(No Model.)

L. BUCHTEL.

PORTABLE COAL SIFTER.

No. 605,175. Patented June 7, 1898.

FIG. 1.

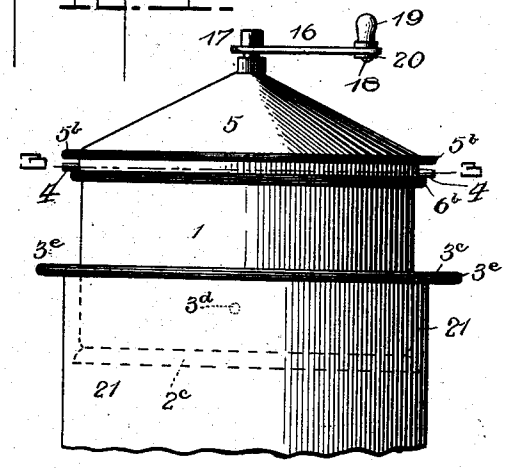


FIG. 2.

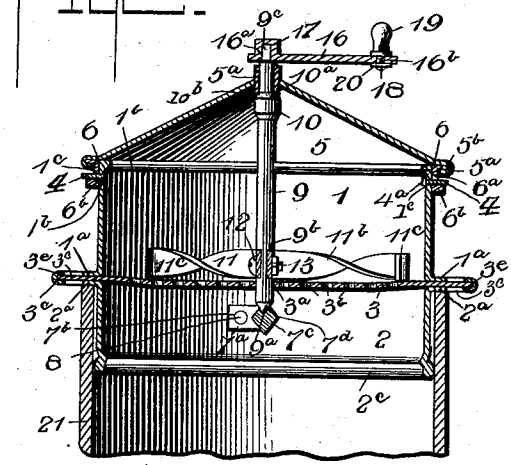


FIG. 3.

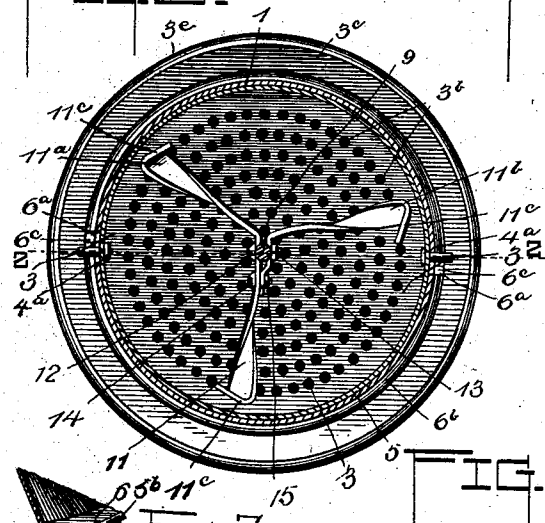


FIG. 4.

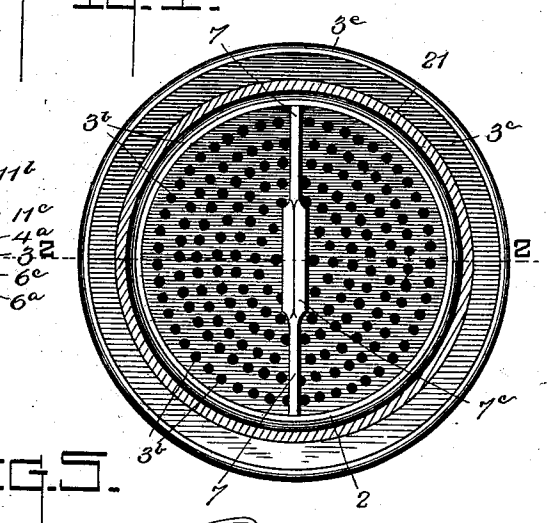


FIG. 5.

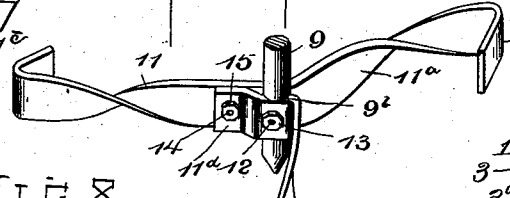


FIG. 7.



FIG. 8.

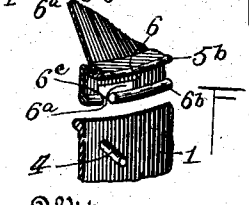


FIG. 9.

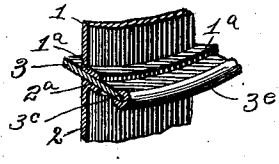
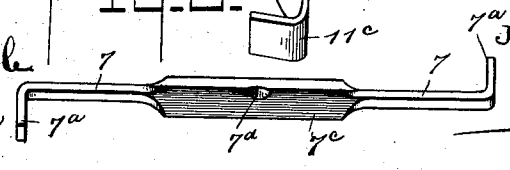


FIG. 6.



Witnesses

W. F. Doyle

Walter Allen

Inventor

Mrs. Luise Buchtel

Knight Bros

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LUISE BUCHTEL, OF NEW YORK, N. Y.

PORTABLE COAL-SIFTER.

SPECIFICATION forming part of Letters Patent No. 605,175, dated June 7, 1898.

Application filed March 11, 1897. Serial No. 626,988. (No model.)

To all whom it may concern:

Be it known that I, LUISE BUCHTEL, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Portable Coal-Sifters, of which the following is a specification.

My invention relates to a portable coal-sifter for domestic use which is so constructed that it can seat on an ordinary bucket or similar vessel.

My invention consists, first, in a peculiar construction of casing, which comprises a cylindrical body provided with an upper section and a lower section, each section being formed with a horizontal peripheral flange and a perforated centrally-located diaphragm, to which the upper and lower sections are secured by their adjacent peripheral flanges, so as to provide a screen within the body and a lifting-collar on the exterior thereof, as hereinafter described and claimed.

My invention consists, secondly, in a peculiar construction of cover for the casing, which is formed with a conical perforated top having a bushing within its apex, a beveled socket, and providing an upper bearing for the upwardly-tapering enlargement of the stirrer-shaft, and with an exterior annular pendent flange having L-shaped slots providing bayonet-joints, whereby the cover is secured to laterally-extending studs projecting from the casing, as hereinafter described and claimed.

My invention consists, thirdly, in a peculiar construction of stirrer which is provided with a vertical stem formed with a conical lower end adapted to extend through the diaphragm of the casing and to seat on a suitable bearing and at the upper end with an upwardly-tapering enlargement fitted to the beveled socket of the bushing of the conical top and supporting the latter at its apex, with a cylindrical portion extending through the top and with an angular projection and a stirring-head provided with twisted flat arms formed with gathering-lips at their extremities, as hereinafter described and claimed.

My invention consists, fourthly, in a peculiar construction of lower bearing for the stirrer, formed of a single bar having outturned ends, by which it is secured to the casing, and an angular central portion having a conical socket providing a step for the conical lower end of the stirrer, as hereinafter described and claimed.

In order that my invention may be fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved portable coal-sifter seated on the upper end of a bucket. Fig. 2 is a vertical section on the line 2 2, Figs. 3 and 4. Fig. 3 is a horizontal section on the line 3 3, Fig. 1. Fig. 4 is a bottom view. Fig. 5 is a perspective view of the lower end of the stirrer. Fig. 6 is a perspective view of the lower bearing-bar. Fig. 7 is a detail perspective view of a bayonet-joint for connecting the cover to the casing. Fig. 8 is a similar view showing the parts separated. Fig. 9 is a detail perspective view of the middle portion of the body.

The casing of my sifter is provided with a cylindrical body having an upper section 1, formed with a circumferential flange 1^a at its lower end, a lower section 2, formed with a circumferential flange 2^a at its upper end, and a diaphragm 3, formed with a central stem-hole 3^a, with perforations 3^b and with an annular collar 3^c outside of the body. The diaphragm 3 is rigidly secured between the circumferential flanges of the upper and lower sections by soldering the three parts together. The upper end of the upper section 1 is also formed with an inturned beading 1^b and perforations 1^c just beneath the beading. Into these perforations are inserted studs or pins 4, so as to project laterally from the body. The studs or pins are each provided with a flange 4^a at their inner end, furnishing means by which the studs or pins are rigidly secured to the body by means of solder. The lower end of the lower section is also formed with a beading 2^c. The collar of the diaphragm is formed with a peripheral beading 3^e, providing means whereby the collar can be grasped in removing and replacing the sifter. The casing is provided with a cover consisting of a cone-shaped top 5, formed with a circular opening 5^a in its apex and with a beaded horizontal flange 5^b at its base. Secured to this horizontal flange by means of solder is a

pendent annular flange 6, formed with L-shaped slots 6^a and with a beading 6^b, disconnected at the entrances 6^c to the slots. Extending across the body of the casing is a bearing-bar for a stirrer. This bearing-bar is formed with outer portions 7, with outturned ends 7^a, having perforations 7^b, and with an angular central portion 7^c, having a conical recess 7^d in its top edge. The bearing-bar is secured to the lower section of the body by means of rivets 8, extending through the perforations in its outturned ends and through perforations 3^d in the lower section of the body.

My stirrer is constructed as follows: 9 is a vertical stem formed with a conical lower end 9^a, with side recesses 9^b just above the lower end and with an angular projection 9^c at the upper end. At a suitable distance beneath the upper end I secure an enlargement 10, formed with a tapering upper end 10^a, fitting a bushing 5^c in the apex of the conical top. The bushing has a beveled socket 10^b, providing an upper bearing for the shaft. The stirrer-head is provided with three twisted radial arms 11, 11^a, and 11^b, formed with gathering-lips 11^c. Two of the arms 11 11^a are formed in one piece and secured in one of the recesses 9^b. The other arm 11^d is single and is secured in the other recess 9^b. The arms are rigidly fastened to the stem by a screw-bolt 12 and a nut 13. The arms are strengthened in their attachment by means of an angular extension 11^d on the single arm, which provides means for the reception of a screw-bolt 14 and nut 15, whereby the arms are rigidly fastened together independently of the stem.

The stirrer is rotated by means of a removable crank-handle constructed as follows: 16 is a flat bar having at its inner end an angular opening 16^a and a socket 17, soldered over the opening, and at its other end a perforation 16^b, through which extends a screw-bolt 18 for securing a knob 19. 20 is a washer located between the bar and the head of the screw-bolt.

In use the sifter is adapted to be placed on a suitable vessel, such as a bucket 21, with its lower section 2 located within the vessel and its collar 3 located on the top thereof. The studs on the upper section and the slots in the pendent flange provide bayonet-joint connection between the cover and the body of the sifter. The upper end of the conical top is secured to the bushing, which rests on the collar on the stem and provides an upper support for the latter, while the lower conical end of the stem extends through the central hole of the diaphragm and rotates in the conical recess of the bearing-bar. The peculiar shape or form of the radial arms causes them to carry the coal or ashes over the perforated diaphragm, which forms a screen through which the dust readily drops.

My device provides a simple, compact, inexpensive, and useful coal-sifter for domestic purposes where the sifting of the material has to be done within the dwelling ordinarily.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. A portable coal-sifter comprising a casing provided with a cylindrical body having an upper section formed with a horizontal peripheral lower flange, and a lower section formed with a horizontal peripheral upper flange, the perforated diaphragm located between the peripheral flanges, secured thereto and projecting beyond the flanges to provide a peripheral collar whereby the casing is lifted for removing and replacing the sifter; the removable cover, and a stirrer journaled in the diaphragm and in the cover, substantially as described.

2. A portable coal-sifter comprising a casing provided with a cylindrical body, and a perforated diaphragm, the conical covering having a circular opening at its apex, the bushing having a beveled socket at its lower end and secured in the circular opening, the stirrer-stem formed with an upwardly-tapering enlargement fitting in the beveled socket, a bearing-bar for the lower end of the stirrer-stem, and a stirrer-head secured to the stirrer-stem; substantially as described.

3. A portable coal-sifter comprising a stirrer having a stem formed with side recesses near its lower end, and a head consisting of three twisted radial arms, each having a gathering-lip at its outer end, two of the arms being formed in one piece and fitted in one of the side recesses, and the other arm having an angular extension fitting in the other recess and also against one of the other arms, a bolt extending through the angular extension through the stirrer-stem and through the integral arms, and a bolt extending through the extension and through one of the integral arms; substantially as described.

LUISE BUCHTEL.

Witnesses:
H. SCHAAF,
G. LORBACHER.