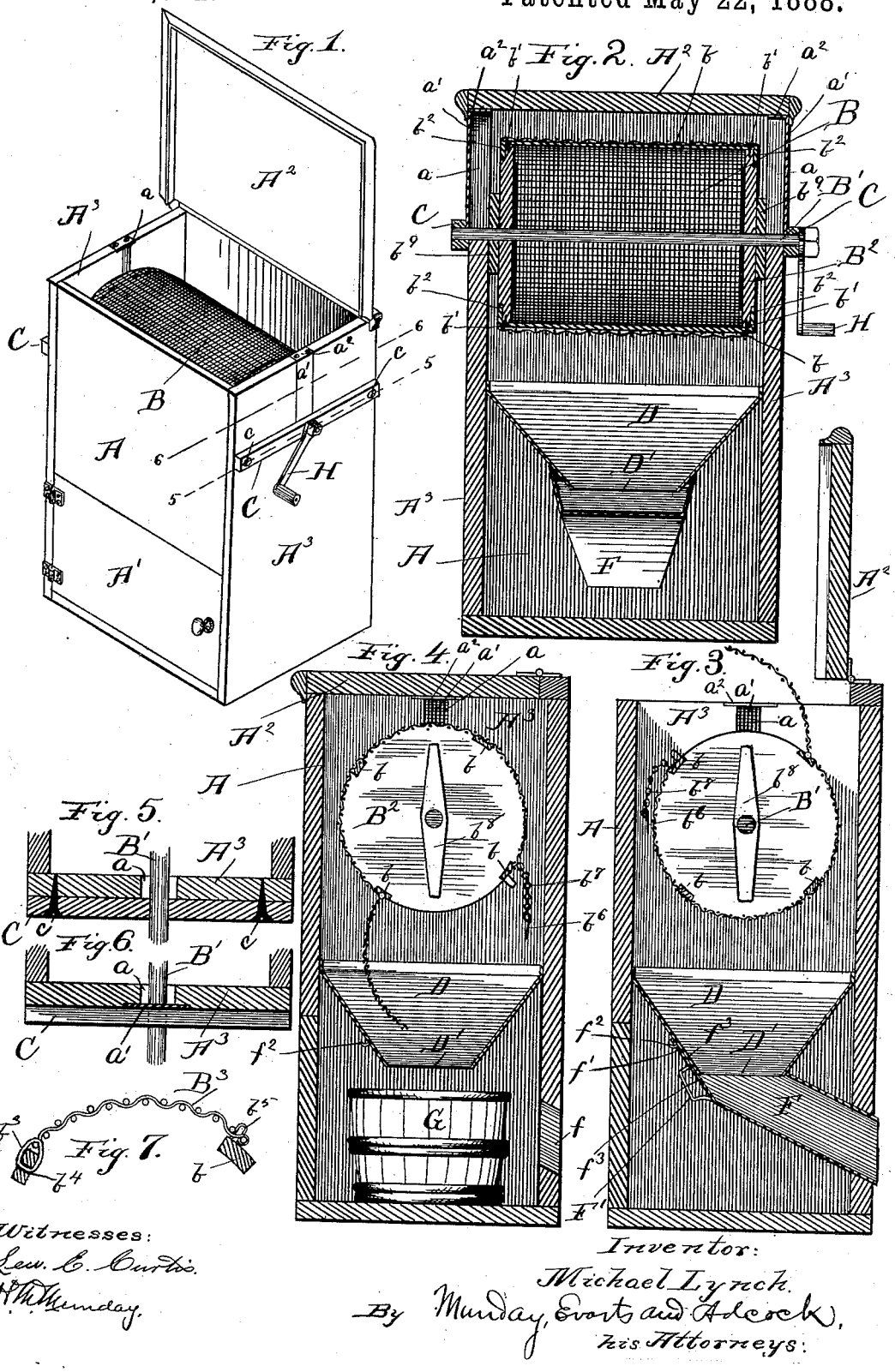
(No Model.)

M. LYNCH.

ASH SIFTER.

No. 383,312. Patented May 22, 1888.



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UNITED STATES PATENT OFFICE.

MICHAEL LYNCH, OF CHICAGO, ILLINOIS.

ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 383,312, dated May 22, 1888.

Application filed March 5, 1887. Serial No. 229,774. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL LYNCH, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Ash-Sifters, of which the following is a specification.

My invention relates to rotary ash-sifters.

My invention consists in the novel construction and combination of devices herein shown and described, and more particularly pointed out in the claim.

In the accompanying drawings, which form a part of this specification, and in which similar letters of reference indicate like parts, Figure 1 is a perspective view of a device embodying my invention. Fig. 2 is a central vertical longitudinal section. Fig. 3 is a vertical cross-section, showing the rotary screen in position for receiving the ashes. Fig. 4 is a similar view showing the screen in position for discharging the cinders or unburned coal after the ashes have been separated therefrom. Figs. 5 and 6 are partial horizontal sections taken on lines 5 5 and 6 6 of Fig. 1; and Fig. 7 is a detail view showing the hinged door of the screen.

In said drawings, A represents the sifter case or box, in which the rotary sifter-screen B is mounted.

The case or box A is provided with a hinged door, A′, at one side, near its base, through which the coal or cinders may be removed, and a hinged lid or cover, A^2, at its top, through which the ashes may be delivered into the rotary screen. The case A is provided at its ends A^3 A^3 with vertical slots *a a* to receive the shaft B′ of the screen B.

The cylindrical screen B consists of wire meshes or cloth secured to the circular end pieces or disks, B^2 B^2. The disks B^2 B^2 are secured together by four metal bars or strips, *b b*, and by the shaft B′. The longitudinal bars *b*, extending between the disks B^2 B^2, are secured to the disks by suitable screws, *b*′. The bars *b* are preferably made of iron, and are provided at each end with flanges or bent ends f^2, which overlap the face of the disk. The periphery of the disks B^2 B^2 is notched or recessed to receive the bars *b*, so that the bars will be flush with the periphery of the disks and leave a true cylindrical surface for the cylindrical wire screen B to fit upon.

The cylindrical disks B^2 B^2 are preferably made of wood, and the screen B may be easily and conveniently secured thereon by ordinary staples.

B^3 represents the door of the screen, consisting of a section of the screen cylinder extending between two contiguous bars *b b*. The door B^3 is hinged to one of the bars *b* by wire loops b^3, which pass through suitable holes, b^4, formed in the bar *b*. The opposite edge of the door is secured to the adjoining bar *b* by means of staples b^5, secured in the bar, and which project through the wire meshes at the edge of the door, the door being fixed in place by pins b^6, which are inserted through the staples. These fastening-pins are attached by chains b^7 to the screen B, near the staple-bar *b*. By means of the perforated hinged bar and the staple-bar, to which the door is secured at its opposite edges, the door is firmly fixed to the screen-cylinder, and will support without sagging the contents thereof. The shaft B′ is furnished with cross brace-bars b^8, which fit inside the cylinder ends B^2 B^2 and serve to make the screen-cylinder strong and rigid. The shaft B′ is journaled in removable journal-pieces C C, secured upon the outside of the case A by suitable screws, *c*.

The journal-bars C C may preferably be of wood, and are furnished with suitable holes to receive the shaft B′. On the shaft B′, between the end pieces, A^3, of the case and the disks B^2 B^2 of the cylinder, circular washer-blocks b^9 are provided to keep the ends of the screen-cylinder free from the case. The vertical slots *a a* in the ends A, which permit the screen-cylinder, with its shaft, to be bodily removed from the case A when the bearing-bars C are loosened, are closed by removable metal plates *a*′, having flanges a^2, through which screws are inserted to secure the plates *a*′ in place.

The case A is provided with a sheet-metal hopper or tapering bottom, D, just below the cylindrical screen B. Through the central opening, D′, of this hopper the ashes as they sift from the screen B are delivered into a removable discharge-spout, F. The lower end of this spout F projects through an opening, *f*, in the side of the case, and the upper end of

the spout fits upon the mouth of the delivery-hopper D and is supported thereby. The upper end of the spout is provided with an upwardly-projecting flaring flange or lip, f^3, having eyes or holes f', in which fit the hooks f^2, secured to the flaring side of the hopper D, by which the spout is supported and held in place, while at the same time permitting of the ready removal of the spout when required. The end of the spout F is furnished with a handle, F'.

G is a tub or pail, into which the cinders and unburned coal are delivered after the ashes have been sifted out and the ash-delivery spout removed from the mouth of the hopper.

H is the crank secured on the end of the shaft B'.

In operation the ashes are first delivered into the cylindrical screen B, the screen-door B^3 being opened for the purpose, as indicated in Fig. 3. After the ashes have been thoroughly sifted out by revolving the screen B, the door B^3 is again opened and the screen then turned into the position shown in Fig. 4, the ash-spout F being first removed and the vessel G placed under the hopper.

The case A may be made of metal or wood, or wood lined with sheet metal, which latter I deem the best and cheapest construction.

I do not claim as my invention the devices shown and described in Patents No. 650, of March 21, 1838; No. 13,083, of June 19, 1855; No. 147,296, of February 10, 1874; No. 166,680, of August 17, 1875; No. 178,132, of May 30, 1876, and No. 243,921, of July 5, 1881.

I claim—

The combination, with case A, of screen B, inclined hopper D, removable spout F, having flange f^3, furnished with eyes f', and handle F', said hopper being furnished with hooks f^2, and said case A being provided with an opening, f, substantially as specified.

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