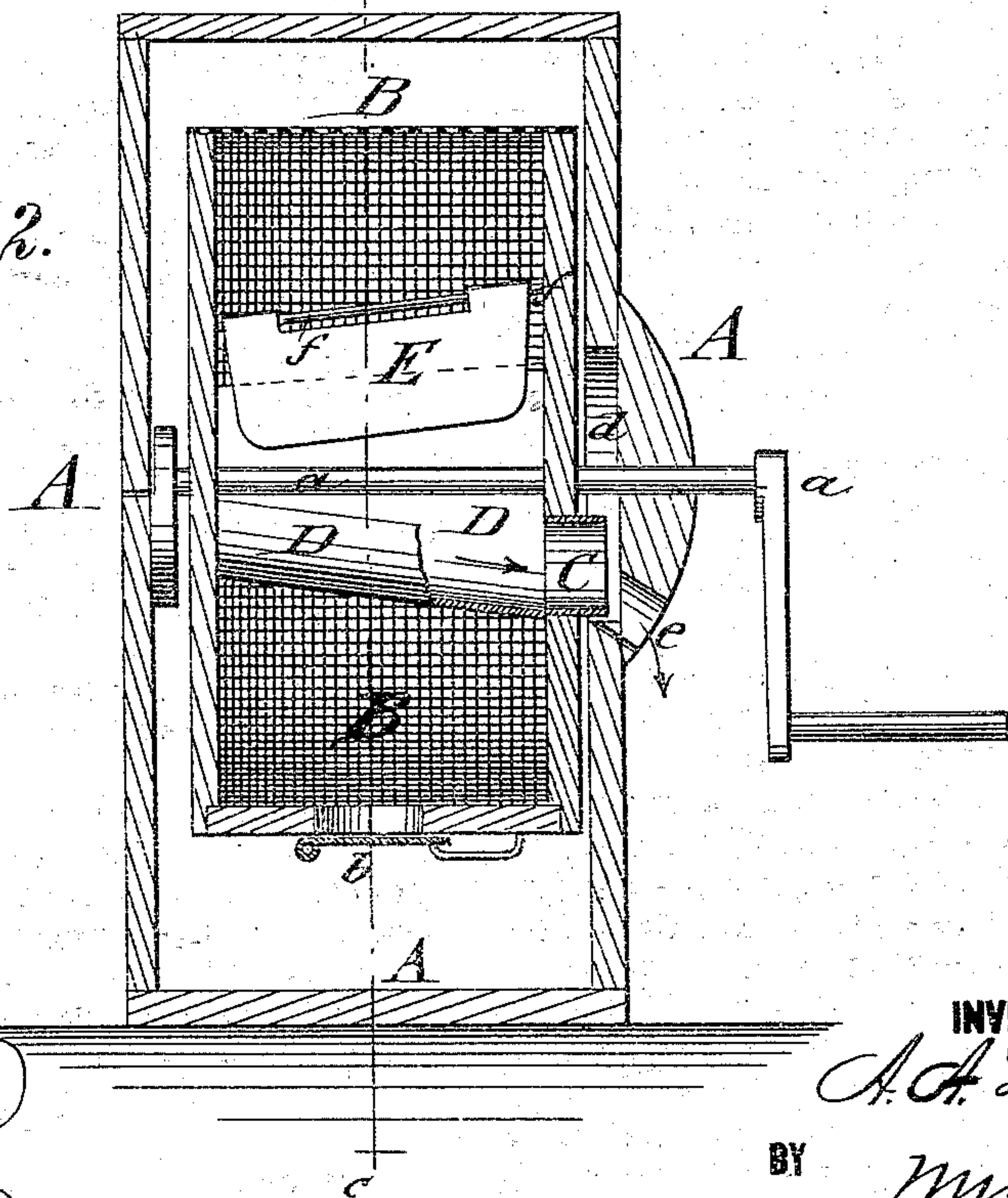


Fig: 2.



WITNESSES:

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ALFRED A. LISCOMB, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN ASH-SIFTERS.

Specification forming part of Letters Patent No. **153,971**, dated August 11, 1874; application filed June 6, 1874.

To all whom it may concern:

Be it known that I, ALFRED A. LISCOMB, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Ash-Sifter, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of my improved ash-sifter, taken on the line *c c* of Fig. 2; and Fig. 2, a vertical transverse section of the same on the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of my invention is to furnish a very convenient and time-saving ash-sifter, by which the ashes are readily separated from the unburnt particles of coal and thrown out of the sifter by a simple reversion of the motion, without opening the inclosing-box. My invention consists of a sifting-drum, rotating in a suitable box with hinged cover, provided with a stationary lateral wing-plate, with suitable inclination, connecting with a side tube of the drum, and with an inclined wing-plate pivoted near the circumference of the drum, so as to allow the passage and sifting of the ashes when the drum is turned in one direction, while producing, upon reversing the direction of rotation, the contact with the stationary wing-plate, and the conveying of the unburnt sifted coal particles along the same to the side tube, from whence they issue to the outside by an inclined connecting perforation of the casing.

In the drawing, A represents the outer inclosing box or casing; B, the drum, constructed, in the usual manner, with coarse wire-cloth, and rotated by a crank-shaft, *a*, turning in side bearings of the box A. The hinged top of the box A is thrown open for placing the ashes, by a sliding door, *b*, of the drum, into the interior thereof, to be then rotated in one direction until the ashes are separated from the unburnt particles settling in the lower part of the box. A sidewise-projecting tube, C, is set into a side perforation of the drum, near the shaft thereof, and allowed to swing freely in the box by providing the same with a corresponding circular recess, *d*. Tube C is preferably made

with a slight inclination, and connected by a similarly-inclined exit-aperture and tube, *e*, of the box to the outside. A lateral curved wing-plate, D, is applied to the inner side of the drum B, extending from the point of tube C farthest from the center, under suitable inclination, to the opposite side of the drum, and to such distance from the circumference that the ashes may readily pass for sifting without being interfered with by plate D, as shown in Figs. 1 and 2. A pivoted wing-plate, E, swings on an inclined pivot-rod attached near the circumference of the drum, and rests on a pin, *f*', at the side of the drum. The rotation of the drum throws the pivoted wing-plate, at each revolution, in contact with the stationary inclined plate, allowing the passage of the ashes when the drum is turned in such direction that the weight is thrown on the rear side of the wing-plate; but when the motion of the drum is reversed the pivoted plate rests on the stationary wing-plate and carries the sifted particles upward and then along the inclined plane formed by the plates, first toward the center, and then, by their side inclination, to the issuing-tube and the exit-aperture of the box, transmitting thereby the sifted coal particles in an instant to the outside, without necessitating the opening of the box or the taking out and opening of the drum. Thus the sifting is accomplished without dust, and the coal particles are furnished for further use without any smudging or further handling of the sifter-drum.

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

As an improvement in ash-sifters, the combination of inclosing-box A, having issuing-aperture *e*, with rotating drum B, provided with side projecting tube C and stationary and pivoted lateral wing-plates D and E, arranged substantially in the manner and for the purpose set forth.

ALFRED A. LISCOMB.

Witnesses:

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