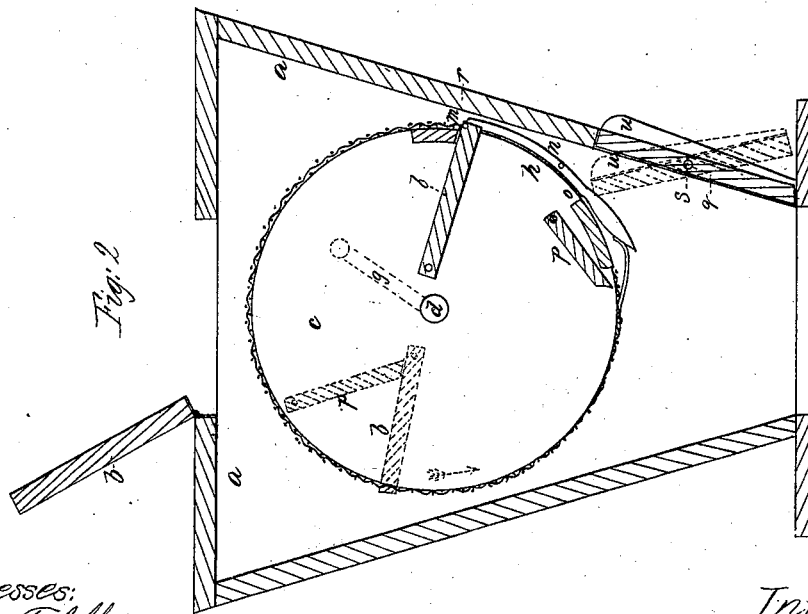
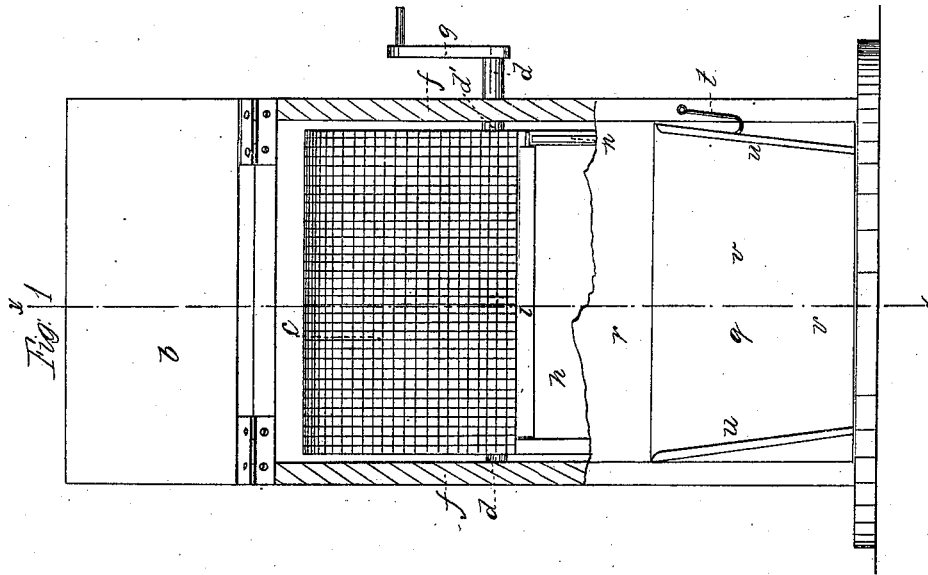


Patented Apr. 24, 1866.



Inventor:
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By Harlow
Att'y

UNITED STATES PATENT OFFICE.

P. HARLOW, OF KINGSTON, NEW YORK.

ASH-SIFTER.

Specification forming part of Letters Patent No. 54,149, dated April 24, 1866.

To all whom it may concern:

Be it known that I, P. HARLOW, of Kingston, in the county of Ulster and State of New York, have invented new and useful Improvements in Ash-Sifters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to coal and ash sifters in which a barrel or cylindrical-shaped sieve is used; and it consists in a novel arrangement of a hopper therein, in connection with a discharge-spout of its casing, whereby the ashes, by slowly revolving the barrel-sieve, are caused to be entirely separated from the good and large particles of coal, &c., falling into any suitable receiver therefor, and when entirely so sifted the coal can be automatically delivered from the same into a coal hod or scuttle, or other suitable vessel.

In accompanying plate of drawings my improvements are illustrated, Figure 1 being a view of one end of the ash-sifter with its end piece partially broken away, and Fig. 2 a transverse vertical section taken in the plane of the line *x x*, Fig. 1.

a a in the drawings represent an outer casing or box, made of any suitable shape and material, having a lid, *b*, at its upper end and open at its lower end, by which it is placed on a barrel or any other receptacle for the ashes, which are sifted in it, as will be presently described.

c is a cylindrical or barrel-shaped sieve, closed at both of its ends, with its sides made of wire-netting or other suitable material, having open meshes, and hung upon short shafts *d d'* at each end in bearings of the side pieces, *f f*, of the outer casing, on one of which shafts *d'* is a winch-handle, *g*, for turning or revolving the same.

A portion, *h*, of the wire-netting side of the sieve is cut away, making a mouth or opening for inserting the ashes to be sifted within the same by raising the lid of the top piece of the outer casing.

l is a partition board or piece extending the whole length of the cylindrical sieve, and in and toward the center of the same from one edge, *m*, of its mouth *h*, which partition is hung

upon pins in the end or head pieces of the sieve at its inner edge, and held in place at its outer edge by means of a spring-catch, *n*, arranged along and upon the edge of one of the heads of the sieve.

Hung at the opposite edge, *o*, of the mouth of the sieve is another board or partition-plate, *p*, of a length equal to that of the cylinder-sieve, and of sufficient width to extend from the edge of said mouth to the inner edge, or nearly so, of the other radially-placed partition, *l*, before referred to, as illustrated by red lines in Fig. 2, this partition *p* swinging forward and backward as the sieve is revolved, so as to close the mouth of the same at such portions of its revolution as would allow the ashes to fall out thereof.

The lower portion, *q*, of the side piece, *r*, of the sieve-casing is cut out, and its piece so removed then hung therein at each end, so as to turn or swing upon gudgeon-pins *s s*, it being held in any desired position by interlocking the catch *t* of the casing with it. Upon the outer face of this swinging piece *q*, extending vertically thereon from end to end, but inclined toward each other as they approach the lower end, are fixed side pieces or cleats, *n*, the two together forming a spout, *v*, through which the coal when delivered from the ash-sifter passes, as will be explained, the swinging board *q* being first properly adjusted therefor, as represented by red lines in Fig. 2.

The ashes to be sifted are placed in the sieve by opening the lid *b* of its casing, the mouth of the sieve having been first brought opposite thereto, when the lid is closed and the sieve slowly revolved in the direction represented by a red arrow in the drawings, the swinging partition *p* during the first half of such revolution shutting upon the other partition, *l*, thus closing the mouth *h*, but which, as the sieve moves on its second half, then opens therefrom, the ashes resting upon the fixed partition-plate *l*, from which, as the sieve approaches its starting-point, they fall over and into the other and bottom portion thereof, and so on, the fine dust or ashes thus being gradually caused to pass through the meshes of the sieve, leaving the larger particles therein, into the barrel or other receiver below.

During the time occupied, as explained, in the sifting of the ashes within the sieve the

delivery-spout *v* is closed; but that having been accomplished, the spout is then set in the position represented in red lines in Fig. 2, and there fastened by the catch-hook *t*, when, as the barrel-sieve is revolved, the spring-catch *n* abuts against the inner face of the spout, thus causing it to become disengaged from the partition *l*, which then, from the weight of the coal upon it, falls, discharging the coal upon the spout, by which it is delivered into a coal-scuttle or other suitable vessel, as is apparent without further explanation, the partition *l* resuming its original position, as the sieve continues to revolve from its gravity alone when it reaches the proper point therefor.

I claim as new and desire to secure by Letters Patent—

The arrangement of the partitions *l* and *p* within a barrel or cylinder sieve, in combination with the delivery-spout *v* of the outer casing or box, operating together substantially in the manner described, and for the purposes specified.

The above specification of my invention signed by me this 3d day of August, 1865.

P. HARLOW.

Witnesses:

ALBERT W. BROWN,
M. M. LIVINGSTON.