M. MENDEL.

SIFTING DEVICE.

APPLICATION FILED NOV. 1, 1919.

1,402,520.

Patented Jan. 3, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

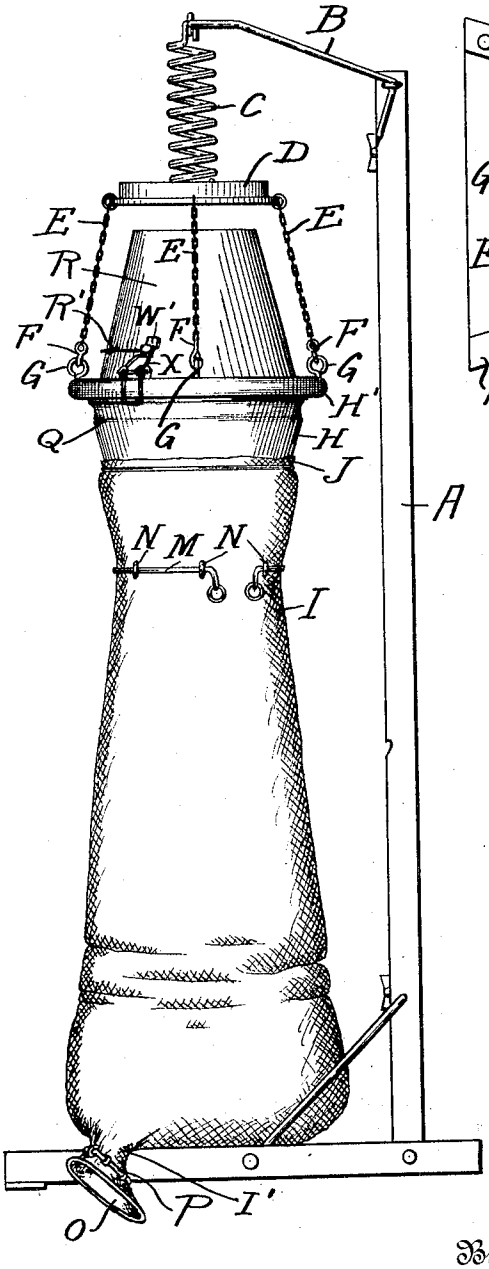


Fig. 2.

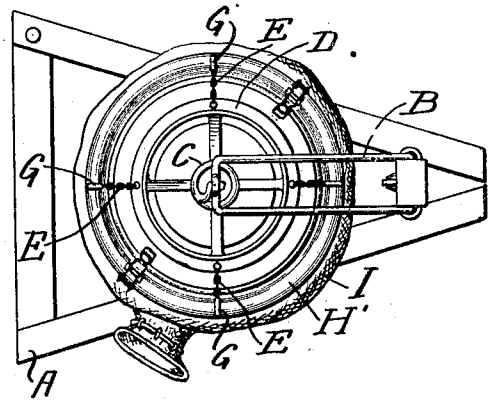
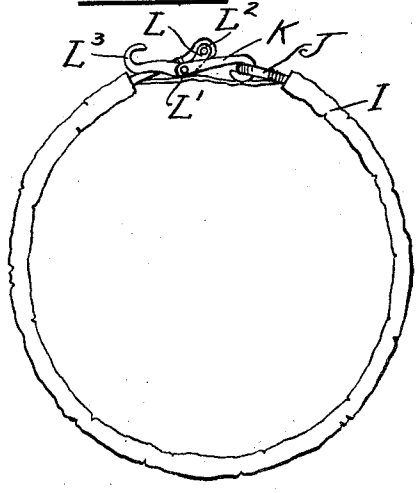


Fig. 3.



Inventor

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2 SHEETS—SHEET 2.

Fig. 4.

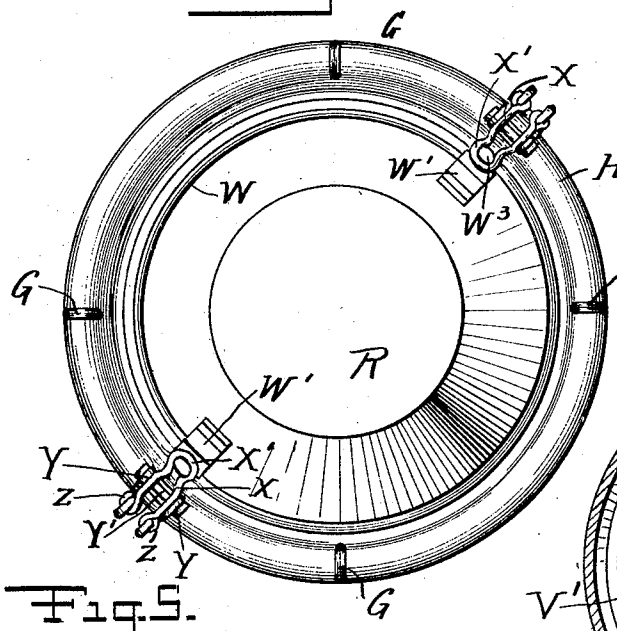


Fig. 5.

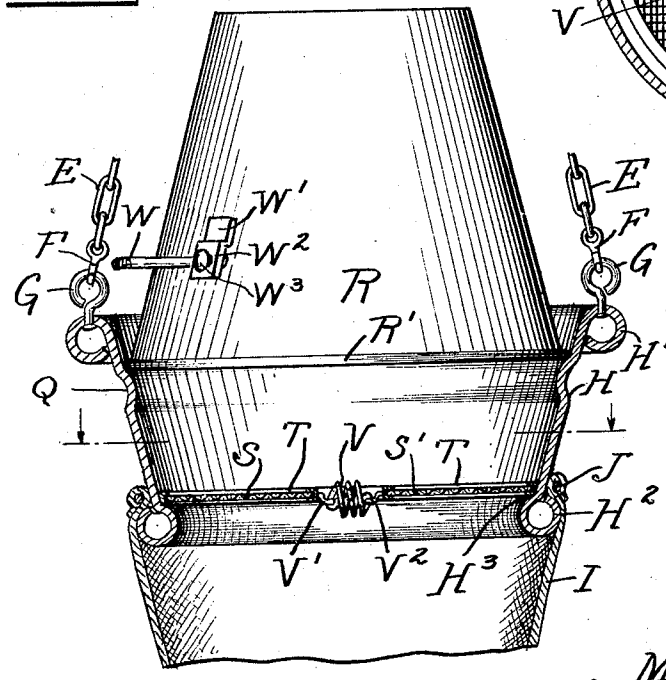


Fig. 6.

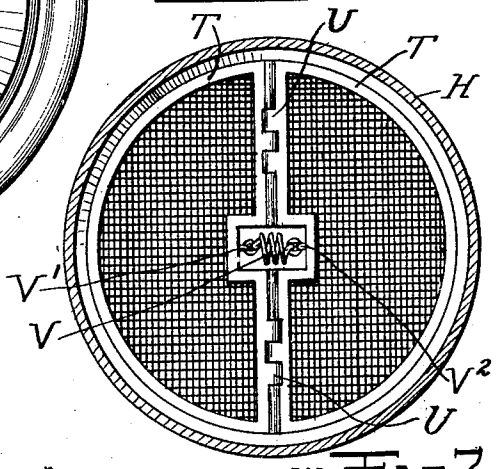
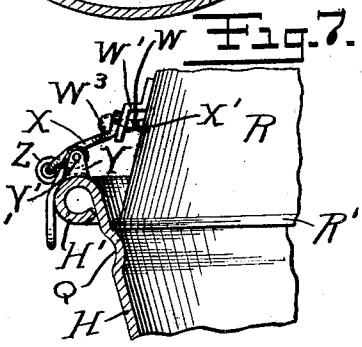


Fig. 7.



Inventor

Michael Mendel

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UNITED STATES PATENT OFFICE.

MICHAEL MENDEL, OF NEW YORK, N. Y.

SIFTING DEVICE.

1,402,520. Specification of Letters Patent. Patented Jan. 3, 1922.

Application filed November 1, 1919. Serial No. 334,949.

To all whom it may concern:

Be it known that I, MICHAEL MENDEL, a citizen of Great Britain, and resident of New York City, in the county of Kings and State of New York, have invented certain new and useful Improvements in Sifting Devices, of which the following is a specification.

My invention relates to sifting devices and in the present case my object is to provide a device adapted to sift ashes and other such substances. By changing the mesh, I may adapt the construction to sift flour and other such materials.

Referring to the drawings which form a part of this specification:

Figure 1 is a side elevational view of a construction embodying my invention.

Figure 2 is a plan view.

Figure 3 is a view of the binding ring which holds the bag to the screen or carrying portion hereinafter referred to as the ring.

Figure 4 is a plan view of the pail and ring on an enlarged scale, disclosing the means for holding them together.

Figure 5 is a side view, partly in section, of the ring, bag and sieve, and the pail in position in the ring.

Figure 6 is a plan view as indicated by the arrows in Figure 5, of the sieve and its hinge construction.

Figure 7 is a fragmental view disclosing a side view of the construction of one of the means for holding the pail and ring together.

A indicates a frame which carries a bracket B which may be of rigid construction or resilient to serve itself as a spring in case the movement desired is not too great for a spring of this character. C indicates a helical spring which is attached to the element B as indicated, at its upper end, and to a spider bracket D at its lower end. Suspended from the periphery of the bracket D are chains E—E—E, etc., the lower ends of which are provided with snap-hooks F—F—F, etc., which in turn are connected to the rings G—G—G, etc., fastened to the rim H′ of the screen ring H, which rim is formed into a hollow beaded ring portion to strengthen and stiffen the construction. A similar construction is made at its lower edge of the ring H and indicated by H^2. The bag I is large enough at its upper end to pass over the bead H^2 and is detachably held thereon by a hoop J, the ends of which are connected by a link cam construction K and L, the hook K being connected to one end of the hoop J and pivotally to the link L at L′ which is at a point intermediate its ends, the end L^2 of the link lever L being pivotally connected to the opposite end of the hoop J. By swinging the end L^3 of the lever L, the hoop J may be locked tight to the ring H and held as illustrated, or loosened by a reverse action to permit the bag to be removed from the ring H. A cord M is held to the bag I by suitable loops N—N—N, etc., to permit the bag to be closed and held after a sifting operation. An outlet O is provided at the bottom of the bag and a cord P is held around the neck I′ of the bag so that by loosening said cord the ashes can be dumped where desired. A corrugation Q is formed in the ring H to afford a strong rigid support for the abutting rim R′ of the pail R and permits of using pails the diameter of the rim R′ of which may vary to a limited degree. The beaded lower end H^2 of the ring H is so formed as to provide an inner flange H^3 which serves as a support for the free sides of the hinged sieve portions S and S′, the edges of the mesh of which is bound by sheet metal T—T, the inner adjacent portions of which are formed to provide hinges U—U as will be readily understood. A wire (not shown) which extends through each of the loops of the hinge portions, is fastened to the ring H and either side of the sieve portion can be lifted or both sides lifted together and held by the spring V. This function is accomplished by connecting one end of the spring V to a depending hook or ring V′ fastened to one screen element and to a similar hook V^2 fastened to the adjacent screen element, both being below the median line of the hinge U when the screens are in the position shown, and above the median line when the screens are in a vertical position, due to the V and V^2 moving in the arc of a circle when the screens are moved, as will be easily understood. A bail handle W is provided and is connected to clips W′—W′ respectively at each side of the pail, said clips each having a hole through which an end of the bail is passed in the usual manner, and the end of the bail is provided with an upset end W^3 at a short distance from the

face of the clip W′ to permit the looped end X′ of the wire X to hook over the end of the bail and thus hold the pail R to the ring H. The specific construction is illustrated in Figures 4—5 and 7 and embodies two spaced brackets Y—Y mounted on the rim H′ with a cross-rod or bolt Y′. A linked lever Z is connected to the cross-rod Y′ and to the element X. When the lever Z is pushed down its cam action draws the pail R down tight against the ring H and holds it, the action being the same as that described in holding the hoop J.

The operation of the device is as follows: The ashes being in the pail R in its normal position and the chains E being disconnected from the rings G, the ring H is inverted and placed over the top of the pail R and locked thereto by the locking means X. The bag I is then attached to the ring H. The spider frame D is disconnected from the lower end of the spring C and inverted, and the pail and its attached ring H is set thereon and the chains connected to the rings G respectively. The whole is then inverted, thus dumping the ashes into the ring H without any dust escaping into the room. The spring C is next attached which leaves the apparatus in the condition as illustrated. The pail is then pulled downward against the resistance of the spring C and when released, the spring reacts to lift the load. By rapidly repeating this action the ashes are sieved, the dust going into the bag and the cinders being held in the ring H above the screen. The chains are then detached, the pail removed, the cinders separated from the coal to be saved and screen door opened to permit the refuse to be deposited therethrough into the bag, after which the bag is detached from the ring H, the cord M tied and the operation is complete. The bag is then removed with its contents and by opening the outlet O the contents may be deposited in the ash-can without trouble.

I may dispense with the hinged screen and use instead a plain fixed screen if desired and in this event I detach the ring H from the bag and deposite the refuse in the top of the bag after separating the coal and cinders, etc.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A sifting device comprising a receptacle for holding the material to be sifted, a receptacle having a screen therein which serves as a door, means for connecting and holding said receptacles together, a receptacle connected to said last named receptacle and a spring, said receptacles being suspended from said spring.

2. A sifting device comprising a receptacle for holding the material to be sifted, a receptacle having a screen therein, a receptacle connected to said last named receptacle, means for holding said last named receptacle in detachable relation to said receptacle having a screen and a spring, said receptacles being suspended from said spring.

3. A sifting device comprising a receptacle for holding the material to be sifted, a receptacle having a screen therein, means for holding said screen in hinged relation to said receptacle, means for connecting and holding said receptacles together, a receptacle connected to said last named receptacle and a spring, said receptacles being suspended from said spring.

4. A sifting device comprising a receptacle for holding the material to be sifted, a receptacle having a screen therein, means for holding said receptacles together in detachable relation, a bag and means for holding said bag to one of said receptacles.

5. A sifting device comprising a receptacle for holding the material to be sifted, a receptacle having a screen therein, means for holding said receptacles together in detachable relation, a bag having an outlet at its lower end, means for closing said outlet, and means for holding said bag to one of said receptacles.

6. A sifting device comprising a spring, a receptacle for holding the material to be sifted, a receptacle having a screen therein, means for suspending said receptacles from said spring and a bag having a controlled outlet and connected to said screen holding receptacle.

7. A sifting device comprising a spring, a receptacle connected to and adapted to be suspended from said spring and having a screen therein and a bag connected to said receptacle having a controlled outlet, and a cord extending around its body portion intermediate its ends.

8. A sifting device comprising a pail, a screen ring having a beaded portion on which the pail is adapted to rest, a screen held in said screen ring, means for holding the pail and screen ring together in detachable relation, a bag held to the lower end of said screen ring and having a cord extending around it near its upper end.

9. A sifting device comprising a pail, a screen ring having a beaded portion on which the pail is adapted to rest, a screen held in said screen ring, means for holding the pail and screen ring together in detachable relation, a bag held to the lower end of said screen ring and having a cord extending around it near its upper end, and having an outlet at its lower end and means for controlling said outlet.

10. A sifting device comprising a pail, a screen ring having a beaded portion on which the pail is adapted to rest, a screen held in said screen ring and a spring for holding said screen in open or closed posi-

tion, means for holding the pail and screen ring together in detachable relation, a bag held to the lower end of said screen ring and having a cord extending around it near its upper end.

11. A sifting device comprising a screen ring having an inwardly extending flange at its lower end and a screen comprising two portions hinged adjacent each other and adapted to seat on said flange.

Signed at New York city, in the county of New York and State of New York, this 17th day of October, A. D. 1919.

MICHAEL MENDEL.