(No Model.)

# P. O'CONNOR.

## COAL SIFTER.

No. 317,574. Patented May 12, 1885.

*Fig. 1.*

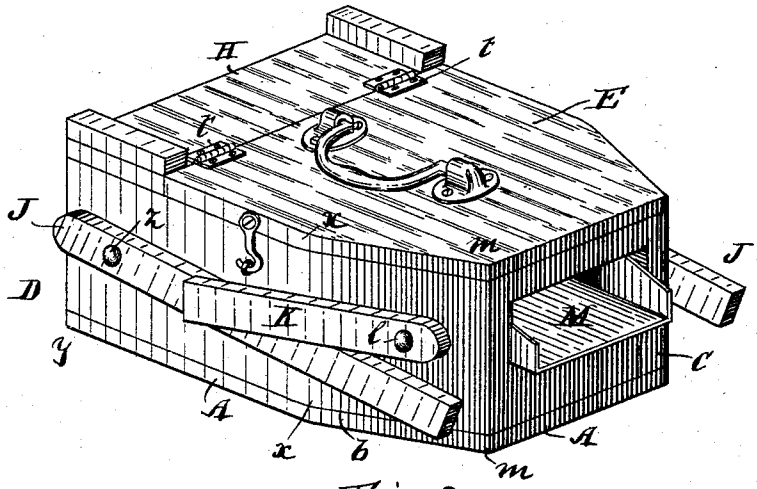
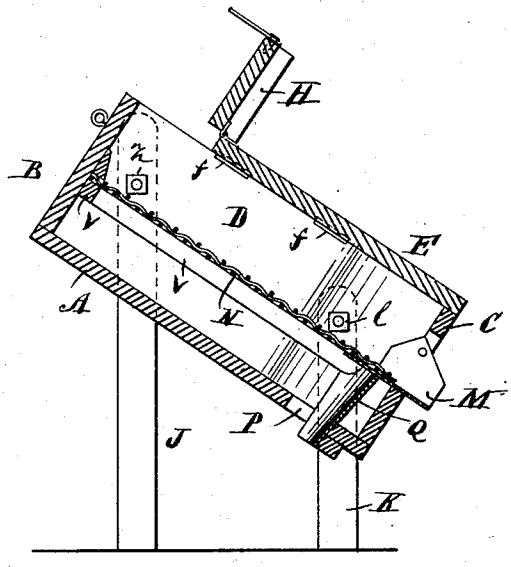



*Fig. 2*




*Witnesses.*

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# UNITED STATES PATENT OFFICE.

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## COAL-SIFTER.

SPECIFICATION forming part of Letters Patent No. 317,574, dated May 12, 1885.

Application filed February 24, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK O'CONNOR, of Lawrence, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Coal-Sifters, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an isometrical perspective view representing my improved coal-sifter with the legs folded and the cover closed ready for packing or transportation; and Fig. 2, a vertical longitudinal section of the same in position for use, the auxiliary cover being represented as open.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of coal-sifters which are designed more especially for domestic purposes; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a more effective and otherwise desirable article of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the bottom; B, the upper end; C, the lower end; D, the sides; E, the main cover; H, the auxiliary cover; J, the hind or long legs, and K the forward or short legs.

The body, consisting of the bottom, sides, and ends, is rectangular in form, but is tapered at its forward or lower end, the end piece C being shorter than the end B, and the sides D converging from *x* to *m*, the bottom A and top E being formed to correspond therewith.

Disposed within the body of the sifter, in parallelism with the bottom A, there is an ordinary wire screen, N, attached to and supported by the cleats or ledges *v*, the lower end of the screen terminating in the chute or mouth M, which projects through the end C, as best seen in Fig. 1.

The main cover E is hinged at *f* to one of the sides D, the auxiliary cover H being hinged at *t* to the upper end of said main cover.

The long or hind legs J are pivoted at *z*, near their upper ends, to the rear or upper ends of the sides D, the short or forward legs being pivoted at *l* near their upper ends to the converging portions of said sides midway between *x* and *m*.

An opening, P, is formed in the bottom A, and between said opening and the lower or front end of said bottom there is a partition, Q, extending from the bottom of the mouth M downwardly through said opening.

In the use of my improvement the sifter is set up, as shown in Fig. 2, with the legs J K unfolded and arranged vertically, and the cover H open. The coal to be sifted is then poured into the body of the sifter onto the screen N, and the cover closed, after which the coal will pass downwardly over the screen by gravitation, and be discharged through the mouth M, the ashes being separated and falling through the screen onto the bottom A, and thence passing through the opening P, in a manner which will be readily obvious without a more explicit description.

The object of the partition Q is to stop the ashes as they slide down the bottom A, and direct them through the opening P into any suitable receptacle.

If large quantities of coal are to be introduced into the sifter, or when the screen requires to be cleansed, the main cover E is raised; but for ordinary purposes the auxiliary cover only is required.

When a sifter having legs pivoted to its sides to adapt them to be folded is set up for use, as shown in Fig. 2, it will have a tendency to pitch forward and fall to the ground by gravitation. To obviate this difficulty or objection I incline the sides D, and pivot the forward legs to the inclined or converging portions, as described, thereby causing the shoulders *b* of the body to come into contact with

said legs as the body descends, the shoulders acting as stops to prevent the sifter from falling.

In case the coal does not pass readily over the screen N the sifting may be facilitated by oscillating the body of the sifter on the pivots *l z*.

Having thus explained my invention, what I claim is—

1. In a coal-sifter, the combination of the following instrumentalities, to wit: a body, a screen, a main cover, an auxiliary cover, two long and two short supporting-legs, the body being provided with discharge-openings for the ashes and sifted coal, and having sides which are straight along the main portion of the body and converge near its lower end, the long legs being pivoted to the straight portions of the sides, and the short legs to the converging portions, and adapted to engage said converging portions and prevent the sifter from pitching forward and falling to the ground, substantially as described.

2. In a coal-sifter, a body having the sides D, said sides being straight from *x* to *y*, and converging from *x* to *m*, in combination with the legs J, pivoted to the straight portions, and legs K, pivoted to the converging portions thereof, substantially as described.

3. The improved coal-sifter herein described, the same consisting of the bottom A, provided with the opening P, the end C, provided with the mouth M, the sides D, provided with the converging portions *x m*, the end B, screen N, partition Q, covers E H, and legs J K, constructed, combined, and arranged to operate substantially as and for the purpose set forth.

PATRICK O'CONNOR.

Witnesses:
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