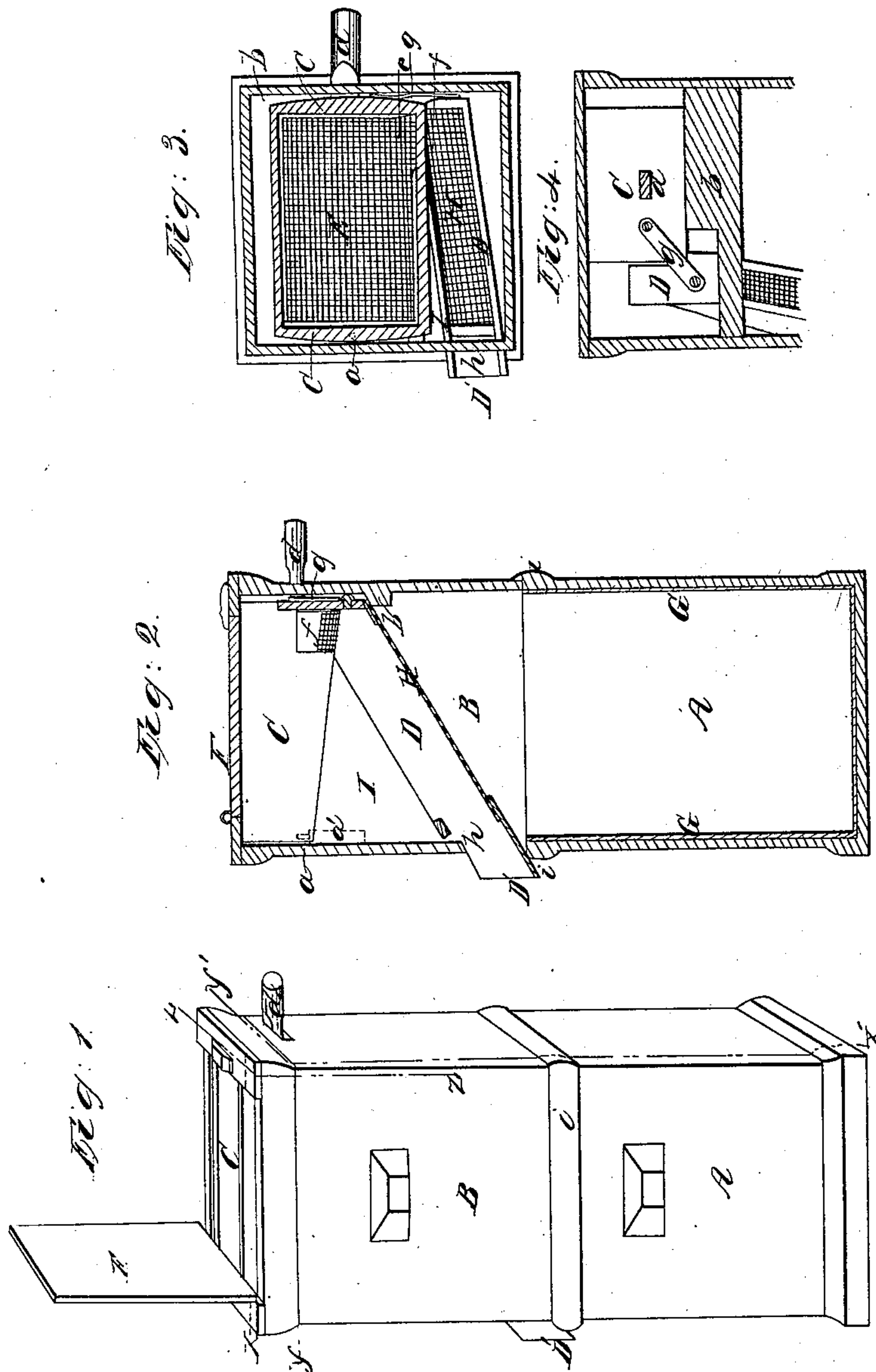


C. H. Rice,
Coal Screen,

No 81,216,

Patented Nov. 17, 1868.



Witnesses:
Chas. W. Bulleigh
L. L. Latham

Inventor
C. H. Rice

United States Patent Office.

C. K. RICE, OF MARLBOROUGH, MASSACHUSETTS

Letters Patent No. 84,216, dated November 17, 1868.

COAL-SIFTER.

The Schedule referred to in these Letters Patent and making part of the same.

Know all men by these presents:

That I, C. K. RICE, of Marlborough, county of Middlesex, Commonwealth of Massachusetts, have invented certain new and useful Improvements in Coal-Sifters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a perspective view of my improved coal-sifter, the cover being raised, to show the position of the sieve.

Figure 2 represents a section on the line $x-x'$.

Figure 3 represents a section on the line $y-y'$, showing the position of the sieve and trough.

Figure 4 represents a section on the line $z-z'$, showing the manner of connecting the sieve and trough.

To enable those skilled in the art to which my invention belongs, to make and use the same, I will proceed to describe it more in detail.

The nature of my invention consists, first, in the peculiar combination of the ash-box, coal-box, and separating-device, as hereafter described; second, in the peculiar combination of the main sieve and secondary sieve, as shown; and, third, in the combination, with coal-box, of coal-sieve frame, as described hereafter.

My improved coal-sifter consists of the ash-box A, surmounted by the removable coal-box B, in which are arranged the sieve-frame C and secondary sieve-frame D.

The sieve-frame C is connected to the side of the coal-box B by the pivot a in the piece a' , on the inside of the coal-box B, the opposite end of the frame resting on the projection b , fastened to or projecting from the inside of the coal-box B, and upon which it can freely slide back and forth laterally.

It is furnished with a handle, d , projecting through the side of the coal-box B, as shown in the drawings, by which the proper motion is imparted to sift the coal.

The sieve E is made inclined toward the corner, e , where there is an opening in the side f , below which is placed the end of the frame D, which rests upon the projection b , and is connected to the sieve C by a strap of metal, g , as shown in fig. 4 of the drawings.

The frame D inclines downward, its outer end passing out through an opening, h , in the side of the box B.

The bottom of the frame D is made of wire netting H, to admit of the passage of dust and ashes into the ash-box A.

The partially-burned coal and cinders being placed upon the sieve-bottom E, the cover F is shut down, and the sieve shaken by means of the handle d . The

pieces of coal which are too large to fall through the sieve E pass out of the opening in the side f , into the trough-sieve D, and are there conveyed or guided to the outside of the box B, and drop into the hod or other receptacle placed under the end D' of the trough for that purpose, the whole operation being accomplished with but little trouble from dust, and, besides, requiring but little effort on the part of the operator.

The ash-box A is furnished with a metal lining, G, which renders it perfectly safe as a receptacle.

The coal-box B is made to fit inside of the flange or projection i upon the upper edge of the ash-box A, thus making a close joint.

The arrangement of the sieves and their frames, in relation to each other and the boxes A and B, as shown and described, enables me to make the article very cheap, and yet durable and effective.

From the foregoing description, it will be seen that I have produced a simple, safe, and yet very effective coal-sifter—one by which ashes or dust can be separated from the coal in a very quick and expeditious manner, and that, too, without exposing the operator to rising dust and ashes during the operation.

It will be observed that the coal is subjected to a double sifting, one upon the sieve E, and another while passing over the sieve H which forms the bottom of the frame or trough D.

A guide-piece, I, is fastened to the inner side of the frame or trough D, and extending up to the bottom of the frame C, whereby the coal is prevented from falling or being thrown into the ash-box while passing from the box or sieve C to the hod or other receptacle under the end D' of the trough D. The lower end of the trough D fits loosely in the box B, so that its upper end can move with the sieve C when the latter moves.

Having described my improved coal-sifter,

What I claim therein as new, and of my invention, and desire to secure by Letters Patent, is—

1. The combination, with the ash-box A and coal-box B, of the sieves C E and D H, substantially as and for the purposes set forth.

2. The combination and special arrangement of the sieves and frames C and D, in respect to each other and the box B, substantially as shown and described.

3. The combination of the projection b and pin a with the box B and sieves C and D, as shown and described.

C. K. RICE.

Witnesses:

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