(No Model.)

J. A. MURPHY.

ASH SIFTER.

No. 495,596. Patented Apr. 18, 1893.

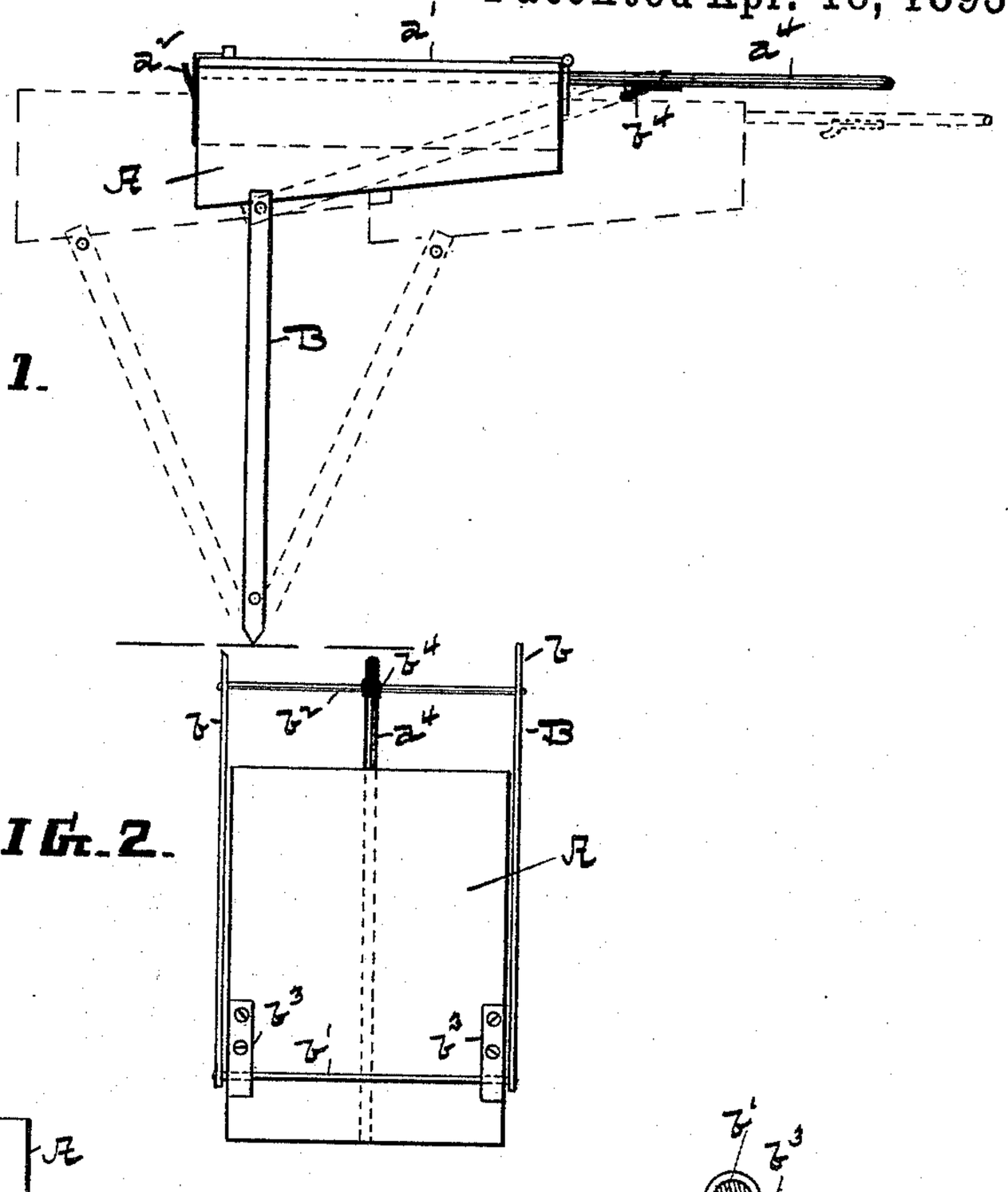

FIG. 1.

FIG. 2.

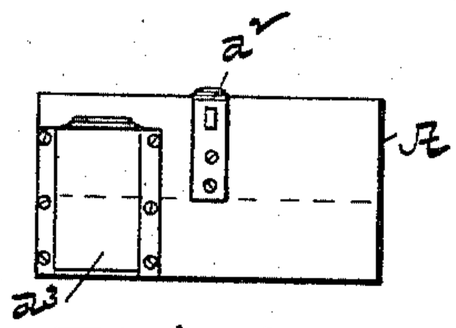

FIG. 4.

FIG. 5.

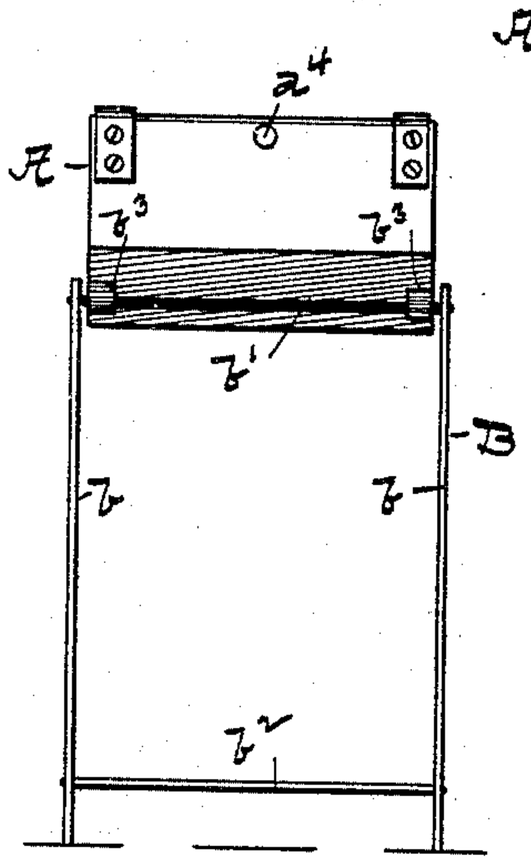

FIG. 3.

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JAMES A. MURPHY, OF HOLYOKE, MASSACHUSETTS.

ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 495,596, dated April 18, 1893.

Application filed April 2, 1892. Serial No. 427,473. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. MURPHY, of Holyoke, in the county of Hampden and State of Massachusetts, have invented a new and useful Improvement in Ash-Sifters, of which the following is a specification, reference being had to the accompanying drawings, forming part thereof.

My invention relates to portable or "hand" ash sifters, as distinguished from the class of such devices comprising a large stationary inclosing box or frame and a shaking or other sieve movably mounted within such frame.

The object of my invention is to provide such portable sifters with means whereby they can be rapidly vibrated to separate the fine ashes from the cinders, without compelling the operator to support the weight of the sifter and its contents, and with the exercise of but slight exertion.

A further object is to provide such sifters with a vibratory support which can be folded back upon the sifter, when not in use, to lessen the space which the sifter will occupy.

A further object is to provide such sifters with a vibratory support which is detachably secured to the body of the sifter to facilitate the packing of the sifters and said supports for shipment.

To these ends, my invention consists in a portable or hand ash sifter having applied thereto a support upon which said sifter can be vibrated, constructed and operating substantially as hereinafter fully described and pointed out in the claims.

Referring to the drawings in which like letters designate like parts in the several views, Figure 1 is a side elevation of an ash sifter having my invention applied thereto, the broken lines indicating the vibratory movement thereof. Fig. 2 is a view of the under side of the sifter, the vibratory support being folded back to its inoperative position. Fig. 3 is a front view, showing the sifter tilted to the proper position to empty the ashes therefrom after the sifting operation is concluded. Fig. 4 is a rear end elevation of the sifter proper. Fig. 5 is a detail view showing the preferred means for connecting the support to the body of the sifter.

For the purpose of illustrating the application of my invention to portable ash sifters generally, I have shown in the drawings the form of sifter for which Letters Patent of the United States No. 379,322, were issued to me on the 13th day of March, A. D. 1888, comprising a rectangular body A, having a bottom which slopes downwardly from its front to its rear end, a cover a' hinged at the front end of the body and engaged at its front end by a spring clip a^2, to normally retain it in its closed position, a vertically sliding door a^3 in the rear end wall of the body and preferably at one end of said wall, as shown in Fig. 4, a screen or sieve horizontally disposed within the body and dividing it into two compartments, as shown by the broken line in Figs. 1 and 4, and a handle a^4 extending longitudinally through the body and projecting from the front end thereof, by which the sifting movement is imparted to the body A.

The body A is made perfectly dust proof, and the sifter thus constructed is designed to be used within the kitchen or other room in which the stove is located, without the escape of dust into said room.

The sifter itself is made light, but I find that when it is filled with ashes and cinders its weight is such that considerable strength is required to lift and vibrate it, and the sifting operation is rendered laborious, and especially so to women. I have therefore devised as an attachment to said sifter, and to hand sifters generally, the vibratory support B, which is pivotally secured to the body A at one end, and is adapted, at its opposite end, to rest on the floor or ground, as shown in Fig. 1. I prefer to make said support in the form of a frame consisting of the two legs or standards b and two rods b' b^2 connecting said legs together, the former at the top and the latter near the bottom thereof. Said frame is secured to the body A by means of bearings b^3 on the bottom of the body, near the rear end thereof, which receive the rod b' and permit the latter to have a free revolving movement therein. I prefer to make said bearings b^3 from spring metal, bent near one end to form the bearing for the rod, and having, at one side of said bearing, screw-holes or other means for enabling the plate to be secured to the body, and having its end, upon the opposite side of said bearing, slightly curved away from the body,

as shown in Fig. 5. By making said bearings in this or equivalent form, the connection between the support and the body can be made by simply forcing rod b' laterally beneath the turned-up end of the spring plate, whereupon it enters its bearing, and is retained therein by the elasticity of the plate. Such detachability of the support enables me to compactly arrange the bodies in crates for shipment, and to make separate packages of the supports and handles, thereby greatly reducing the space required in transportation. Upon handle a^4 is a clip b^4, which is so located that when the support is folded to the position shown in Fig. 2, rod b^2 will spring beneath the end thereof and the support will be retained in such position until positively released. When the support is thus folded back, the sifter can be readily carried in the hand, and takes up but little room. The clip b^4 will be placed on the upper or lower side of the handle as the support is adapted to fold in one direction or the other. I prefer to locate it upon the lower side, as shown, and to have the support swing upwardly around the lower front corner of the body, for the reason that the latter then drops directly to the floor when released, and by placing the foot against rod b^2, the support can be utilized as a lever to enable the body and its contents to be raised from the floor without directly lifting the same.

The operation of the device thus constructed will be obvious from an inspection of the drawings.

The sifter is placed upon the floor, its cover a' is raised and the commingled ashes and cinders emptied into its upper compartment. The cover is then lowered and securely fastened in its closed position by the clip a^2. The operator then releases rod b^2 from its engagement with clip b^4, thereby permitting the free end of the support to drop to the floor, places his foot against rod b^2, and by drawing handle a^4 toward him raises the sifter to the position shown in Fig. 1. He then vibrates the sifter as represented by the broken lines in said figure, the pointed lower ends of legs b preventing them from slipping upon the floor. A few vibrations of the sifter will suffice to thoroughly separate the fine ashes from the cinders, whereupon the door a^3 is raised and the front end of the sifter tilted downwardly, as represented in Fig. 3, whereby the ashes are permitted to escape into a coal-hod or other receptacle. Cover a' is then raised and the cinders are emptied from the upper compartment into the receptacle provided for them.

It will be observed that from the beginning to the end of the sifting operation, the necessity of lifting bodily the sifter and its contents is avoided, and said operation can therefore be performed by women, and even children, with perfect ease. After the operation is concluded, the support is folded back to its formal position and the sifter can be set away in a very small space, until again wanted.

The bearings on the body A for rod b' are so located longitudinally of said body, that the latter is very evenly balanced upon the support, thus greatly adding to the ease with which the sifting operation can be performed.

I prefer to make the supporting frame from light iron bars and rods, but wood can be utilized for such purpose if desired.

As a vibrating support merely the rods b' b^2 could be omitted, and the legs b could be pivotally connected to the sides of body A, but I prefer the construction shown because of its greater strength, and because of the detachable and folding features thereof.

The vibratory support herein shown and described can be applied to any form of hand sifter.

Modifications in the details of construction can be made without departing from the spirit of my invention.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with ash sifter A having handle a^4, of the support B, composed of standards b and connecting rods b' b^2, said rod b' being journaled in bearings upon the bottom of said sifter, and a clip upon said handle a^4 to receive said rod b^2, substantially as and for the purpose set forth.

2. The combination with the sifter A having upon its bottom the spring bearing plates b^3, of support B having the rod b' adapted to be inserted within and withdrawn from said bearings, substantially as described.

3. The combination with the sifter A having a sloping bottom as described, of support B pivotally secured to said bottom at a point substantially midway between the rear end and middle thereof, substantially as described, whereby the sifter will be evenly balanced upon said support during the sifting operation.

4. The combination with sifter A having the bearing plates b^3 secured to the bottom thereof, and having handle a^4 provided with clip b^4 upon the under side thereof, of vibratory support B composed of standards b and rods b' b^2, substantially as described.

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Witnesses:
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