

(No Model.)

2 Sheets—Sheet 1.

W. A. BARTLETT & S. CHILDS.

COAL SIEVE.

No. 369,223.

Patented Aug. 30, 1887.

Fig. 1.

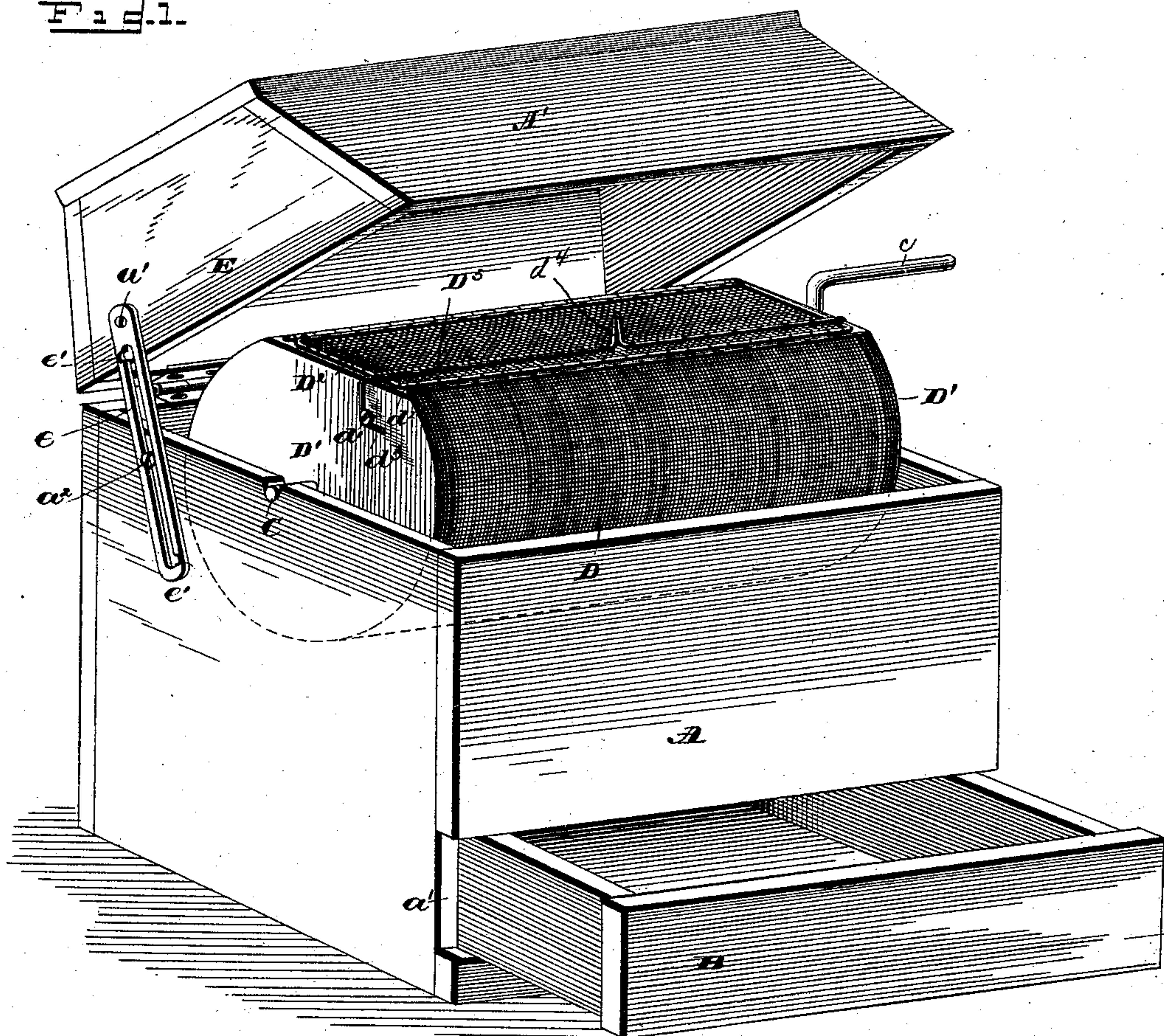
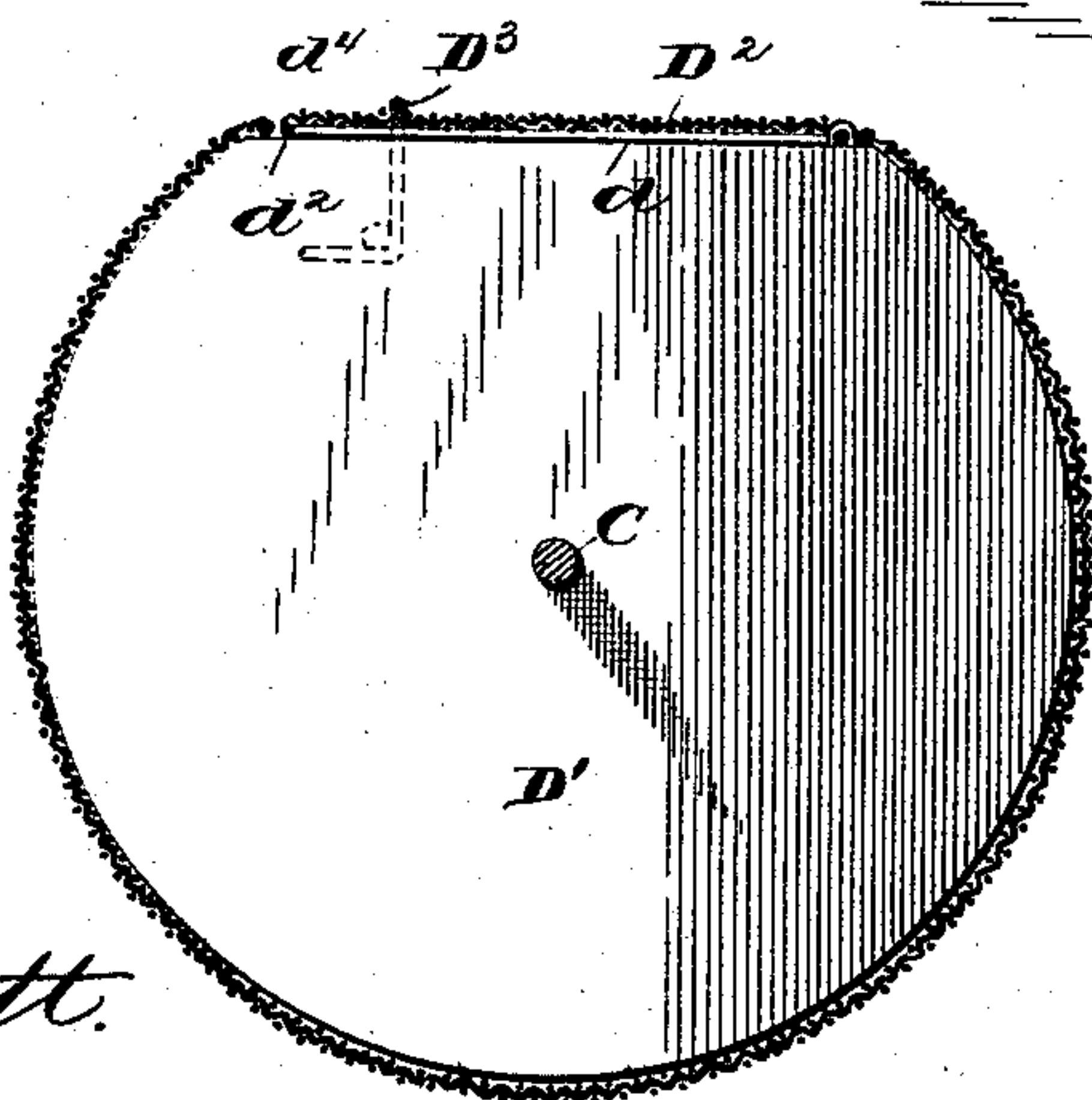


Fig. 2.



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2 Sheets—Sheet 2.

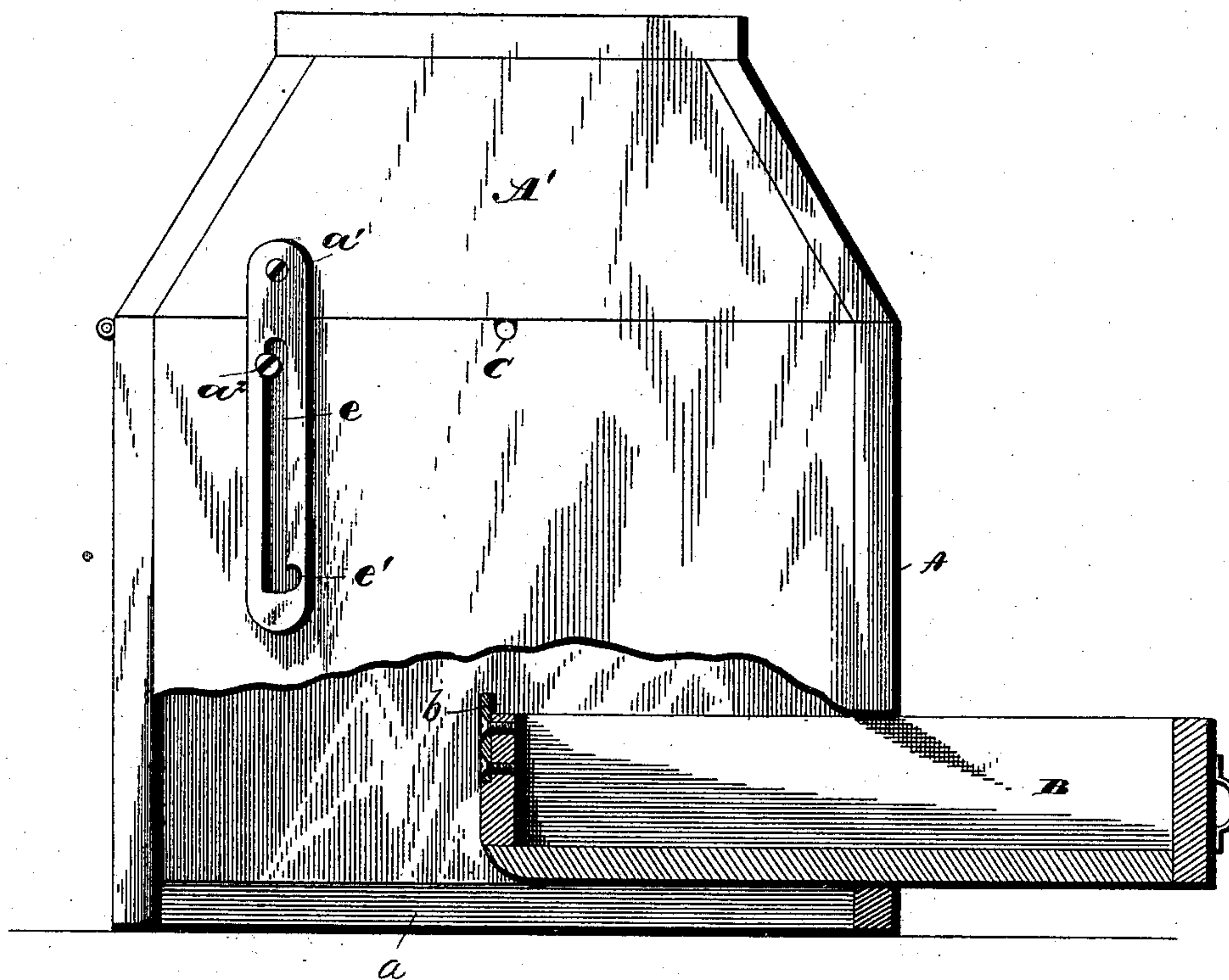
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# UNITED STATES PATENT OFFICE.

WILLIAM A. BARTLETT AND SOLONNOIS CHILDS, OF MEDWAY, MASSACHUSETTS.

## COAL-SIEVE.

SPECIFICATION forming part of Letters Patent No. 369,223, dated August 30, 1887.

Application filed January 27, 1887. Serial No. 225,699. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM A. BARTLETT and SOLONNOIS CHILDS, citizens of the United States of America, residing at Medway, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Coal-Sieves; and we 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to rotary screens or sieves for separating ashes and cinders from coal; and the object of the invention is to produce a more easily operated and efficient device of this character without an increase in cost.

The invention consists in particulars of construction to be hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a perspective view of our improved screen or sifter. Fig. 2 is a diametrical section through the screen proper; and Fig. 3 is a side elevation, partly in section, showing details of construction.

Within a suitable open-bottomed casing, A, we arrange ways  $a$ , to guide and support a drawer, B, adapted to slide through an opening,  $a'$ , in the front wall of casing A. This opening  $a'$  is arranged near the bottom of the casing, in order that the drawer B, when in its normal position, may form a bottom for said casing, the drawer being of a size equal to the horizontal area of the interior of the casing. The upper part of the casing is provided with a hinged cover, A', as shown. The side walls of the casing are provided at the top with bearings to receive a shaft, C, upon which is rigidly secured a rotary screen or sieve, consisting of heads D', supporting a wire screening-cloth, D. These heads D' may be circular or polygonal in contour, and are so arranged with relation to the drawer and casing that the ashes or other refuse discharged from the screen will fall into this drawer and not upon the side or end rails thereof. The wire screen-cloth D

but partly encircles the heads D', there being left a longitudinal opening,  $d$ , between the adjacent edges of the screen-cloth to adapt the screen for the reception and discharge of the material to be screened. This opening  $d$  is closed by a hinged gate, D<sup>2</sup>, consisting of a section of wire-cloth secured upon a frame,  $d^2$ , of a size to close the opening  $d$  and establish the continuity of the screening-surface throughout the entire cylinder. Upon the free edge of this gate D<sup>2</sup> is journaled or pivoted by wire loops or staples a rock-shaft, D<sup>3</sup>, the ends of which extend slightly beyond the heads D' and terminate in cranked ends lying closely to the heads D', and provided with hooks  $d^3$ , which are designed to engage studs  $d'$ , projecting from the heads D', to lock said free end of the gate against accidental displacement.

The rock-shaft D<sup>3</sup> is provided centrally with a projecting hand-piece,  $d^4$ , by means of which the shaft may be rocked to engage or disengage the hooks  $d^3$  from the studs  $d'$ .

The rear lower corner of the drawer B is rounded, as shown, and the rear rail is provided at the top with a projecting stop or stops,  $b$ , designed to engage the front wall of the casing A when the drawer is pulled out to its utmost limit and prevent its entire withdrawal. Owing, however, to the rounding of the rear lower corner of the drawer, it may be entirely removed from the casing by pulling it out to its full limit, then raising it at the front to throw the stop or stops  $b$  down below the upper edge of the opening  $a$  in the front of the casing.

From one side of the cover A' projects a stud,  $a'$ , upon which is pivoted one end of a link, E, the opposite end of which is provided with a longitudinal slot,  $e$ , which engages a stud,  $a^2$ , projecting from the side of the casing. These parts are so arranged relatively that in closing the cover the link will move downwardly with it until the stud  $a^2$  occupies the upper end of its slot  $e$ , and upon raising the cover the lower end of the slot will abut against said stud just as the cover has passed the perpendicular. In order to lock the cover in either its open or closed position, we have formed in the sides of the slot at each end notches  $e'$  to engage the stud  $a^2$ .

In operation the cover A' is thrown open



and the screen turned with its gate side up. The gate is then opened, the charge of coal or cinders introduced, and the gate again closed and locked. Before introducing the cinders, however, the drawer B should be withdrawn to permit the ashes to fall in any suitable receptacle over which the screen may be placed. The cover A' should now be closed to prevent escape of dust, and the screen be revolved a few turns by means of its crank *c* to sift the ashes and cinders from the coal. The drawer B may now be pushed in and the gate D'' opened, when by turning the screen a half-revolution the balance of the charge will be discharged. The drawer may now be removed and emptied.

We claim—

1. A cylinder for coal screens or sifters, consisting of a shaft, heads secured on the shaft and provided with studs *d'*, the screen-cloth secured upon the heads to leave an opening,

and the rock-bar terminating in cranked ends provided with hooks to engage the studs *d'*, substantially as described.

2. A casing for coal-screens, provided at the front with a drawer-opening, and the drawer rounded at its rear lower corner and provided at its upper edge with a rigid stop to engage the casing at the upper side of the drawer-opening, substantially as described.

3. The combination of the casing, the cover hinged thereto, and the bar pivoted to the cover and provided with a notched longitudinal slot to engage a fixed stud projecting from the casing, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM A. BARTLETT.  
SOLONOIS CHILDS.

Witnesses:

JEDEDIAH P. PLUMMER,  
EDWARD A. WIGGIN.