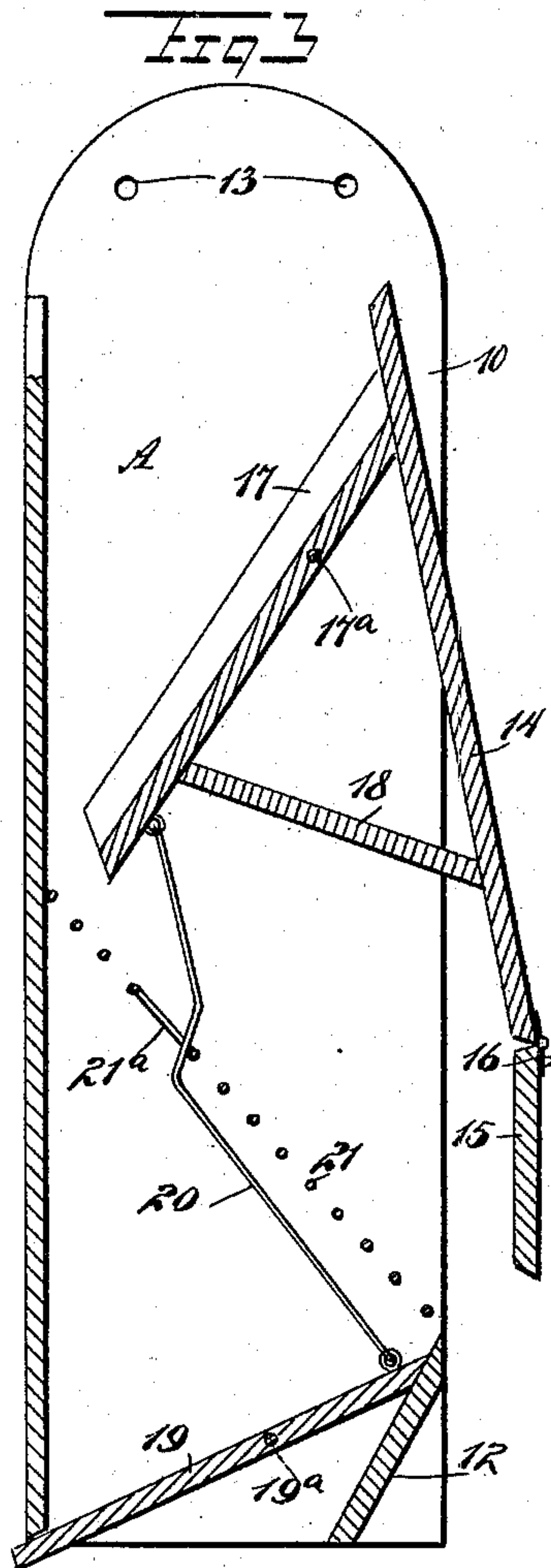
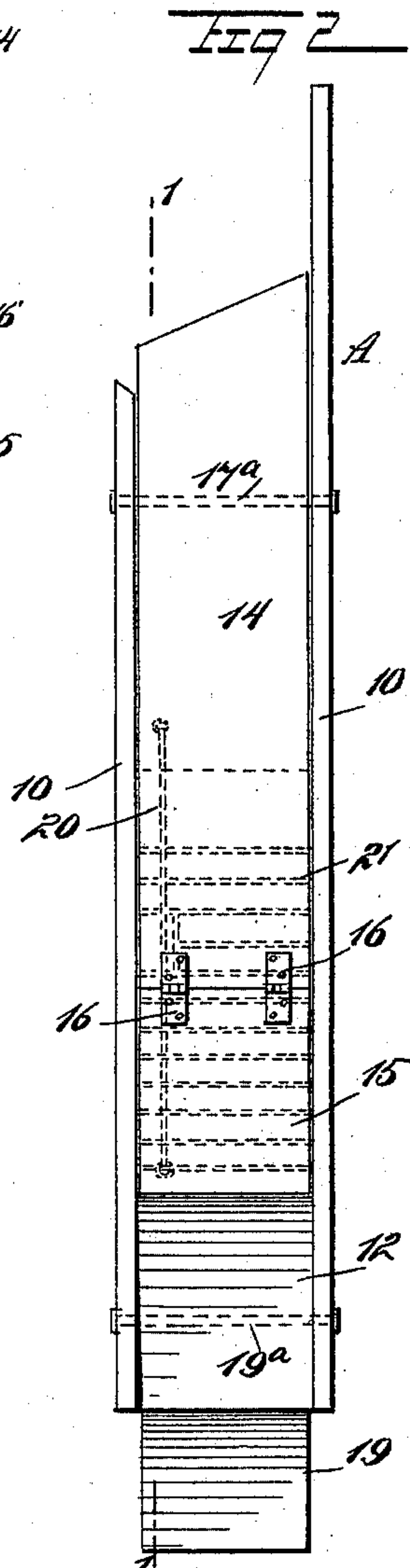
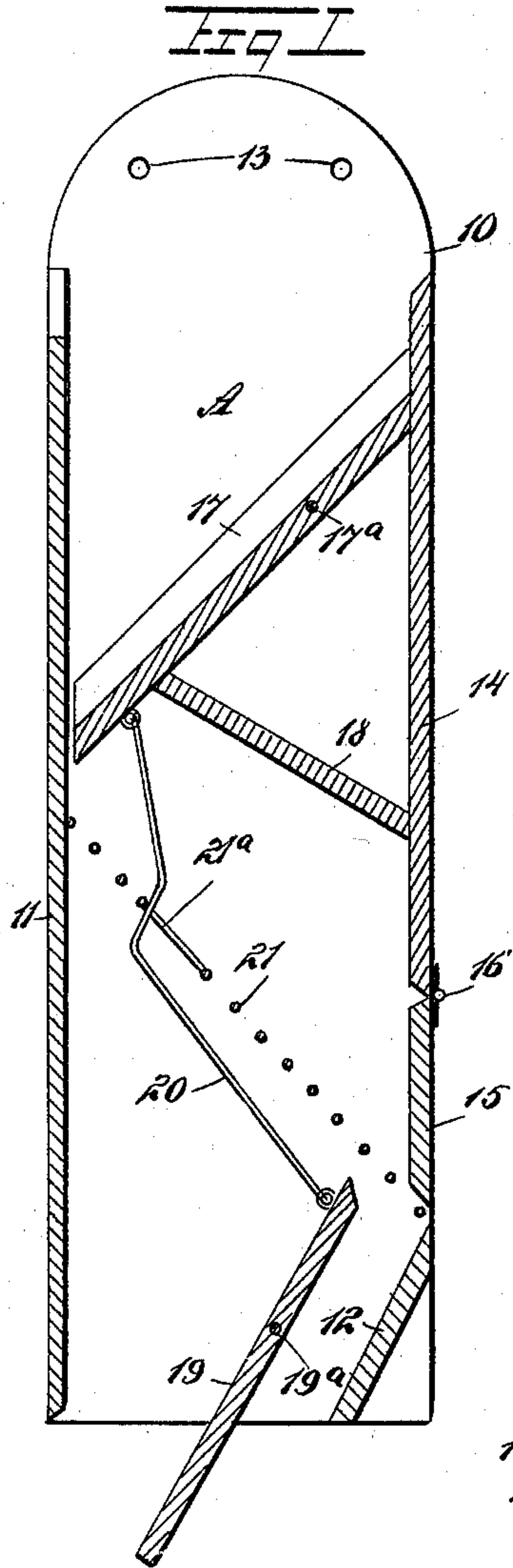


(No Model.)

J. H. & E. W. COUNTISS,
ASH SIFTER.

No. 603,893.

Patented May 10, 1898.



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UNITED STATES PATENT OFFICE.

JAMES H. COUNTISS AND EDMUND W. COUNTISS, OF CAMDEN, NEW JERSEY.

ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 603,893, dated May 10, 1898.

Application filed June 4, 1897. Serial No. 639,368. (No model.)

To all whom it may concern:

Be it known that we, JAMES H. COUNTISS and EDMUND W. COUNTISS, of Camden, in the county of Camden and State of New Jersey, have invented a new and Improved Ash-Sifter, of which the following is a full, clear, and exact description.

The object of our invention is to provide an ash-sifter which may be hung up or placed in a receptacle and which will be automatic in its action.

A further object of the invention is to so construct the sifter that it will be practically dust-proof and whereby also, while the ashes are being sifted, the dust will be retained in the sifter, the cinders having free egress, but wherein as soon as the supply of ashes is stopped the casing of the sifter will be automatically closed except at one portion, which will be automatically and instantly opened for the egress of the dust.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a section through the sifter, taken substantially on the line 1 1 of Fig. 2. Fig. 2 is a front elevation of the improved sifter; and Fig. 3 is a section similar to that shown in Fig. 1, illustrating, however, the position of the parts when the sifter is in the act of sifting ashes.

The casing A consists of a front and a rear board or plate 10, the back being shown as extending higher than the front. The front and rear sections of the casing are connected at one side by a board, plate, or bar 11, and a diagonal board, plate, or bar 12 performs the same function at the lower end only at the opposite side, as shown in both Figs. 1 and 3. Openings 13, preferably two in number, are made in the projecting portion of the back, enabling the casing to be suspended from a post or other upright support and be maintained in perpendicular position. That por-

tion of the side which has been described as open may be and is under certain conditions closed through the medium of a door which is made in two sections, a long upper section 14 and a shorter lower section 15, the two sections being connected by hinges 16 in such manner that the lower portion of the door may be carried outward at an angle to the upper portion. The upper portion of the door is secured to one end of a chute 17, and this chute is pivoted by a pin 17^a in the casing, the pin extending through from front to back of the casing and through the chute between its center and its upper end. The chute 17 is further connected near its lower end with the upper portion 14 of the door by a brace 18. Normally the chute 17 will extend diagonally with a downward inclination from one side of the casing to the other, as shown in Fig. 1, completely separating the upper portion of the casing from the lower portion; and when the chute 17 is in its normal position the door, composed of the sections 14 and 15, will close the open side portion of the casing, as is also shown in Fig. 1.

A platform 19 is pivoted, preferably, between its upper end and its center by a pin 19^a at the bottom portion of the casing, the pin extending from front to rear, and the platform is of sufficient length to engage with one of its ends the lower extremity of the closed side 11 of the casing, while its upper or opposite end will at that time fit snugly against the inclined side board or plate 12, as shown in Fig. 3. The platform 19 occupies the position just described when ashes are being sifted, so as to hold the dust within the casing; but when the ashes have been sifted the platform will drop to the position shown in Fig. 1, uncovering the bottom of the casing and permitting the dust contained therein to drop out. When the chute is carried toward what may be termed the "open" or "outlet" side of the casing, the platform 19 is automatically and instantly brought to the position shown in Fig. 3, closing the bottom of the casing, and the moment that the chute is restored to its normal position, as shown in Fig. 1, the platform is carried to a

position to admit of the egress of dust. Such concerted action is obtained by connecting the upper portion of the platform 19 with the lower portion of the chute 17 by means of a rod or link 20; but two or more such rods or links may be employed, if desired.

The mesh of the sieve is formed by passing rods or bars 21 through the casing from front to back, the said rods or bars thereby forming a grate which will extend from a point slightly below the bottom of the chute 17 to a point at or near the upper end of the inclined partition or side board 12. The bars 21, forming the grate or screening-surface, are placed sufficiently close together to prevent small coals from passing through them, and one or more links 21^a are provided to serve as guides for the connecting-rods 20, since the rods must have a throw of greater extent than the space between the screening-bars 21, and the bars located at the points where the links 21^a are placed may be attached to both links when two are employed. When only one link 21^a is used, the bar at that portion of the casing will be secured to said link and to the side of the casing facing the link, as shown in dotted lines in Fig. 2.

In operation let it be supposed that the casing is suspended from a suitable support and its parts are in the normal position shown in Fig. 1. The moment ashes are dropped in at the top of the casing and strike the chute 17 the weight of the ashes will carry the chute in direction of the outlet side of the casing and will cause the platform 19 to close the bottom of the casing, while at the same time the sectional door at the outlet side of the casing will be opened, permitting the coal or cinders as they pass over the screening-surface composed of the bars 21 to find an exit from the casing at the bottom of said screening-surface. The lower section of the door being hinged will permit large pieces of coal to pass out and will gravitate back to its proper position relative to the screening-surface, which position is such as to prevent dust from flying out at the open side of the casing to any appreciable extent. The dust from the cinders will be collected in the space beneath the screening-surface and will rest upon the platform 19. As soon as the supply of ashes is cut off the chute 17, when relieved from the ashes, will gravitate to its normal position, closing the doors 14 and 15 and opening the platform 19, thus closing all communication between the dust-chamber and the outside atmosphere, except at the bottom of the casing, at which point the dust will be discharged.

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

1. In an ash-sifter, a sieve or screen, a chute located at one side of said screen, and a dumping-platform located at the opposite side of said screen, the platform and chute

being arranged to move in concert and oppositely, substantially as described.

2. In an ash-sifter, a casing provided with a screening-surface and an outlet adjacent to said screening-surface, a dumping-platform located below the screening-surface, a supply-chute located above the screening-surface, and a door operated by the movement of the chute, the chute being also arranged to control the movement of the dumping-platform.

3. In an ash-sifter, a casing, a gravity supply-chute, a screening-surface below the supply-chute, a door adapted to control the opening through which the cinders are ejected, the door being connected with said chute and opened and closed by the movement thereof, a dumping-platform below said screening-surface, and a connection between the dumping-platform and chute, whereby the movement of one compels a movement of the other.

4. In an ash-sifter, the combination, with a casing provided with a screening-surface, of a dumping-platform, a supply-chute, and a door arranged to cover the opening through which the ashes are to be ejected, the movement of the supply-chute regulating the movement of the door and platform.

5. In an ash-sifter, the combination, with a casing having an opening in its bottom and an opening in its side, and a screen having a diagonal position in the casing, extending from its closed to its open side, of a dumping-platform located beneath the screening-surface, a pivoted chute located above the screening-surface, a door connected with the said chute, and a rod connecting the platform with the chute, the chute being of such length as to extend from side to side of the casing, and the connection between the chute and platform being such that when the chute is closed the platform will be opened to discharge its load.

6. In a sieve, a casing, a chute located above the screening-surface, pivoted in said casing and normally separating the upper from the lower portion of the casing, and a door connected with said chute, adapted to close the outlet of the casing, the door being opened and closed by the movement of the chute.

7. In an ash-sifter, a counterbalance-chute, and a door arranged to cover the outlet-opening of the sifter, and controlled by the said counterbalance-chute, and a sieve located between the two.

8. In an ash-sifter, a counterbalance-chute, and a door arranged to cover the outlet-opening of the sifter, and controlled by said counterbalance-chute, the said door being constructed in sections having a hinged connection, and a sieve located between the two.

9. In an ash-sifter, the combination, with a casing having an inclined screening-surface, a counterbalance-chute located above

the screening-surface, extending from side to side and from front to rear, a door adapted to close the central outlet in the casing, the door being connected with the counterbalance-chute, and a dumping-platform located
5 below the screening-surface and connected with the counterbalance-chute, the connection being such that when the chute is in

normal position the platform will be in dumping position.

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