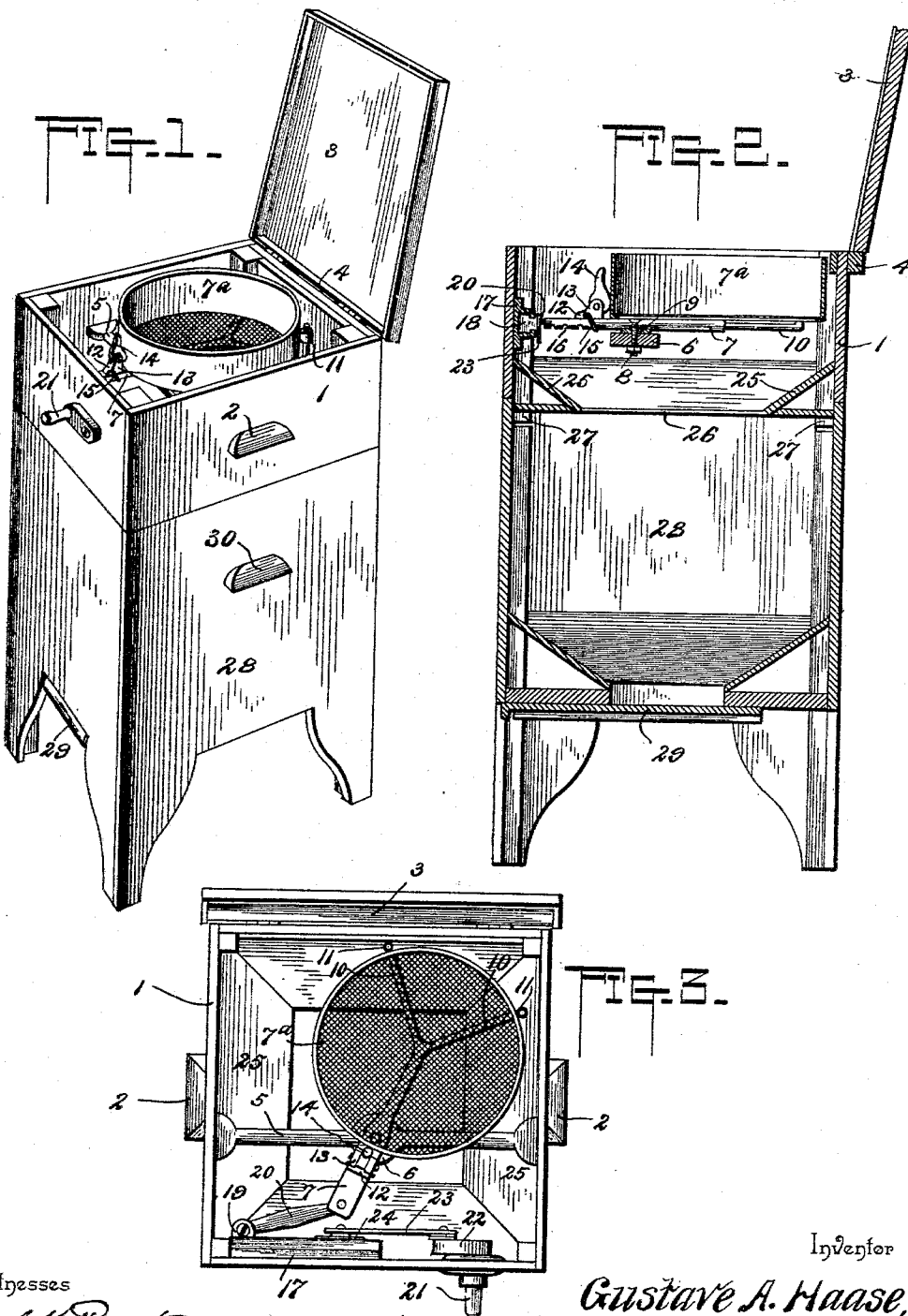


(No Model.)

G. A. HAASE.
SIFTER.

No. 583,994.

Patented June 8, 1897.



Witnesses

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SIFTER.

SPECIFICATION forming part of Letters Patent No. 583,994, dated June 8, 1897.

Application filed May 19, 1896. Serial No. 592,150. (No model.)

To all whom it may concern:

Be it known that I, GUSTAVE A. HAASE, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented a new and useful Sifter, of which the following is a specification.

This invention relates to new and useful improvements in sifters; and it has for its object to provide a device of this character which shall embody in its construction simple and efficient means whereby the operation of the same shall be both positive and effective.

The invention further contemplates improved means for retaining the sieve within the body of the device so that the same shall be capable of adjustment, thus providing for the employment of sieves of different sizes, and also in certain details of construction which will appear as the invention is more clearly understood.

To these ends the invention consists, substantially, in the construction, combination, and arrangement of parts, as will be more fully illustrated, described, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a sifter constructed in accordance with the present invention, the cover being elevated to show the interior of the device. Fig. 2 is a central transverse sectional view thereof. Fig. 3 is a top plan view of the same.

Similar numerals of reference indicate corresponding parts throughout the figures.

Referring to the drawings, 1 designates the casing of a sifter, which may be formed of any suitable material, and is provided with handles 2, by which the same may be easily lifted and carried. The casing 1 has a hinged cover 3, and between the hinges of the latter, on the outside of said casing, a supporting-strip 4 is secured, which strip limits the movement of the cover 3 and prevents the same swinging rearwardly and downwardly.

Disposed within the casing 1 and transversely thereof is a supporting-bar 5, the ends of which are secured to the sides of said casing, and at the center of said bar an enlargement 6 is formed. Mounted upon the supporting-bar 5 is an oscillatory sieve-holder 7, and said holder is pivoted to the enlargement 6 by means of a bolt 8 or its

equivalent, a washer 9 being interposed between the holder and the enlargement to permit free movement. The holder 7 has a sieve 7^a of any suitable form and is substantially Y-shaped, consisting of a shank or bar and divergent arm extensions 10, the outer ends of which are bent upwardly and have secured thereon elastic sleeves 11, of rubber or its equivalent, for a purpose to be presently stated. The other end of the holder has an adjustable fastener 12 mounted thereon and composed of a block or support provided with vertical ears 13 and an eccentrically-pivoted cam 14, mounted between the ears and adapted to clamp the sieve. Fastened to each of the ears 13 is one end of a loop or stirrup 15, the latter adapted to engage any one of a series of transverse notches 16, formed at the lower side of the holder 7, whereby the fastener 12 may be adjustably secured on said holder. By reason of the fastener 12 being adjustable it will be obvious that sieves of different sizes may be employed with the holder, and when placed between said fastener and the upwardly-bent outer ends of the arm extensions 10 the sleeves 11 and the cam 14 will securely hold the same and prevent displacement. When the cam 14 is in engagement with the sieve, it also exerts a sufficient strain on the loop 15 to hold the latter firmly in engagement with the shank of the sieve-holder to prevent it from becoming accidentally disengaged from the notches thereof and releasing the sieve during the operation of the sifter.

Secured to the casing 1 at one of its inner sides is an elongated slotted guide 17, in which is disposed a slide-block 18. The block 18 has a lug 19 formed at one of its ends, which lug passes through the slot in the guide 17 and is provided with a slit in which is pivoted one end of a connecting-rod 20. The other end of the connecting-rod 20 is pivoted within a slit formed in the end of the holder 7, on which the fastener 12 is mounted, and it will be seen that as the slide-block 18 is reciprocated in the slotted guide 17 an oscillatory motion will be imparted to the sieve-holder 7 through the medium of the connecting-rod 20.

For reciprocating the slide-block 18 in the slotted guide 17 a crank-handle 21 is journaled in the side of the casing 1 and projects

on the outside thereof, said crank-handle being provided at its inner end with a crank-arm 22. Pivoted to the crank-arm 22 is a pitman 23, which pitman is also pivoted to a projection 24, formed on the slide-block 18 at the end opposite to the lug 19, and by means of the pitman 23 motion is communicated from the crank-arm to the slide-block.

The lower end of the casing 1 is provided with inclined sides 25 and also has a central opening 26, through which the sifted particles pass. It is to be noted that the inclined sides 25 project below the sides of the casing 1 and are provided with leg extensions 27, said projecting sides and leg extensions being adapted to enter the open upper end of a receiver 28, so as to prevent the casing being displaced from the same when said casing is placed thereon. The receiver 28 is designed for the reception of the sifted particles which fall from the casing 1 and has its bottom formed with inclined sides and a central opening similar to the inclined sides 25 and the opening 26; but the central opening of the receiver is closed by a slide 29, so that the contents may be removed as desired. At the sides of the receiver handles 30 are attached to enable the same being transported.

From the foregoing the operation and advantages of the herein-described sifter will be readily understood by those skilled in the art. When it is desired to use the same, the material to be sifted is placed in the sieve 7^a, which has previously been fastened in the holder 7 by means of the upwardly-bent ends of the arm extensions 10 and the cam 14, and the hinged cover 3 is then closed upon the casing 1 to prevent escape of the dust incident to the sifting operation. The crank-handle 21 is then rotated, which also rotates the crank-arm 22, and through the pitman 23, slide-block 18, and the connecting-rod 20 the sieve-holder 7 is given an oscillatory motion, thereby agitating the contents of the sieve 7^a and thoroughly sifting the same. The sifted particles in their descent strike upon the inclined sides 25 of the bottom of the casing 1 and by means of the same are directed into the opening 26, so as to pass therethrough into the receiver 28, from which they may be removed through the opening in its bottom by simply withdrawing the slide 29 from said opening. The sieve 7^a may be removed, after its contents have been thoroughly sifted, by releasing the cam 14 from binding against the same, and should it be desired at any time to place a sieve of a different size in the holder it may be accomplished by passing the stirrup 15 in one of the notches 16, which notch will so adjust the fastener 12 as to be in a position to permit the cam 14 binding against the sieve and thereby retain the lat-

ter in the holder 7. By reason of the sleeves 11 being secured on the upwardly-bent outer ends of the arm extensions 10 it will be evident that the same will greatly assist the cam 14 in holding the sieve.

The herein-described sifter is especially adapted for use with ashes, but I wish it to be understood that I do not restrict myself to such use, as I may employ the same for grain or other materials which it is desired to sift; and while I have described the casing 1 as applied to the receiver 28 it will also be further understood that I may dispense entirely with the receiver or substitute therefor a barrel or any other similar receptacle.

Changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A sifter comprising a casing, a horizontally-disposed oscillating sieve-holder provided at its lower face with notches, an adjustable clamp composed of a support mounted upon the sieve-holder and provided with vertical ears, a loop pivoted to and depending from the support, said loop receiving the sieve-holder and engaging one of the notches at the lower face thereof, and a cam pivotally mounted between the ears, adapted to engage one side of the sieve and also hold the loop firmly in engagement with the holder, means for engaging the opposite sides of the sieve, and operating mechanism connected with the sieve-holder for oscillating the same, substantially as described.

2. A sifter of the class described, comprising a casing, a supporting-bar mounted therein, a sieve-holder mounted on said supporting-bar, a sieve mounted on the holder, said holder having arm extensions the ends of which are bent upwardly and provided with elastic sleeves, said holder being also provided with an adjustable clamp, said bent-up ends and the adjustable clamp being adapted to retain the sieve on the holder, a guide secured to said casing, a slide-block disposed in said guide, a connecting-rod secured to the sieve-holder and the slide-block, and means for reciprocating said block to impart motion to the sieve-holder, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GUSTAVE A. HAASE.

Witnesses:

RICHARD H. CLARK,
JOSEPH A. TAYLOR.