(No Model.) 2 Sheets—Sheet 1.

H. E. BUCK.

ASH SIFTER.

No. 553,896. Patented Feb. 4, 1896.

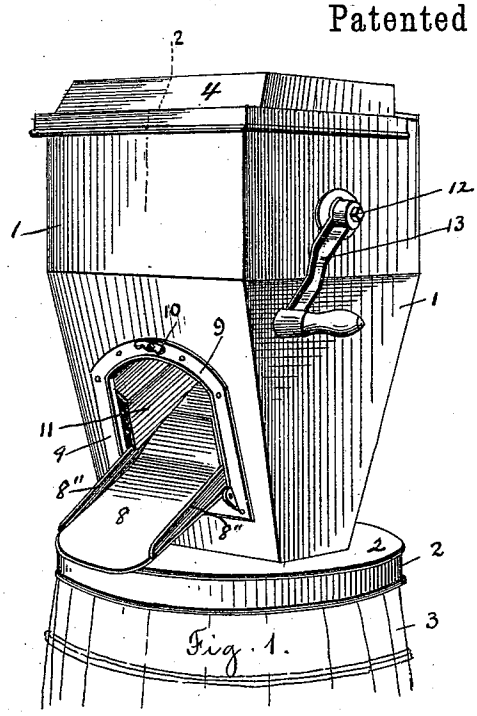

Fig. 1.

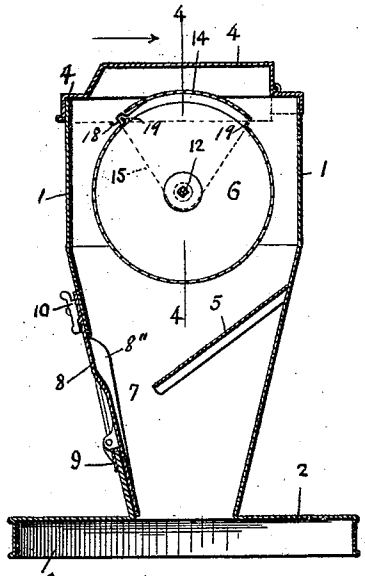

Fig. 3.

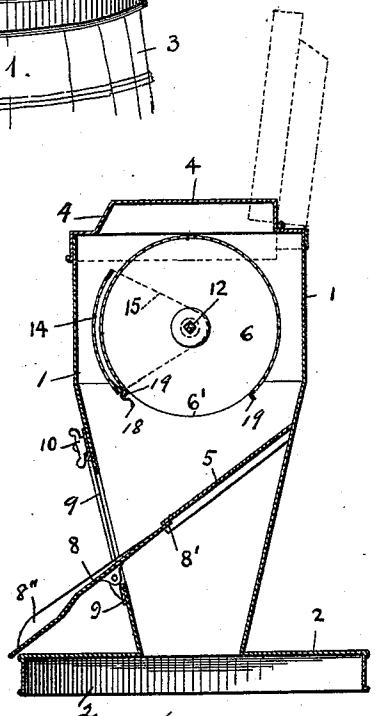

Fig. 2.

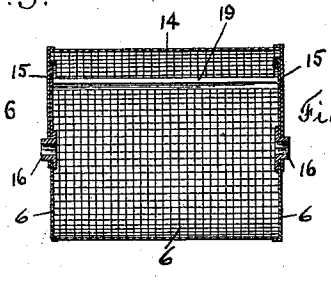

Fig. 4.

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(No Model.) 2 Sheets—Sheet 2.

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ASH SIFTER.

No. 553,896. Patented Feb. 4, 1896.

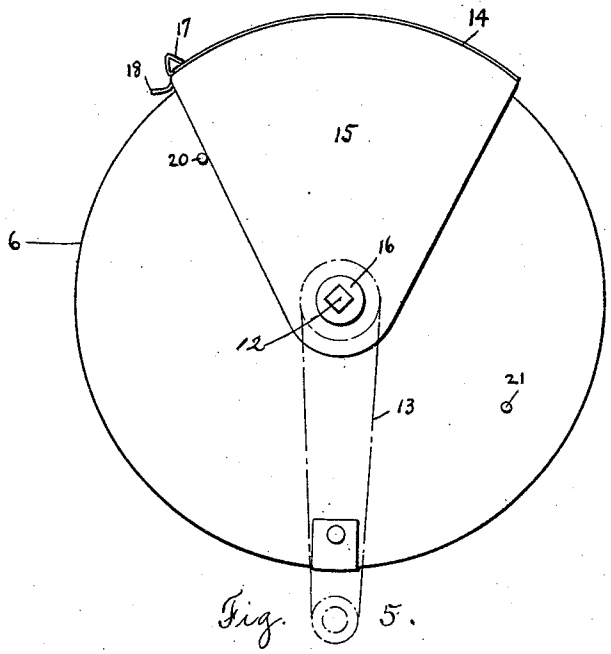

Fig. 5.

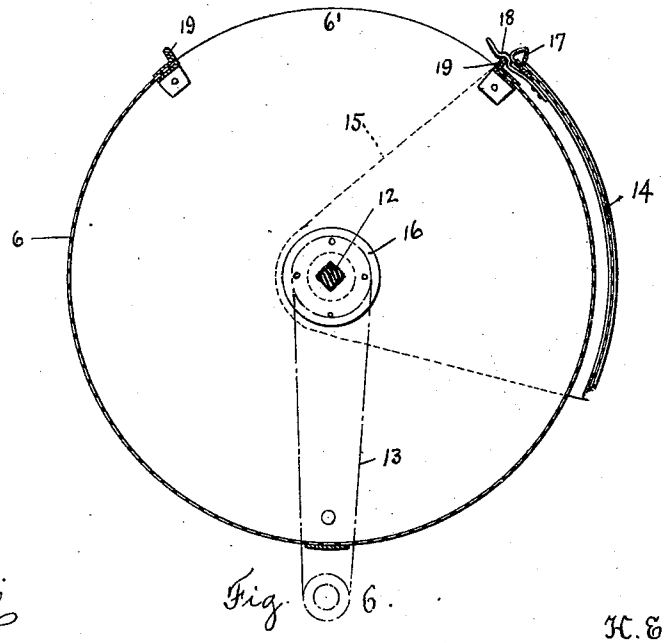

Fig. 6.

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UNITED STATES PATENT OFFICE.

HELON E. BUCK, OF WORCESTER, MASSACHUSETTS.

ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 553,896, dated February 4, 1896.

Application filed March 8, 1895. Serial No. 541,006. (No model.)

To all whom it may concern:

Be it known that I, HELON E. BUCK, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Ash-Sifters; and I do hereby declare that the following is a full, clear, and exact description of the invention, which, in connection with the drawings making a part of this specification, will enable others skilled in the art to which my invention belongs to make and use the same.

My invention relates to ash-sifters, and more particularly to an improved construction of the ash-sifter cylinder shown and described in my United States Letters Patent No. 533,271, dated January 29, 1895. The ash-sifter cylinder shown and described in said patent is provided with a slide or cover which moves endwise, and when it is desired to discharge the coal from the cylinder, after it has been sifted, it is necessary to remove the cover extending over the opening in the cylinder, and in order to do this the top of the cylinder must project above the top of the ash receiver or case far enough to permit of the cover being moved endwise without coming in contact with the sides of the receiver.

In my improved construction of the ash-sifter cylinder I make the cover in such a manner and so combine it with the cylinder that it may be opened when the top of the cylinder does not project above the top of the ash-receiver. The cover is so attached to the cylinder that it will remain open while the cylinder is revolved without interfering with the free revolution of said cylinder. By this construction the ash-sifter cylinder may be located entirely within the ash receiver or case at any point desired, and a straight flat cover may be used on top of the ash-receiver, if desired.

I have shown in the drawings my improved ash-sifter cylinder combined with an individual ash receiver or case, the construction of which corresponds to that of the ash receiver or case shown and described in my said patent above referred to.

Referring to the drawings, Figure 1 is a perspective view of an ash-sifter with my improvements applied thereto. The ash-sifter is shown on top of a barrel. Fig. 2 is a central vertical section of the ash-sifter shown in Fig. 1, taken at a point indicated by line 2. Fig. 3 corresponds to Fig. 2, but shows the cover of the ash-sifter cylinder closed and the damper also closed. Fig. 4 is a central longitudinal section through the ash-sifter cylinder removed, taken on line 4 4, Fig. 3, looking in the direction of the arrow, same figure. Fig. 5 is, on an enlarged scale, an end view of the ash-sifter cylinder removed, with cover closed, and showing the operating-handle in broken lines; and Fig. 6 is a vertical section through the ash-sifter cylinder with the cover open.

In the accompanying drawings, 1 is the ash receiver or case, preferably made of galvanized iron, of substantially the shape shown in Fig. 1, and provided with the enlarged circular bottom 2, adapted to extend over the top of a barrel 3, as shown in Fig. 1.

The top of the case 1 is provided with a hinged cover 4, preferably of the shape shown. An inclined partition or division 5 is secured within the case 1 and extends between the two sides under the ash-sifter cylinder 6. The partition 5 is inclined from the back of the case 1 toward the front, but does not extend to the front side of the case, and an opening 7 is left, through which the sifted ashes pass into the lower part of the case 1 and into the barrel 3, in case one is used, the damper 8 being closed, as shown in Fig. 3.

Combined with the front side of the box 1 is a damper attachment, which is of substantially the same construction as the damper attachment shown in my said patent and consists of a frame 9, secured in an opening cut in the front side of the case 1, and in said frame is pivoted a damper 8, the upper end of which is made heavier than the lower end, so that when the button 10 is turned, as shown in Fig. 1, the damper 8 drops down into the position shown, with the inner end 8′ extending under the lower end of the partition 5, (see Fig. 2,) so that the coal, as it is discharged from the cylinder 6, will fall onto said damper 8 and slide down into a receptacle (not shown) placed to receive it.

Within the case 1 side partitions may be placed, as shown at 11 in Fig. 1, to direct the ashes and coal, as they fall out of the cylinder

6, onto the damper 8. Said damper may be provided with side flanges 8″, as shown.

I will now describe the construction of the ash-sifter cylinder to which my present improvements particularly relate.

The sifter 6 of is cylindrical shape and preferably made of wire-netting and is adapted to revolve within the case 1 and is fast on a central shaft 12, journaled in the sides of the case 1. Said shaft 12 is provided with a handle 13 at one end, by which said shaft and the ash-sifter cylinder are turned. The cylinder 6 is provided with a movable section 14, which acts as a cover, to extend over the opening 6′ in the cylinder 6.

The movable section or cover 14 is made of wire-netting, and the length and width thereof are a little greater than the length and width of the opening 6′ in the cylinder 6, so that when said cover is closed it will entirely cover said opening. The length of the cover 14 is a little greater than the length of the cylinder 6, so that the ends of said cover will extend beyond the ends of the cylinder, (see Fig. 4,) and each end of the cover 14 is provided with a supporting-arm 15, attached thereto, which in this instance is made of triangular shape. (See Fig. 5.) The inner end of each arm or support 15 is loosely mounted on a hub 16, secured in each end of the cylinder 6, and the shaft 12 passes through said hubs 16. (See Fig. 4.)

The curvature of the cover 14 in cross-section corresponds to the curvature of the cylinder 6, and by means of the pivoted arms or supports 15 the cover 14 may be swung around in the arc of a circle on the outside of the cylinder to open and close the opening 6′ in the cylinder, (see Fig. 5,) the pivotal point of attachment of the arms 15 being the axis of the circle.

Owing to the fact that the cylinder is composed of wire-netting, which is liable to become bent or dented, and also to permit of small pieces of coal catching in the meshes and projecting beyond the surface, it is necessary that the arms 15 be of sufficient length to cause the cover 14 to lie at a short distance from the surface of the cylinder to permit of its moving freely back and forth in opening and closing the cylinder. To close the space between the cover and the edges of the cylinder along the opening of the cylinder, a flange 19 is placed along each side of the opening so as to project beyond the surface of the cylinder and fit snugly against the inner surface of the cover. In addition to closing this space between the cylinder and the cover the flange is preferably made of a substantial L shape, so that the portion adjacent the cylinder may act as a strengthener for the edge of the wire-netting along the opening, and thereby prevent the edges from becoming bent or broken in filling and emptying the cylinder.

The cover 14 is preferably provided with an upwardly-extending longitudinal fin or ridge 17 on one edge thereof, by which the cover may be moved, and there is a spring-catch 18 secured at one or both ends of said cover, which is adapted to catch over a flange 19 extending longitudinally on the cylinder 6 at each edge of the opening 6′ therein, as shown in Fig. 6, to hold said cover closed, as shown in Fig. 5, or open, as shown in Fig. 6.

When it is desired to move the cover 14 to uncover the opening 6′ in the cylinder 6, the catch 18 is disengaged from the flange 19 and the cover 6 swings around in the arc of a circle into the position shown in Fig. 6 and the catch 18 catches over the other flange 19 on the cylinder 6 and holds the cover open.

Pins 20 and 21 secured in the outer end of the cylinder 6 may be used to form stops to limit the motion of the cover 14, if preferred, in case the catch 18 fails to act.

It will be understood that my ash-sifter cylinder provided with my pivoted cover may be combined with any form of ash receiver or case, and the details of construction of the same may be varied if desired. For example, instead of providing the cover 14 with solid triangular pivoted supports 15 pivoted supports of other construction may be used.

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

In an ash-sifter, the combination, with a receiver or case, of a cylinder journaled therein, said cylinder being provided with a longitudinal opening extending from end to end, a cover for the opening pivotally attached to the ends of the cylinder so as to move in the arc of a circle around the cylinder and at a slight distance beyond the surface thereof, one edge of which is provided with an upwardly-extending longitudinal fin or ridge, an L-shaped flange upon each side of the opening in the cylinder, a portion of which forms a strengthening-piece for the edge of the cylinder along the opening, and the remaining portion projects beyond the surface of the cylinder to the under surface of the cover, and a spring upon the edge of the cover having the fin and adapted to engage with the flanges upon the cylinder to hold the cover open or closed, substantially as set forth.

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Witnesses:
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