

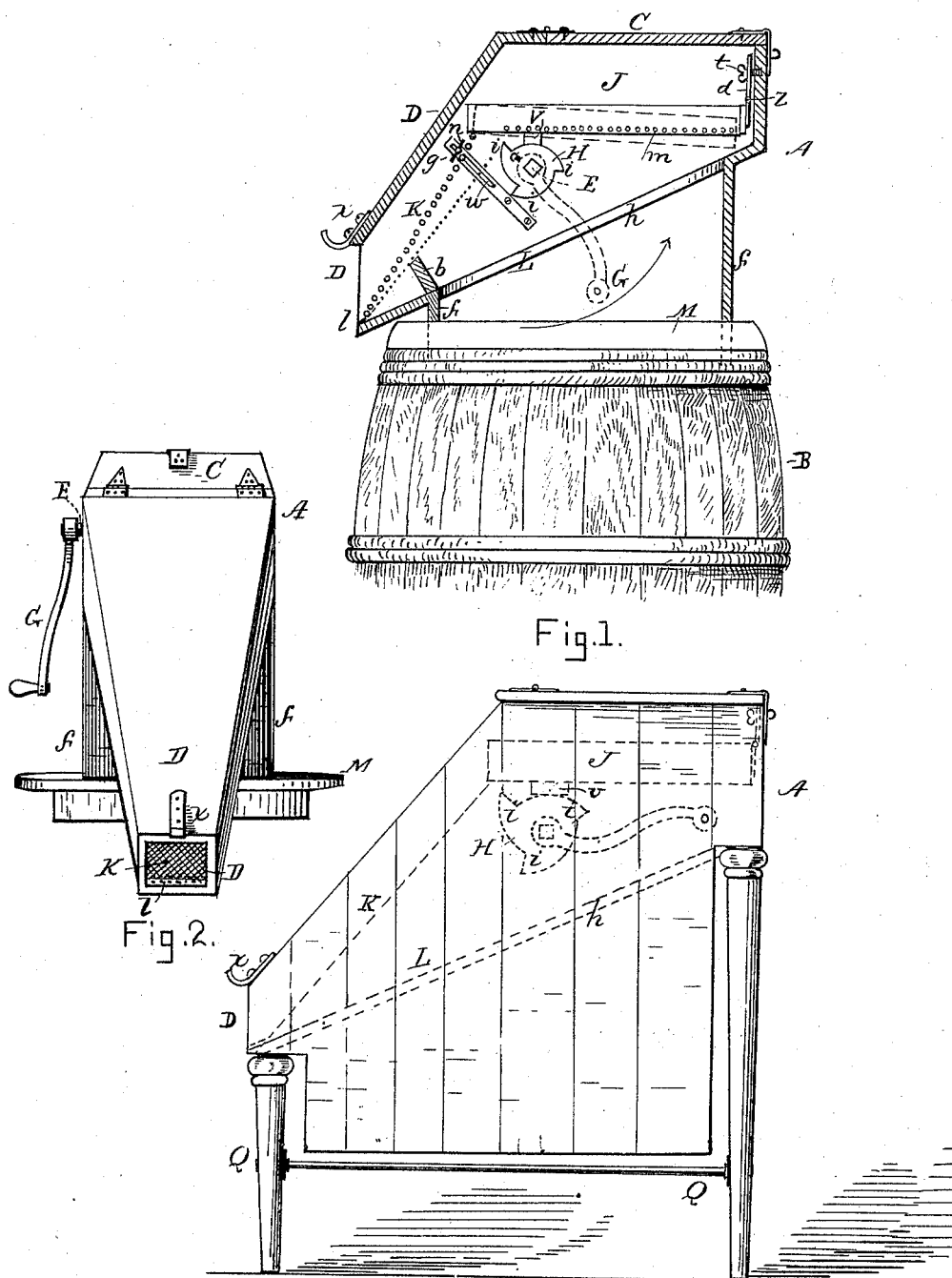
(No Model.)

M. N. COBB.

COAL SIFTER.

No. 301,097.

Patented July 1, 1884.



Witnesses.
H. E. Demick
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Fig. 3.

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UNITED STATES PATENT OFFICE.

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COAL-SIFTER.

SPECIFICATION forming part of Letters Patent No. 301,097, dated July 1, 1884.

Application filed February 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, MERRITT N. COBB, of Malden, in the county of Middlesex, 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 a part of this specification, in which—

Figure 1 is a vertical longitudinal section representing my improved coal-sifter in position for use; Fig. 2, an isometrical perspective view of the same, looking from the front; and Fig. 3, a sectional view showing a modification of my improvement.

Like letters and figures 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 use, and provided with an independent or detachable receptacle for the ashes; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which a cheaper, simpler, and more effective device 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, its extreme simplicity rendering an elaborate description unnecessary.

In the drawings, A represents the case, and B the receptacle for the ashes, which may consist of a barrel, box, or any other suitable vessel. The body of the case is irregular in form, as best seen in Figs. 1 and 2, and is provided at its top with the hinged cover C, through which the coal is introduced, and at one of its sides with the chute D, through which the sifted coal passes into a hod (not shown) suspended on the hook *x*.

Journaled horizontally in the sides of the case there is a shaft, E, provided with a crank, G, and a collet, H, the periphery of which is formed into a series of evolute cams, *i*, as shown in Figs. 1 and 3.

A shallow box or shaker, J, having a wire-netting or reticulated bottom, *m*, is disposed

in the body of the sifter above the shaft E, and provided on its lower side immediately over said shaft with the cross-bar or projection *v*, which rests on the cam-collet H. The shaker is hinged at *z* to a slotted plate, *d*, and provided with a thumb-screw, *t*, by which it may be vertically adjusted.

An inclined wire screen, K, is disposed in the chute D, the lower end of the screen being nailed, or otherwise suitably attached at *l* to the mouth of the chute, and the upper end secured at either side to a gib, *g*, provided with a thumb-screw, *n*, working in a slot, *w*, in the side of the case, and adapted to adjust the screen vertically, or to govern its position in the chute.

Attached to the bottom L of the case A by the supplemental casing *f* there is a flanged cover, M, adapted to fit over the top of the barrel B or other receptacle for the ashes, the bottom being cut away or provided with a hole, *h*, and the cover M with a corresponding hole, (not shown,) through which the ashes fall into the barrel.

In the use of my improvement, the coal to be sifted is placed in the shaker J and the cover C tightly closed, after which the crank is rapidly turned in the direction indicated by the arrow, thereby producing a series of vertically-reciprocating jolting movements of the shaker, and performing the work in a manner which will be readily understood without a more explicit description.

An auxiliary chute or guard, *b*, is secured to the upper side of the bottom L, near the mouth of the chute D, for catching the ashes that escape with the coal from the shaker and fall through the screen, and guiding them into the barrel through the hole *h* and corresponding hole in the cover M, thereby preventing them from passing into the hod with the screened coal.

In sifting or screening coal containing but few ashes, the hinged end of the shaker and inner end of the screen may be elevated to the fullest extent, as it is not necessary to retain the coal long on either to thoroughly sift it; but when it contains a large quantity of ashes or other impurities, and consequently requires to be sifted a greater length of time, the shaker and screen are lowered accordingly, the ad-

justment of these parts being effected by the screws *t n*.

In Fig. 3 a modification of my improvement is shown, which is designed for use in sifting sand, beans, grain, &c., the case A being mounted on legs Q and the flanged cover M omitted, the sifted articles falling through a hole (not shown) formed in the lower portion of the case into any suitable receptacle or onto the ground.

I do not confine myself to using the sifter described, and as shown in Fig. 1, for sifting coal merely, as it is well adapted for nearly any similar purpose; neither do I confine myself to making the shaker and screen adjustable, or to the use of the hook *x*, guard *b*, or flanged cover M, as these features may be dispensed with, if desired, without departing entirely from the spirit of my improvement.

Having thus explained my invention, what I claim is—

1. In a coal-sifter substantially such as de-

scribed, the body A, screen K, provided with the screws *n* and gibs *g*, the shaker J, provided with the slotted hinged plate *d* and screw *t*, and the shaft E, provided with the crank G and cam-collet H, combined and arranged to operate substantially as specified.

2. The improved coal-sifter herein described, the same consisting of the case or body A, provided with the chute D, guard *b*, hole *h*, slots *w*, hook *x*, and cover C, the hinged shaker J, having the reticulated bottom *m*, and provided with the plate *d*, screw *t*, and bar *v*, the screen K, attached to the chute at *l*, and provided with the gibs *g* and screws *n*, the crank G, provided with the cam-collet H, and the flanged cover M, all constructed and arranged to operate substantially as specified.

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Witnesses:

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