A. M. KETCHUM.

ASH-SIFTER.

No. 183,307. Patented Oct. 17, 1876.

Fig. 1

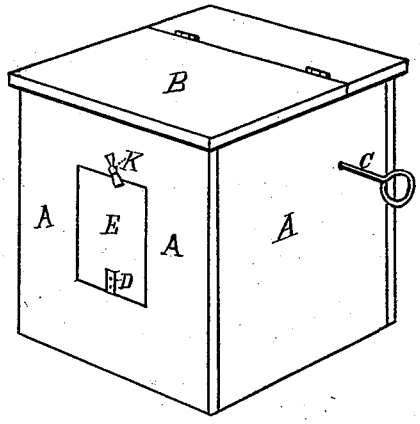


Fig. 2

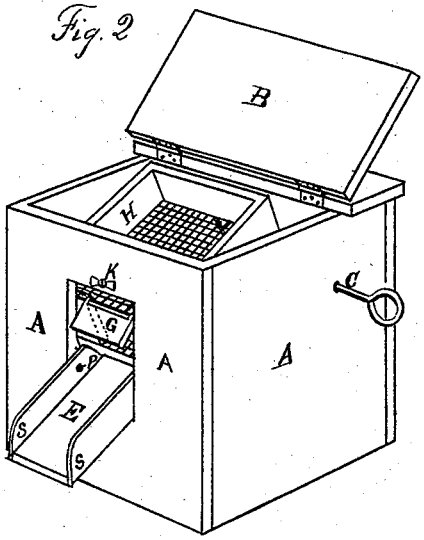


Fig 3

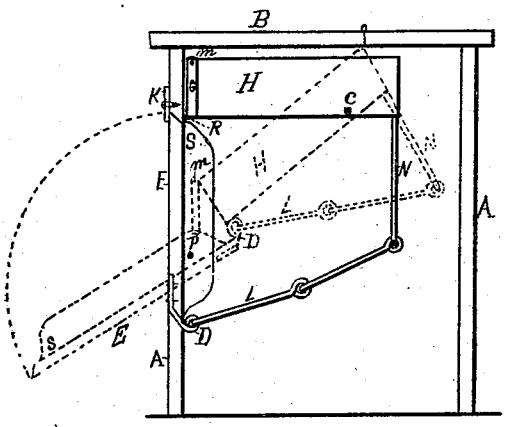


Fig 4

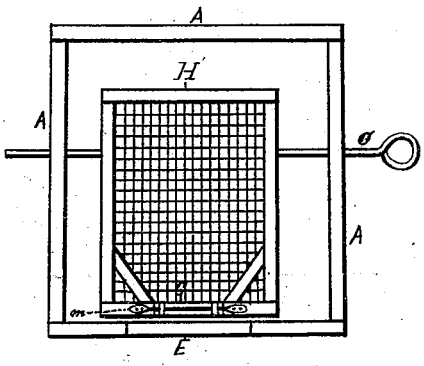
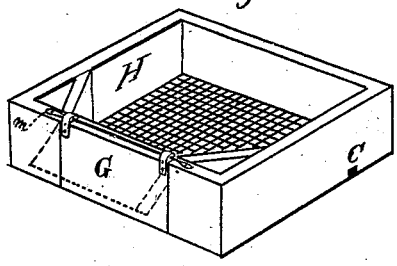


Fig 5



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UNITED STATES PATENT OFFICE.

AUSTIN M. KETCHUM, OF SCHENECTADY, NEW YORK.

IMPROVEMENT IN ASH-SIFTERS.

Specification forming part of Letters Patent No. **183,307**, dated October 17, 1876; application filed September 25, 1876.

To all whom it may concern:

Be it known that I, AUSTIN M. KETCHUM, of the city and county of Schenectady and State of New York, have invented a new and useful Improvement in Ash-Sifters, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

In said drawings, Figure 1 represents a perspective view of the ash-sifter, closed. Fig. 2 is a perspective view with the cover raised and the spout down, and the sieve inclined, with the gate open. Fig. 3 shows vertical, longitudinal, and transverse sections of my improved ash-sifter. The dark lines in the figure show the case, the sieve, the rod, the arm, and the spout, all in position as when the process of sifting is going on. The dotted lines in the figure show the sieve inclined, the spout down, and the gate in the sieve hanging open, all in the position as when the dumping of the coal is going on. Fig. 4 is a top view, showing the sieve and the rod by which it is shaken for sifting the ashes. This figure also shows that the sieve is somewhat smaller than the case, so as to allow room for the sieve to be shaken sufficiently to separate the coal from the ashes. Fig. 5 shows a perspective view of the sieve and pivoted or hinged gate.

My invention has for its object to furnish, for household and other purposes, an improved ash-sifter that separates the unburned coal particles from the ashes in a quick and reliable manner, without any annoyance from dust.

The invention consists of a movable sieve with a pivoted gate, said sieve being arranged in the upper part of an inclosed box, and worked back and forward in said box by a rod fastened on the under side of said sieve, and passing through the two opposite sides of said box. When the sieve is worked the ashes fall into a barrel or box beneath, while the coal is deposited in the spout through the hinged gate in the sieve, thence into a receptacle underneath the spout. This dumping process is done by letting off the button which holds up the spout. When the spout falls down the sieve inclines, the gate in the sieve is freed, while the particles of coal slide out through the gate into the spout, thence into a receptacle to receive them. After so dumping the sieve it may be replaced for again sifting by raising and closing the spout in the outer case, to which spout is attached a rod, which connects with the rear end of the sieve by an arm, so when the spout is raised the sieve is also raised by the rod to a horizontal position for again sifting, the spout answering the double purpose of a spout and a door to the outside case.

A in the drawing represents the outer box or case of my improved ash-sifter, which is inclosed by a tightly-fitting cover, B, hinged to the same on top, and also a pivoted spout, E, on the side of case A. On the inside of case A is a movable sieve, H, having a hinged or pivoted gate, G, on one side. Said sieve H rests and is fastened on rod C to the right of the center of said sieve, so it will incline readily when the supports S S are removed at the other end. After the process of sifting is gone through with, and the coal is to be removed from the sieve, turn the button K, and the weight of sieve H upon the rod L and arm N, connected to the spout E by joint D, will press out spout E, and the sieve H will incline to a proper angle for the coal to slide out. The rod L and arm N will draw the spout E down also, and the gate G will be freed, so the coal readily slides out and down through gate G into spout E to a box or other receptacle underneath for that purpose. To replace the sieve H for again charging it, raise the spout E to a perpendicular position and button it with button K. By this motion the connecting-rod L and arm N, said arm N being connected firmly to the rear end of sieve H, will draw the sieve H to a horizontal position for again charging it, the gate G being then kept closed by being in contact with the inside of case A. While the process of sifting is going on, gate G, being hung on a pivoted rod, *m*, swings readily out, when sieve H is lowered to the opening occupied by spout E. The rod L has a universal-joint connection with E at D, and with the rod N at P. The sieve is rigidly fastened to rod C, and bears at its other side freely on the inclined ends S S of the door and spout E; hence the coal is sifted by taking hold of

handle of C and reciprocating the sieve H horizontally, the rod C playing loosely in holes through the sides of the box A. As the case is entirely inclosed, no dust can escape while the process of sifting is going on, so the ash-sifter may be used at any place without annoyance. The sifter is compactly made, easily operated, and of moderate cost.

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

The combination of the inclosed case A, having cover B, having a pivoted door and spout, E, and a movable sieve, H, having a pivoted gate, G, spout E and sieve H being connected by rod L and arm N, arranged substantially as and for the purposes set forth.

AUSTIN M. KETCHUM.

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