

(No Model.)

J. CARMICHAEL.
CINDER SIFTER.

No. 313,054.

Patented Mar. 3, 1885.

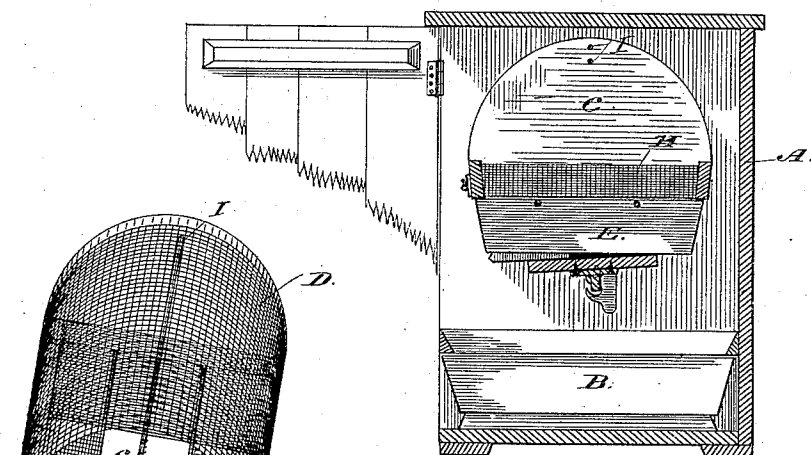


Fig. 1.

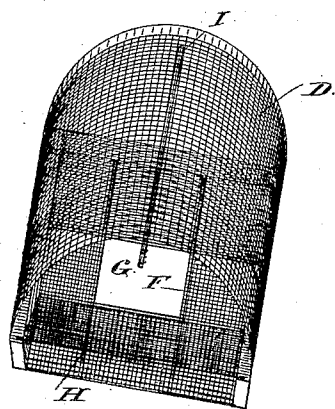


Fig. 3.

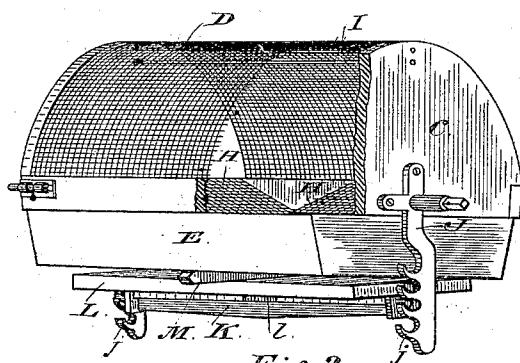


Fig. 2.

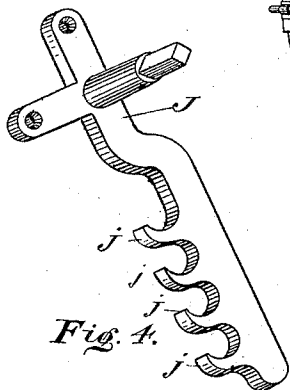


Fig. 4.

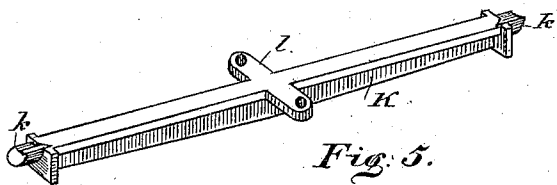


Fig. 5.

Witnesses.
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UNITED STATES PATENT OFFICE.

JAMES CARMICHAEL, OF OSHAWA, ONTARIO, CANADA.

CINDER-SIFTER.

SPECIFICATION forming part of Letters Patent No. 313,054, dated March 3, 1885.

Application filed June 23, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES CARMICHAEL, of the town of Oshawa, in the county of Ontario, in the Province of Ontario, Canada, gentleman, have invented certain new and useful Improvements in Cinder-Sifters; and I do hereby declare that the following is a full, clear, and exact description of the same.

The invention relates to certain improvements in a cinder-sifter patented by me in Canada on the 5th of April, 1884, No. 19,061, and for which an application is now pending in the United States Patent Office, filed April 3, 1884, Serial No. 126,510; and the object of the present invention is to provide simple means for securing the ash-pan to the sifter and effective means for more thoroughly and quickly separating the cinders from the ashes; and it consists in the peculiar combination and the construction and arrangement of parts, hereinafter more fully described and claimed.

Figure 1 is a cross-section of my improved sifter placed within the box in which the sifting takes place. Fig. 2 is a perspective detail of the sifter proper complete, showing a portion of its end broken away to exhibit its interior construction. Fig. 3 is a perspective detail of the cage forming the sifter with one of its ends removed. Fig. 4 is an enlarged perspective detail of one of the notched brackets. Fig. 5 is a perspective detail of the bar employed for supporting the ash-pan.

It will be noticed that Fig. 1 is a cross section or end section, the door, which is seen partially broken away, being intended to be on the far side or end of the box A, which is rectangular in shape, and has placed at its bottom the ash-pan B, which can readily be removed when full.

The sifter proper is composed of semicircular ends C, preferably made of wood, and connected together by a netting, D, as represented. The ash-pan E, held in position as shown, completes the ash-sifter. This is intended to represent the ordinary stove ash-pan, and is carried from the stove and placed into the sifter without being emptied.

F represents a flat bottom formed of netting and connecting the flat sides of the ends C together.

G is a rectangular hole made in the center

of the bottom F. To guide the cinders into this hole G, I fasten to each end C a slanting piece of netting, H, which extends to the edges of said hole, thus forming a chute down which the cinders slide into the hole, as will be readily understood.

I are longitudinal wires extending from one end C to the other, and so placed that the ashes and cinders as they are rolled by the rocking motion of the sifter will be arrested and broken up, as it were, so as to separate the ashes from the cinders, allowing the latter to fall into the ash-pan E when the sifter is placed in the position it is shown in in Fig. 1.

J are brackets secured, as shown, one to each end C. Each bracket J forms a pivot-spindle, which fits in bearings made in the box A, to permit the sifter to be revolved within the said box. It will be noticed that the long arm of the bracket J has a series of curved notches, *j*, which notches are intended to allow for ash-pans E of various depths to be placed in position.

K is a bar provided with ends arranged to fit into the notches *j*. These ends have extension-lips *k* cast on them, so that while they readily fit and may be removed from the notches *j* they will not revolve entirely around the said notches.

L is a cross-bar formed in the center of the bar K, and provided for the purpose of enabling the board L to be fixed to the bar K.

In the drawings I have shown the board L wider than there is any real necessity for, but this is of no consequence, as it may be made either narrow or the full width of the sifter, as desired.

M is a wedge placed between the board L and the bottom of the ash-pan E for the purpose of forcing the said ash-pan up against the bottom of the sifter.

When about to work the sifter, the operator ascertains the depth of the ash-pan E which is to be placed into the box. Having ascertained this depth, he adjusts the bar K into the particular notches *j*, which will leave sufficient room between the top of the board L and the bottom F of the sifter to allow the free passage of the pan E. When this is placed in position, the wedge M is driven in on one side between the board L and the bottom of

the ash-pan E. The other side of the board L will of course tilt up and come in contact with the opposite side of the ash-pan E, thus forcing up evenly the top edge of the said ash-pan against the bottom F. When the ash-pan is thus secured, the door of the box A is closed and a rocking or revolving motion is given to the sifter, causing the ashes to fall into the ash-pan B, while the cinders remain in the netting, and when thoroughly sifted are carried back into the ash-pan E by bringing the sifter into the position it is shown in in Fig. 1.

I am aware of the Patent No. 100,421, which shows wires connecting the two ends of the sifter and serving as supports for the netting thereof, and make no claim to such construction as forming part of my invention, for said wires have no practical effect in arresting and breaking up the ashes, which is the object of my wires I. I deem it important that these wires be arranged at a distance from the netting, for where they are arranged in close proximity thereto they have little or no effect in arresting and breaking up the ashes.

What I claim as my invention is—

1. A sifter comprising the semicircular ends C, the netting D, bottom F, and the slanting pieces of netting H, arranged substantially as and for the purpose specified.
2. A sifter having the ends C, the netting D, and netting F, having the hole G made in the center of the latter, in combination with the brackets J, having notches *j*, the bar K, board L, the wedge M, and the ash-pan E, substantially as and for the purpose specified.
3. The sifter provided with the brackets J, having the notches *j*, in combination with the bar K, having projecting lips *k* formed on its end to prevent the said bar from completely revolving in the notches.
4. The sifter provided with the brackets J, having notches *j*, in combination with the board L, fixed to the cross-bar *l*, and the bar K, having the cross-bar *l*, substantially as and for the purpose specified.

Oshawa, June 14, 1884.

JAMES CARMICHAEL.

In presence of—

L. K. MURTON,
S. PEDLAR.