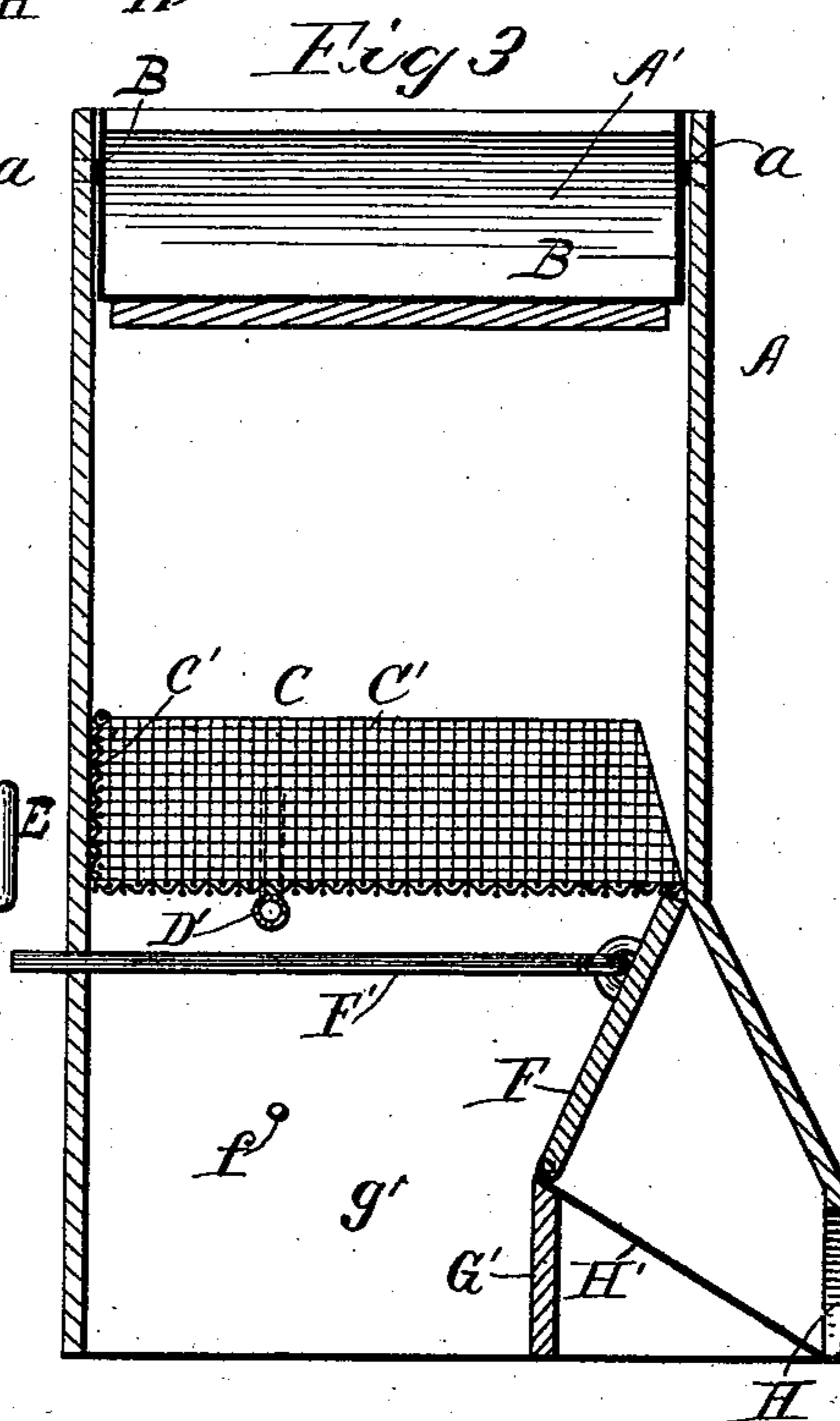
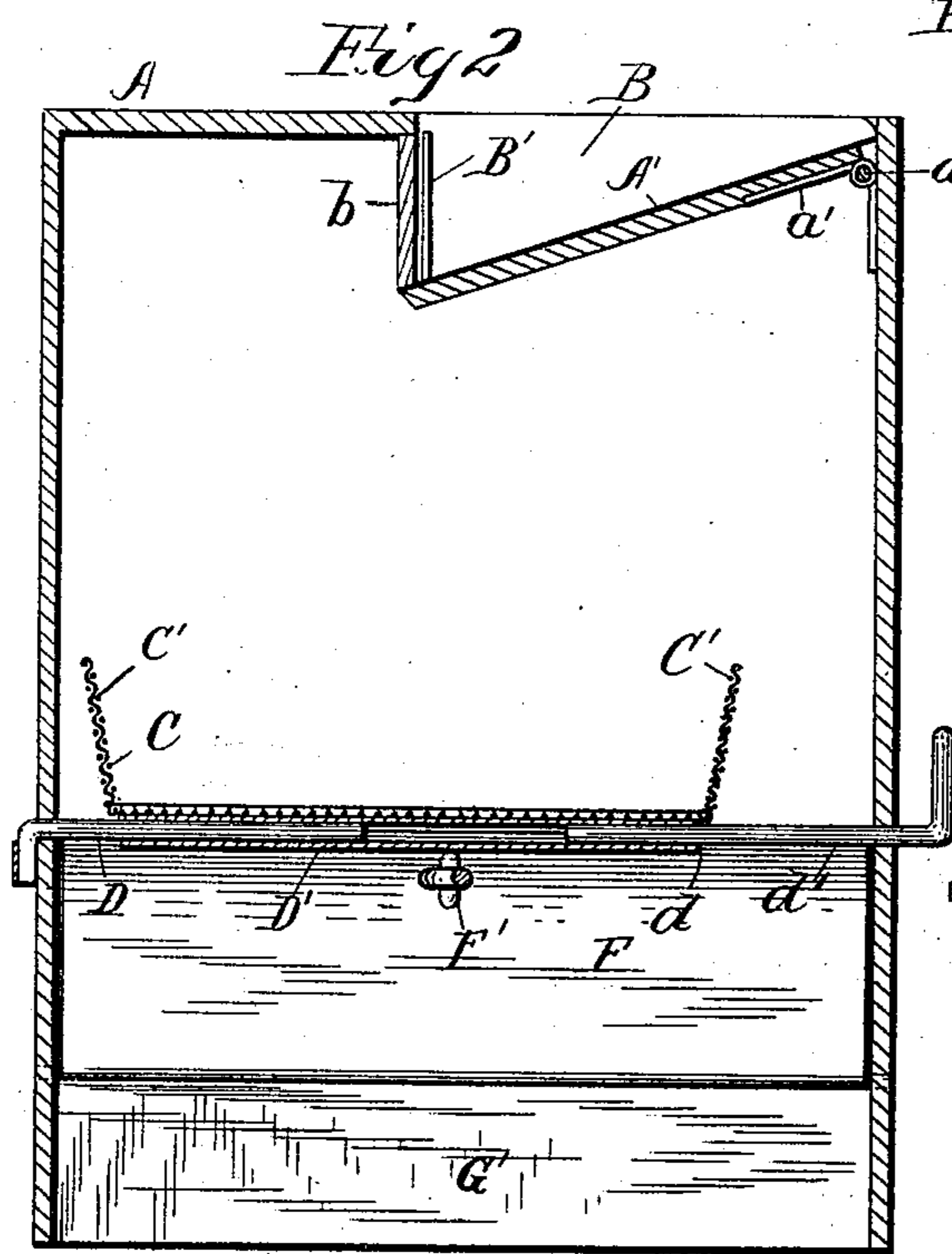
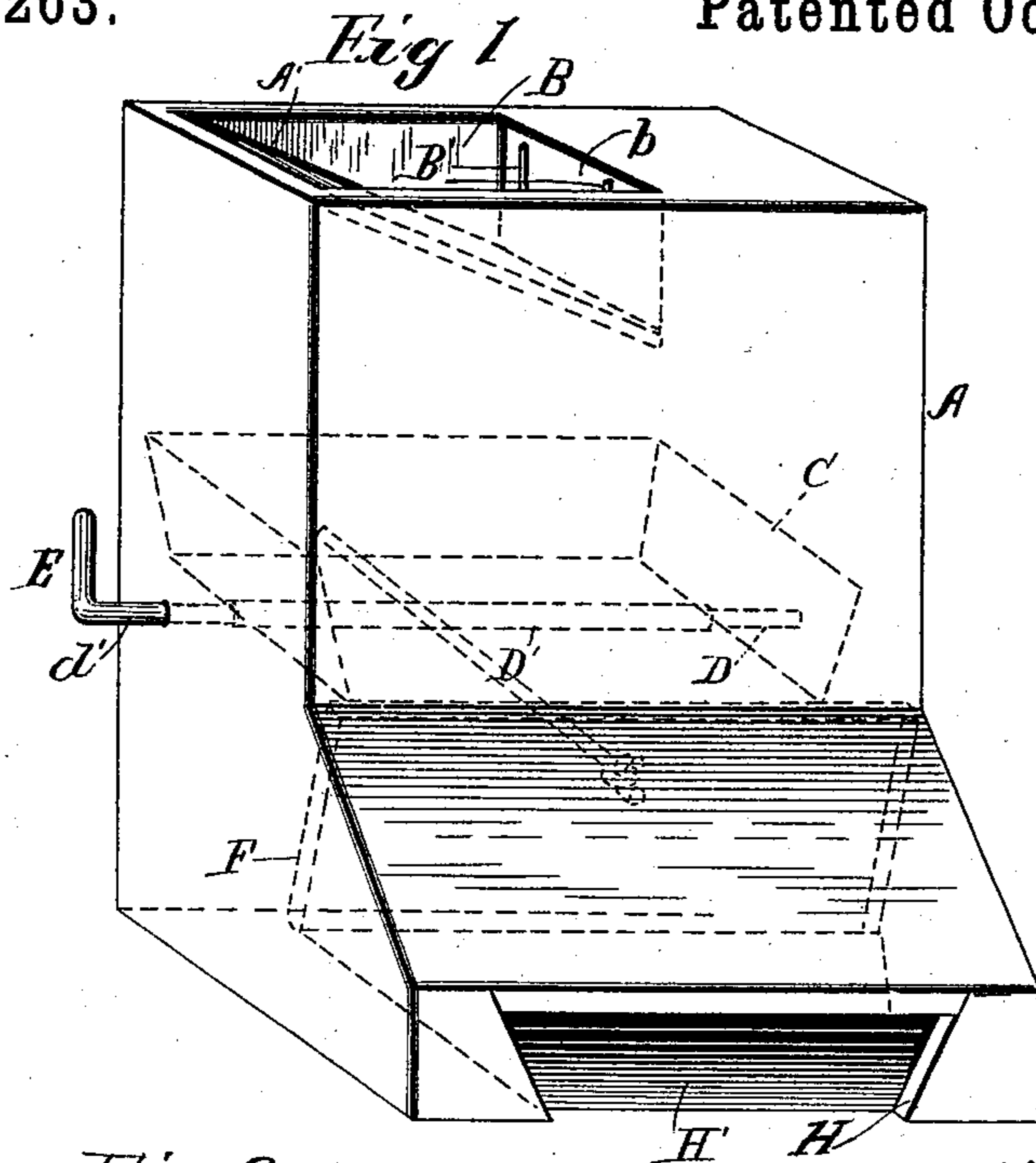


(No Model.)

D. B. SANFORD.
ASH SIFTER.

No. 506,263.

Patented Oct. 10, 1893.



WITNESSES:

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ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 506,263, dated October 10, 1893.

Application filed April 27, 1893. Serial No. 472,108. (No model.)

To all whom it may concern:

Be it known that I, DAVID B. SANFORD, a citizen of the United States, residing at Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Ash-Sifters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in that class of sifters used for sifting ashes, and it has for its object to produce a sifter having two separate divisions and means for sorting the cinders and ashes, and dumping one in one division and another into the other.

To this end my invention consists of certain peculiarities of construction and combination and arrangement of parts more fully described hereinafter and finally pointed out in the claim.

Referring to the accompanying drawings which illustrate my invention: Figure 1 represents a perspective view thereof with the casing broken away to disclose the interior mechanism; Fig. 2, a longitudinal section; Fig. 3 a cross section.

The reference letter A indicates the frame casing of my improved sifter which may be of any preferred or convenient material, wood being however preferred.

Located in the top of the casing A is a trap-door A', hinged to the rod *a* and provided with the springs *a'*, whereby it is given a normal tendency to remain closed. This door is inclined slightly and provided with side flanges B and guard-fingers B'; while a dam or bulkhead *b* is formed at its end, thereby making a hopper for the reception of the ashes to be sifted, which ashes are adapted to open the door by their weight and against the tendency of the springs *a'*.

The reference letter C indicates the sieve or sifter proper which is arranged far enough below the door A' to admit the door to swing down, and is provided with walls C' on three

sides, one side being left open for the discharge of the cinders as will hereinafter appear, the side of the casing A being constructed so that it will lie flush with the open end of the sieve, and thereby perform the functions of the walls C'. The sieve C is formed shorter than the casing A and is capable of reciprocal movement therein, but is made long enough to insure it being partially under the mouth of the trap-door A' so as to receive its contents whatever be the position of the sieve.

Secured by any suitable means, to the inner side of the casing and projecting thereinto for a distance equal to about one-third the length of the casing, is a rigid rod or shaft D which fits loosely into the sleeve or socket D' of the sleeve C. The socket D' is securely fastened to the under side of the sieve and has its closed end *d* fitted with a rod *d'*, which extends through the opposite side of the casing and is provided with an operating handle E. By this means the sieve is reciprocated on the rod D and the operation of sifting performed.

Hinged or pivoted to the lower portion of the casing at a point just beyond the open end of the sieve C, is a swinging partition F secured at its base and provided with a rod F' connected to it and extending across the casing under the sieve C, to its opposite side through which it projects. By this means the partition F may be swung on its bearings. The upper edge of the partition is adapted to be engaged by and to support that part of the sieve which lies forward of the rod D. As the sieve is fulcrumed at a point beyond its middle it will be seen that that part which extends forward of its fulcrum or the side with the open end, will have a normal tendency to tilt or swing down. Now it is one of the functions of the partition F to support this end of the sieve until it is desired to tilt it and thereby dump its contents. This is done by drawing out the rod F' thereby swinging the partition backward which will allow the open side of the sieve to tilt and when so doing to project forward of the partition.

Studs or projections *f* are arranged in the

ends of the casing in the path of the partition F and are designed to limit its outward movement.

Formed in the lower portion of the body are two compartments by means of the wall or partition G'. The larger compartment g' is of a size equal to the area of the space occurring between the pivotal point of the partition F and the rear side or wall of the casing, and its function is to receive the ashes which pass through the sieve; while the remaining compartment is formed with a way or gate H on its front side. This compartment serves no function as a receptacle for ashes or coal, but is provided to receive the chute H' which is arranged at the base of the partition F and extends forward and downward into the small compartment and opens on the outside of the casing by way of the gate H. The partition G' is formed with a beveled front edge which is arranged to fit snugly against the incline bottom of the chute H', thereby making a tight connection and preventing the escape of dust and smoke from the compartment g', and the front side of the casing is extended or inclined at I so as to enlarge the bottom portion of the sifter. The compartment g' is formed bottomless and arranged so that the ashes dumped therein will be deposited on the ground or floor upon which the sifter rests. Thus it will be seen that the ashes from the sieve will fall into the compartment g', while, the residue of the sifting operation, or the cinders, will remain in the sieve. They are discharged from this by swinging the partition or wing F rearward by means of the rod F', whereupon the heavy side of the sieve will drop for want of a support, with its mouth opening into the chute H', whereat the cinders are discharged and emptied out the mouth of the chute into any suitable or convenient receptacle that may be placed for them, or if desired on the ground. The partition F is then moved back to its normal position and the sieve will be lifted to a horizontal position and ready for a second load.

To use my improvement as an ash sifter, the parts are all arranged in their normal position and a quantity of unsifted ashes dumped into the depression or hopper formed by the door A', whereupon their weight will over-

come the spring on the door and the door will drop to deposit its contents on the sieve C. The handle E by way of rod or shank d', is reciprocated which will of course be followed by a similar movement of the sieve, the ashes being deposited in the compartment g', while the residue of cinders is discharged by way of the chute H', all of which has been explained.

When it is desired to remove the ashes from the compartment g', the casing is lifted bodily and the contents of compartment g' will fall through its open bottom, when they can be disposed of at will. It will be noticed that owing to the tight joints between the pan and casing at the trap-door A', no dust or smoke can escape during the sifting operation, and that the compartment g' may be made large enough to hold ashes from several weeks' use, thus making its frequent renovation unnecessary. It will also be seen that the partition F is practically a continuation of the chute H' and that it serves when in one position to close its inlet and to support the sieve, and when in the other, to enlarge its inlet and to allow the sieve to tilt into such inlet when enlarged.

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

In an ash sifter, the combination with a casing of a tilting pan-shaped screen located therein, and having one side open when dumped and normally in engagement with the interior of the casing, when in sifting position, whereby the side is closed and the ashes confined in the screen, a chamber for receiving the sifted ashes, and a chute for carrying off the cinders, said chute having a partition adapted to normally close the chute and to support the open end of the screen, and when operated, to open the chute and allow the open end of the screen to drop and empty its contents into the chute, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

DAVID B. SANFORD.

Witnesses:

W. B. GARDINER,
A. J. GARDINER, Jr.