J. ROSSI.

ASH SIFTER.

APPLICATION FILED AUG. 12, 1918.

1,288,205.

Patented Dec. 17, 1918.

2 SHEETS—SHEET 1.

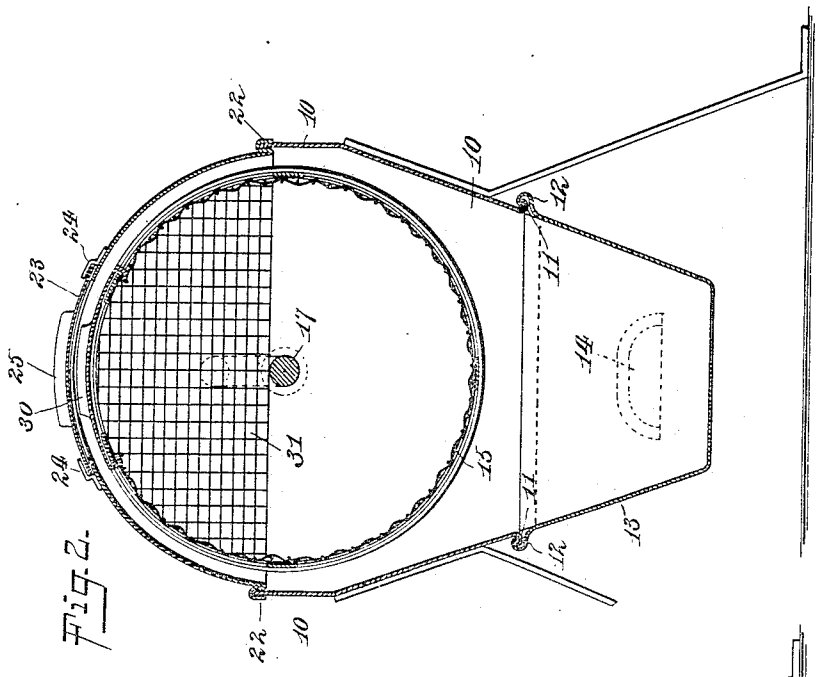


Fig. 2.

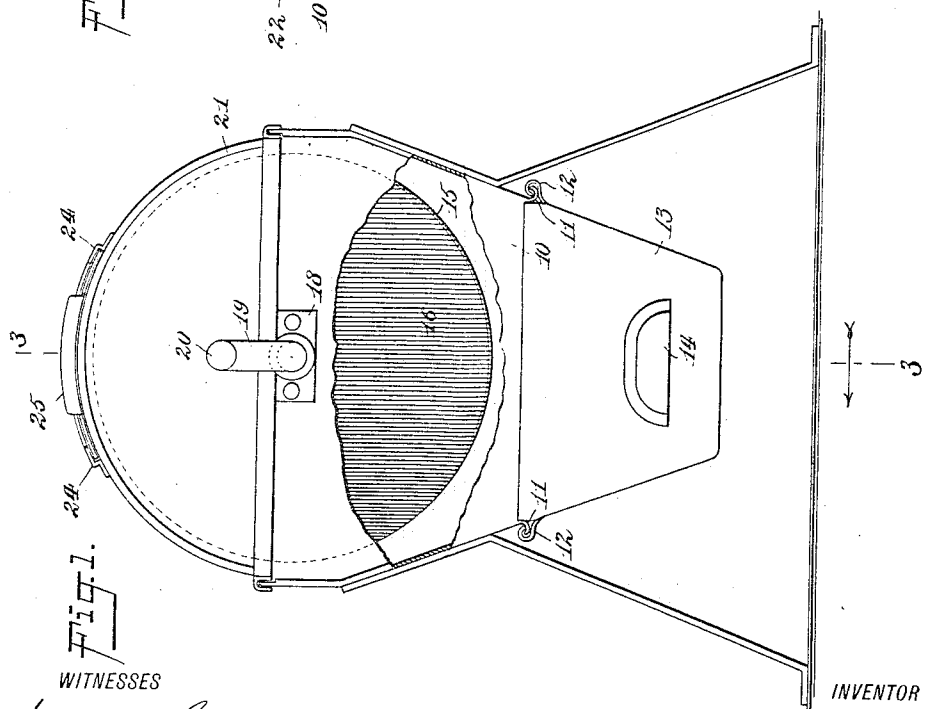


Fig. 1.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 4.

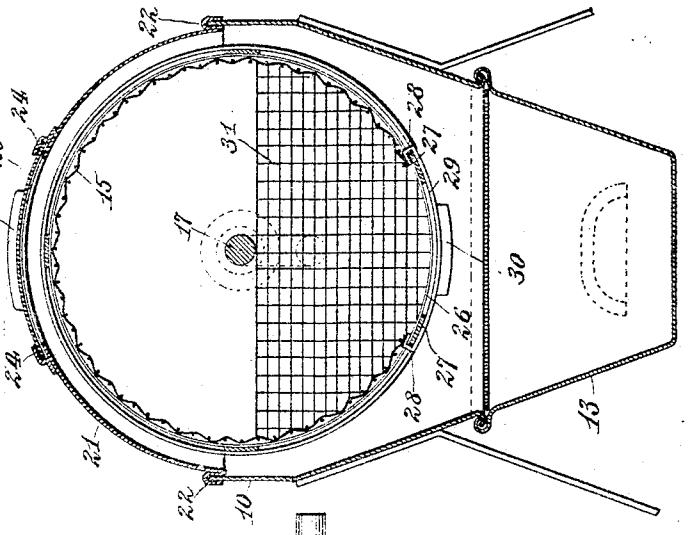


Fig. 5.

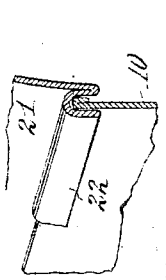


Fig. 3.

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ASH-SIFTER.

1,288,205. Specification of Letters Patent. Patented Dec. 17, 1918.

Application filed August 12, 1918. Serial No. 249,451.

To all whom it may concern:

Be it known that I, JOSEPH ROSSI, a citizen of the United States, and a resident of Peetzburg, in the county of Bergen 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 present invention relates more particularly to improvements in the construction and arrangement of parts forming the dustless ash sifter for which an application for patent bearing Serial No. 232,373 was filed by me May 3, 1918. For a further understanding of said construction and assembly, cross reference is here made.

Among the objects which the present invention has in view are to reduce the cost of construction of the apparatus, to facilitate the emptying of the recovered coal, and to simplify the construction.

Drawings.

Figure 1 is an end elevation of an ash sifter constructed and arranged in accordance with the present invention, a portion of the outer wall being cut away to show the interior arrangement;

Fig. 2 is a vertical cross section of the sifter the receiving and delivery opening of the screen drum thereof being disposed in receiving position;

Fig. 3 is a vertical section, the section being shown as on the line 3—3 in Fig. 1;

Fig. 4 is a vertical cross section showing the screen drum and opening therein in delivery position; and

Fig. 5 is a detail view showing by sectional elevation the joint between the cover and side walls of the sifter casing.

Description.

As seen in the drawings, a boxlike casing 10 has out-turned sliding rails 11 over which are curled channeled hangers 12. The hangers 12 are integrally mounted on a box drawer 13. The handle 14 thereon serves to manipulate the said drawer. One or more drawers 13 may be employed, it being preferred that at least two drawers should be used, one to receive the ashes from the drum 15, and the other, subsequently, to receive the remaining coal and clinkers.

The drum 15 has solid heads 16. Between the heads 16 a cylinder forming the body of the drum 15 extends. The cylinder is constructed of suitably open mesh wire cloth. The drum and heads 16 thereof are carried on the shaft 17 which extends beyond the bearing plates 18 formed in the said heads, and at one end is furnished with a crank 19, the handle 20 whereof is employed by the operator for revolving the said drum. The plates 18 and bearings formed thereby are permanently secured in the ends of the casing 10. As distinguished from the invention to which cross reference has been made, it will be noted that the drum 15 in the present invention is permanently secured in the casing 10.

The casing 10 is covered by a hood 21. The hood 21 is preferably semicylindrical and has an outwardly folding edge 22 arranged to form the channel for the upper edge of the casing 10, as best seen in Fig. 5 of the drawing. The hood 21 has a feed opening at the top thereof which is normally closed by a slide 23. The slide 23 moves in channels formed by the up-set edges 24 and is furnished with a tab 25 by which said slide is engaged.

When the slide 23 is open the drum 15 is rotated until the opening 26 is disposed in line with the opening exposed by the movement of the slide 23. The opening 26 is framed at each side by runner bars 27. The bars 27 are engaged by overturned edges 28 of a slide cover 29 which is moved to and from closure position by means of the tab 30 integrally formed thereon.

To facilitate the screening operation and to guide the ash and coal when being delivered from the drum, I provide two inclines 31. The inclines 31 are best seen in Figs. 3 and 4. They consist of sections of screen material which are secured in position in the drum 15 at opposite ends thereof and converge upon the opening 26 at a relatively sharp angle. The inclines 31 perform a further function of distributing the ashes in the drum and breaking up or preventing massing or packing of the ash. The shaft 32 on which the drum 15 is supported cooperates to this end by shattering any mass which is thrown or dropped from the inclines 31 through the drum to the opposite side thereof.

When employing a sifter constructed and arranged as shown in the accompanying drawings and as above described the operation is as follows: The drum 15 is rotated until the opening 26 rests below the opening normally closed by the slide 23. The slide

23 is withdrawn exposing the slide 29, which is then moved aside from the opening 26. The mixed ash and coal to be treated is now poured into the drum 15. When the drum is sufficiently charged the slides 29 and 23 are closed. The operator now proceeds to rotate the drum 15 by employing at this end the crank 19 and the handle 20.

As the drum 15 rotates it is evident the inclines 31 passing to the underside of the drum receives the load of ashes thereon, which by reason of the inclination of the inclines 31 is delivered toward the center of the drum. When in the course of the revolution the drum is turned so that the inclines 31 are at the upper side of the said drum, the ash load is thrown or dropped to the opposite side of the drum. It will be noted that as the finer ash is separated from the coarser ash and residue coal, the rolling action imparted by the inclines 31 serves to dust or free by attrition the coal from the ash adhering thereto.

At the end of a few minutes it will be found that the coal and coarser material which remain in the drum 15 have been cleared of all the ash usually adhering thereto. The drawer 13 in which the ash has been received is then removed from the casing 10 to be replaced by a second drawer or by any suitable receptacle for the coal or residue which has remained in the drum 15. When this drawer or receptacle is disposed in position below the opening 26, the slide 29 is moved to its open position and the drum is revolved until the opening 26 is at the lowermost side thereof. The coal or larger particles which have remained in the drum are now delivered through the said opening to the drawer or receptacle. When being so delivered the coal or particles roll down the inclines 31.

Claim.

An ash sifter comprising a rotary sifter drum having a receiving and discharge opening therein; means centrally located in said drum for rotating the same; and a plurality of inclines permanently mounted in said drum to deliver the contents of said drum to said delivery opening, said inclines being constructed from open-mesh material to operate as a sifter for the contents of said drum.

JOSEPH ROSSI.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."