(No Model.)

J. A. DONOVAN.

CINDER SIFTER.

No. 265,038. Patented Sept. 26, 1882.

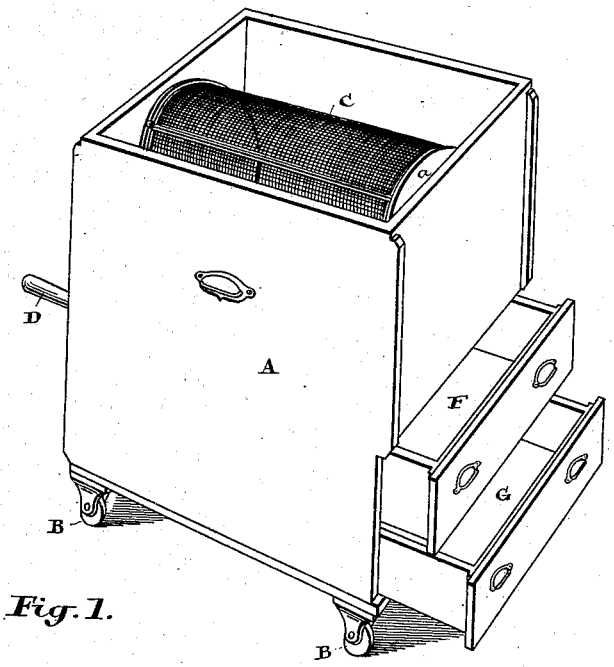

Fig. 1.

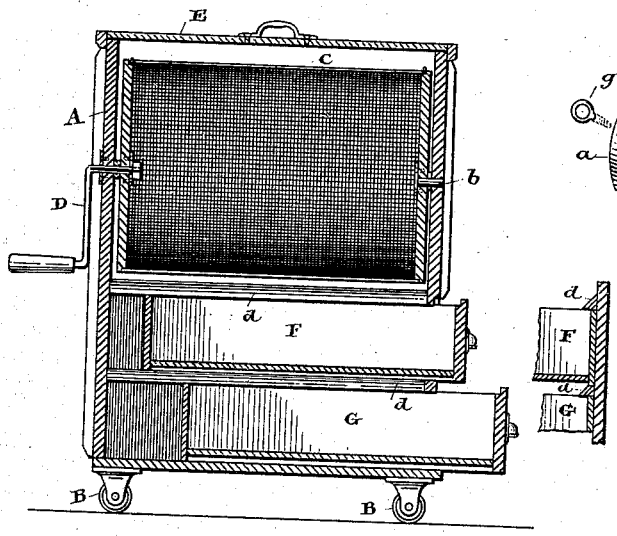

Fig. 2.

Fig. 2.a

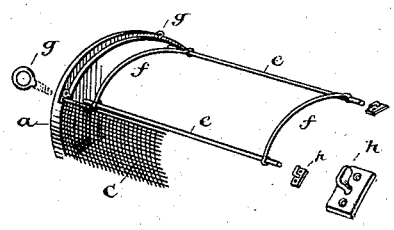

Fig. 3.

Witnesses.

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JOSEPH A. DONOVAN, OF TORONTO, ONTARIO, CANADA.

CINDER-SIFTER.

SPECIFICATION forming part of Letters Patent No. 265,033, dated September 26, 1882.

Application filed March 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH ALOYSIUS DONOVAN, a subject of the Queen of Great Britain, residing at the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented a certain new and useful Cinder-Sifter, of which the following is a specification.

The object of the invention is to produce a cinder-sifter in which the largest quantity of cinders may be sifted with the smallest possible expenditure of labor; and it consists in the peculiar construction, arrangement, and combination of parts, as more fully hereinafter described and claimed.

Figure 1 is a perspective view of my improved cinder-sifter, showing the cover of the box removed and the drawers partially opened. Fig. 2 is a sectional elevation of my improved cinder-sifter, and Fig. 3 is a detail showing the arrangement of the detachable cover of the cylinder.

In the drawings I have shown my improved cinder-sifter built of wood and wire-gauze; but it will of course be understood that sheet-iron or other material might be advantageously employed in the construction without in any way altering the principle involved in the invention. I may further mention that although I have shown in the drawings a rectangular box arranged to contain the cylinder a differently-shaped box might be used for the purpose of containing my cylindrical sifter.

In the drawings like letters indicate corresponding parts in each figure.

A is a rectangular box, provided with wheels B.

C is the cylinder, the body of which is preferably made of wire-gauze, while its ends *a* are solid disks of wood, iron, or other suitable material. In the center of the cylinder C, I provide at one end a pivoted pin, *b*, journaled in one side of the box A. The end of the crank-handle D forms a center bearing at the opposite end of the cylinder. The cylinder C is thus pivoted within the box A and provided with a crank-handle, D, in order that it may be caused to revolve within the said box.

E is a cover formed to fit tightly the top of the box A, the flange extending around the cover, constituting a joint capable of preventing the escape of any dust produced by the movement of my sifting-cylinder.

F is an ash-drawer placed immediately below the sifting-cylinder C, and extending across the full width and length of the box A. G is a similarly-formed drawer, situated below the ash-drawer F, and designed specially to receive the cinders, as herein explained, after the ashes have been separated therefrom and removed within the drawer F.

In order to protect the bearing-edges of the drawers F and G, I place over each edge a beveled strip, *d*. (See Fig. 2ª.) This strip effectually prevents the admission of any ash-dust or other obstruction accumulating on the edges of the drawers, which might affect their satisfactory movement. These beveled strips extend some distance over the edge of the drawers to more effectually serve the desired purpose, and in order that when the upper drawer is removed cinders will be prevented from collecting on the lower strips, which serve as the supports for the upper drawer.

It will of course be understood from the foregoing that the ashes to be sifted are placed within the cylinder C and the cylinder caused to revolve. In order that the cinders may be placed within the cylinder, a segment of it is made detachable, as shown in Fig. 3. This segment, which constitutes the cover, consists of a rectangular circular frame, composed of two straight parallel bars, *e*, connected together by curved end pieces, *f*, the ends of the bars *e* projecting beyond the end bars, *f*. The frame thus formed is covered with gauze, corresponding with the rest of the cylinder, and is fitted into a space formed in the cylinder, so that the cover shall correspond with the circle of the cylinder. In order to secure this cover in position, I provide on one end piece, *a*, two eyebolts, *g*. Corresponding with these eyebolts, on the opposite end of the cylinder, I provide pivoted crooked fingers *h*, the eyebolts *g* being arranged to receive the ends of the bar *e* at one end of the cover, while the pivoted curved fingers *h* are designed to clamp over the opposite ends of the parallel bars *e*. It will thus be seen that a cover so constructed can easily be removed and replaced. When the cinders are to be sifted the cover E is first removed, and then the segment of the cylinder

forming its cover, as described. The cinders may then be freely dumped into the cylinder till it is full, or partially so, when the cover of the cylinder is replaced and fastened in position, as indicated. The cover E is then placed on the box A, when, by a few rapid turns at the crank-handle D, the ashes are discharged through the meshes of the wire cylinder into the ash-drawer F. The agitation of the cinders within the revolving cylinder causes the ashes to thoroughly separate therefrom, leaving the cinders remaining within the cylinder clean and ready for use. When the ashes have been thus separated the ash-drawer F is withdrawn, the segment of the cylinder removed, and the cylinder revolved until the open portion of the cylinder comes opposite to the drawer G, when the cinders are discharged therein.

It will be seen that the efficiency of my improved cinder-sifter is in a very great measure attained by the arrangement of the two drawers F and G, F being arranged for the purpose of receiving the ashes and dust shaken from the cinders, which, when so separated, can be removed in the drawer and readily conveyed to a receptacle arranged for their collection, while the drawer G receives only cinders after they have been thoroughly cleansed.

Apart from the advantage of the complete separation of the cinders and ashes, as described, the facility and rapidity with which both the dust and the cinders may be handled constitutes an important factor in the efficiency of my cinder-sifter. Another element of advantage in my peculiarly-constructed sifter is the simple means for securing in position the segment of the cylinder designed to be removed for the purpose of forming a door or opening into the cylinder. The bar *e* at one end of the frame forming the segment referred to can easily be slipped into the eyebolts *g*, while the other end of the bars can with equal rapidity be locked by turning the fingers *h*, and of course the segment can be removed with equal rapidity. Another advantage I may mention is providing the wheels B, which makes the cinder-sifter extremely easy to move from place to place—an important matter when the sifter is made large.

What I claim as my invention is—

1. A cinder-sifter comprising a perforated or wire-gauze cylinder provided with a detachable cover, a closed box carried on wheels, and the two drawers F and G, placed within the box, one below the other, and having their bearing-edges protected by the beveled strips *d*, substantially as and for the purpose specified.

2. In an ash-sifter, the screening-cylinder having fixed eyes *g* upon one end and pivoted locking-keys *h* upon the other, combined with the door-frame, formed of the curved end bars, *f*, and the side bars, *e*, projecting beyond the bars *f* upon either side, as and for the purpose set forth.

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