

(No Model.)

A. SCHIEFER.

ASH SIFTER.

No. 255,889.

Patented Apr. 4, 1882.

FIG. 1.

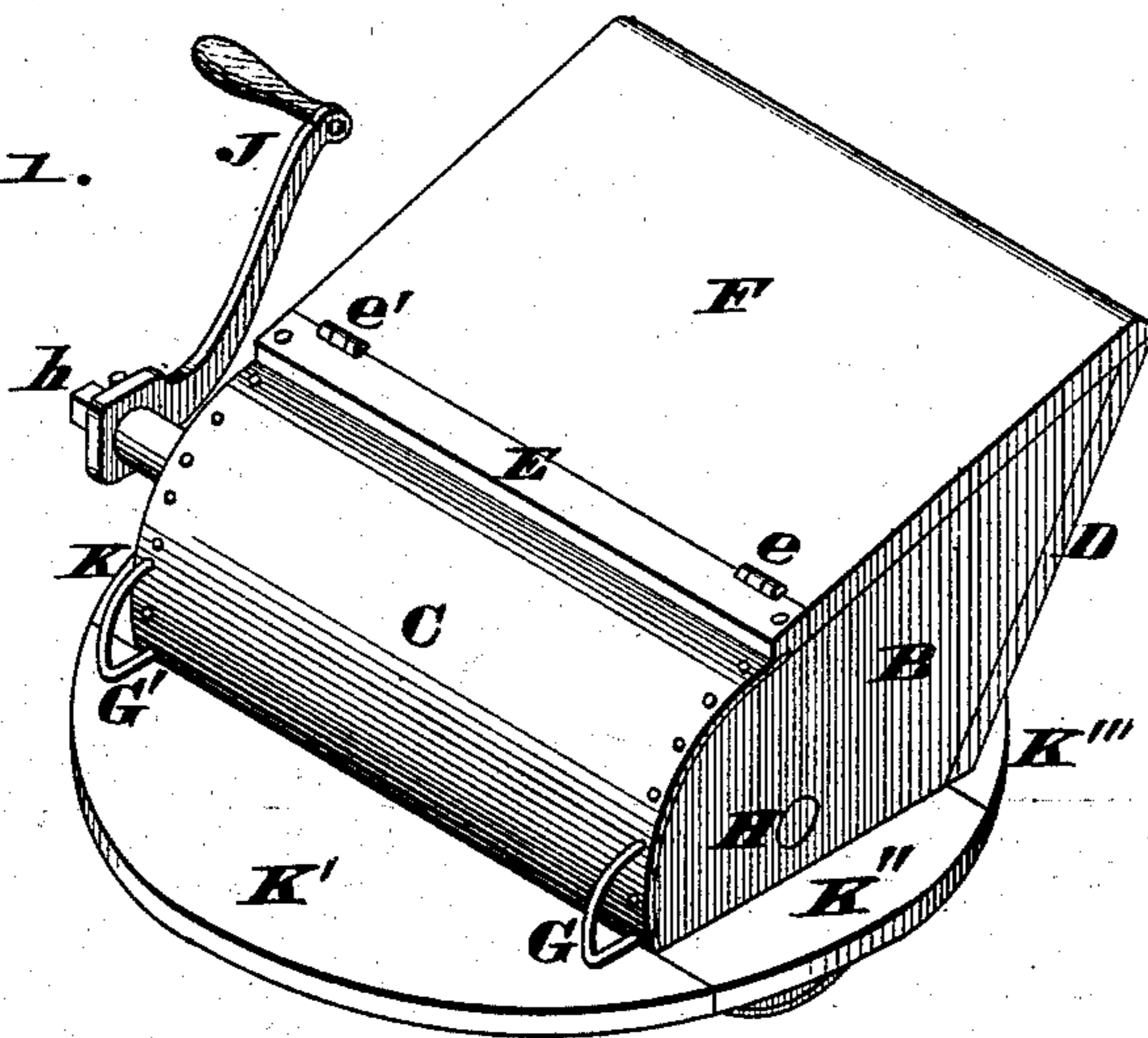


FIG. 2.

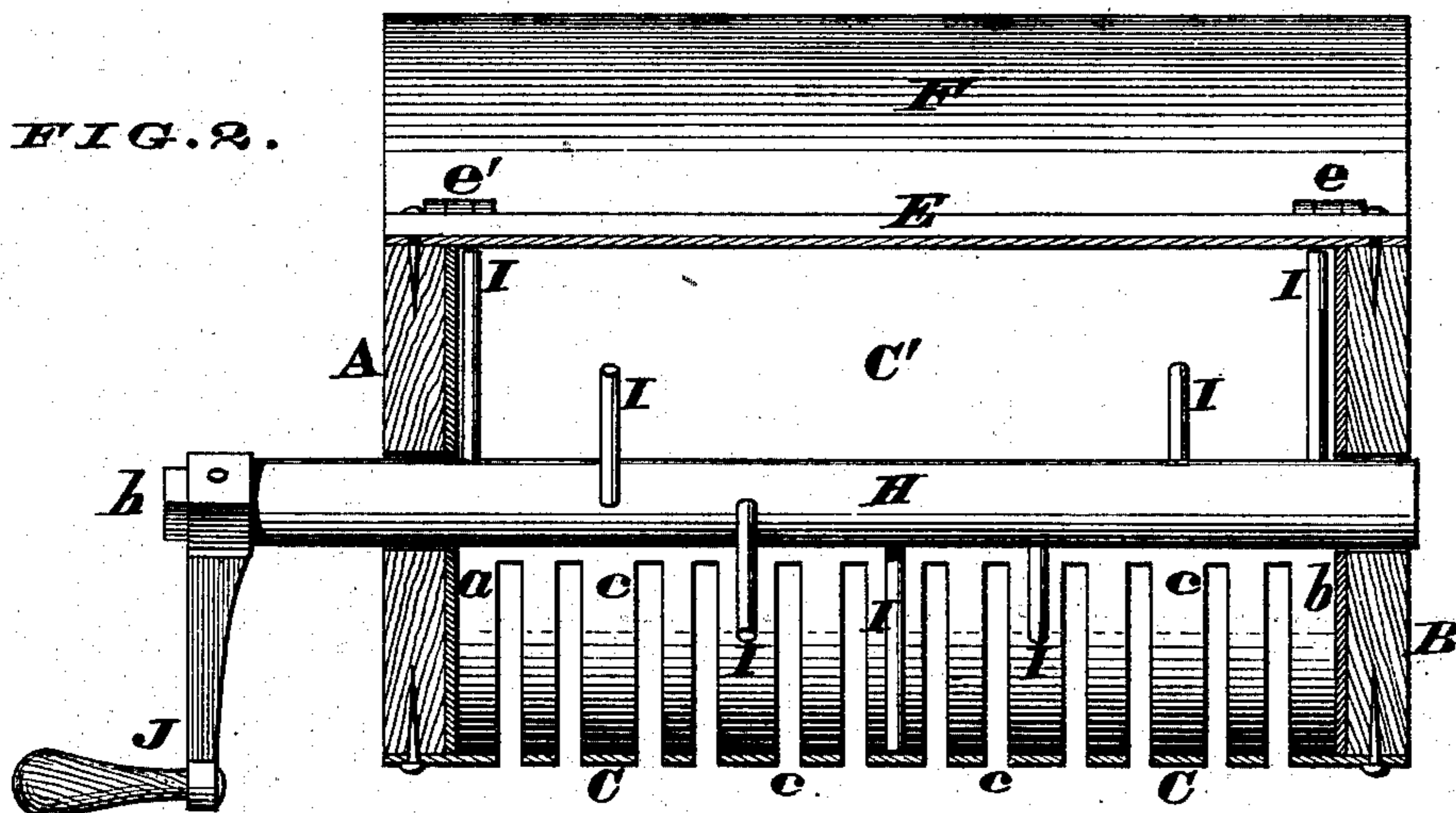
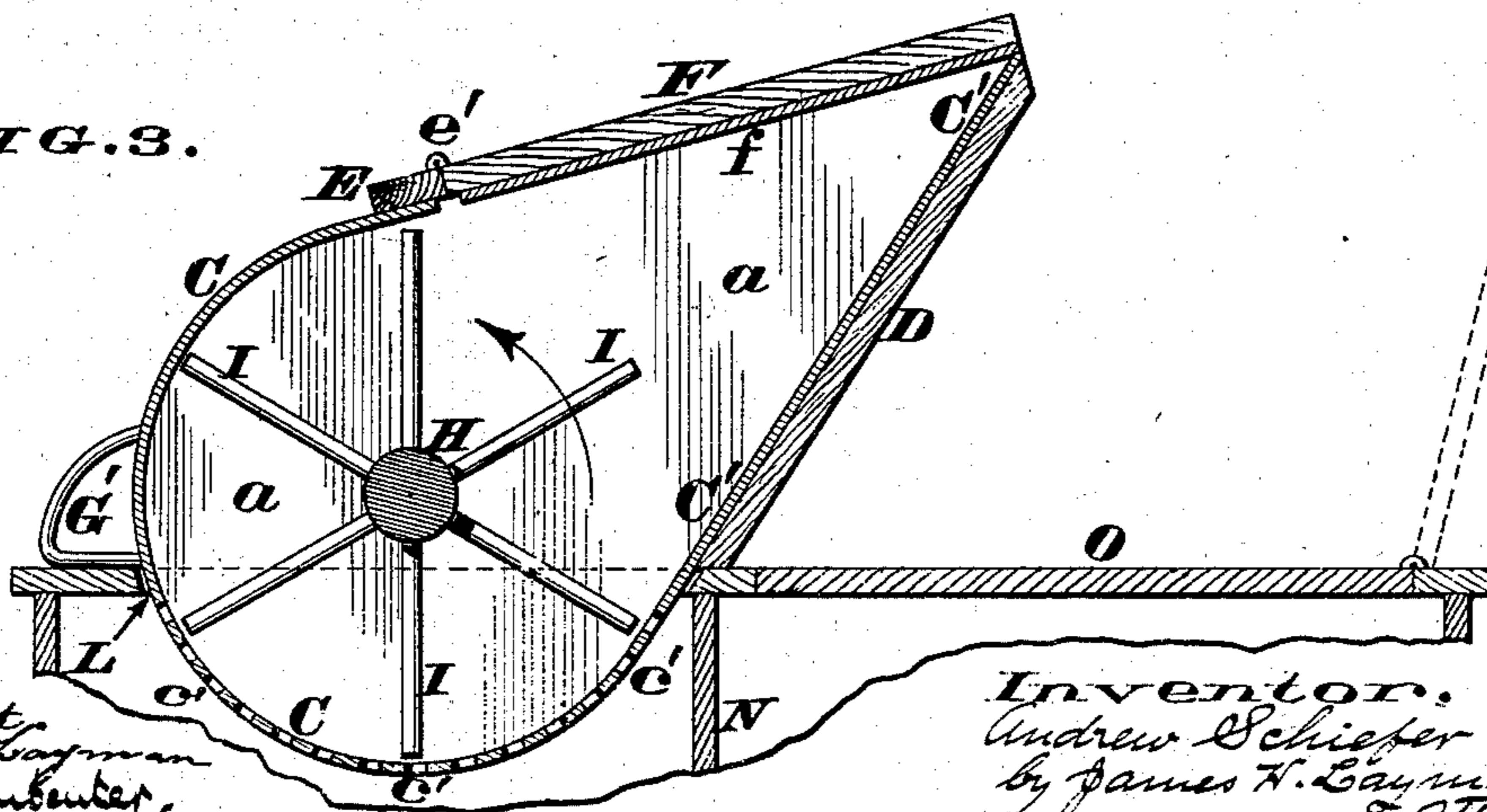


FIG. 3.



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ASH-SIFTER.

SPECIFICATION forming part of Letters Patent No. 255,889, dated April 4, 1882.

Application filed December 3, 1881. (No model.)

To all whom it may concern:

Be it known that I, ANDREW SCHIEFER, a citizen of the United States of America, residing at Newport, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Ash-Sifters, of which the following is a specification.

The first part of my invention comprises a cheap and handy implement wherewith ashes can be readily separated or sifted from cinders and without allowing dust to fly over the operator. This implement consists essentially of a receptacle the body of which is approximately cylindrical and is slotted or perforated at bottom to allow the ashes to sift through when the contents of said receptacle are agitated by a shaft armed with suitable pins or projections. The shaft occupies an axial position within the cylindrical shell or case, and is rotated by means of an external handle. This perforated cylinder is disposed horizontally, and terminates at the rear with an inclined chute, into which the ashes and cinders are dumped preparatory to being sifted, said chute being provided with a hinged door that is kept securely closed while the agitator is in operation, as hereinafter more fully described.

The second part of the invention consists in lining the interior of the sifter with any suitable sheet metal as a precaution against fire.

The third part of my invention consists in applying to the body of the device a pair of external loops, which perform the twofold purpose of stops that prevent the implement descending too far into the ash box or barrel, and also of acting as handles wherewith the sifter can be easily managed, as hereinafter more fully described.

In the annexed drawings, Figure 1 is a perspective view of my ash-sifter in position upon a head adapted to be applied to an ordinary barrel. Fig. 2 is an enlarged vertical section of the sifter, taken in the plane of the agitator-shaft, the implement being shown detached from its support. Fig. 3 is a vertical section taken from front to rear of the sifter, the implement being shown in position on a specially-constructed ash-box.

The ends of the implement consist preferably of two wooden heads, A B, which are made of such a shape as to have fastened to

them the perforated cylinder and inclined chute previously referred to, said cylinder being composed of a single piece of sheet metal, C, that extends from a point about vertically above the agitator-shaft to the bottom of the inclined chute, or it may reach to the upper end of the latter, as shown at C'. Furthermore, the lower portion of this cylinder is either slotted, as at *c* in Fig. 2, or perforated, as at *c'* in Fig. 3, or otherwise pierced to permit free passage of dust, while at the same time the cinders are retained. The two heads A B are united at rear by an inclined board, D, that forms the bottom of the chute, the lower edge of said board serving as a stop or bearing when the sifter is mounted on a suitable support. Said heads are further united at a point about vertically above the agitator-shaft by a rail or slat, E, to which is hinged at *e e'* a lid or flap, F, that affords access to the sifter. Projecting from the front of the cylinder are two metallic loops, G G', so shaped as to serve as handles for the implement and also to prevent it dropping into the ash barrel or box.

a and *b* are respectively sheet-metal linings fastened to the inner sides of the heads A B, and *f* is a similar lining for the lid of the implement. Located axially in the cylindrical portion of the sifter is a shaft, H, armed with pins I or other suitable projections, the outer ends of which just clear the interior of said cylinder, as seen in Fig. 3. These pins are arranged in a single row spirally around the shaft H, the outer ones fitting up snugly against the linings *a b*, and thereby preventing longitudinal shifting of said shaft. (See Fig. 2.) One end of this shaft has a square arbor, *h*, to receive the crank J.

When it is desired to sift the ashes into an ordinary barrel I furnish a head composed of four pieces of board, K K' K'' K''' united by battens on the under side, which battens are so disposed as to prevent said head shifting off of the barrel. I prefer, however, to use a special form of ash-box, the upper portion of which is seen in Fig. 3, in which illustration L represents the opening to receive the sifter, N a partition that divides the box vertically into two compartments, and O is a lid of the rear chamber.

To sift the ashes into a barrel the special

head K K' K'' K''' (seen in Fig. 1) is applied to the latter and the implement is seated in the rectangular opening formed by said segmental pieces, the handles G G' resting upon the front piece, K', while the lower edge of chute D bears upon the rear piece, K'''. Furthermore, the heads A B fit snugly against the respective pieces K K'', thereby closing the opening in this head, and thus preventing dust flying out of the barrel. Lid F is now opened, the ashes, &c., dumped into the sifter, after which act said lid is at once closed and the handle J turned in the direction of the arrow seen in Fig. 3. Evidently the rapid rotation of this shaft and the spiral arrangement of arms I cause a thorough agitation of the contents of the implement, the result being to force the ashes and dust out through the slots *c*, or their equivalent openings, while the cinders are retained within the cylinder. As the ashes are thus sifted out the inclined chute D causes the contents of the implement to gradually settle at the bottom of cylinder C, which latter contains nothing but cinders when the operation is finished. Flap F is now opened, and the sifter, after being grasped by the handles G G', is turned back on its bearing on board K''', so as to dump the cinders into a convenient receptacle. From the above description it is evident all the cinders may be thus collected together without completely enveloping the operator in a cloud of dust and ashes.

In the special form of box seen in Fig. 3 the ashes are sifted into a compartment in front of the partition N, while the cinders are dumped into the rear division of said box as soon as the door O is turned up, as indicated by dotted lines.

By referring to Fig. 2 it will be noticed that the pins I are not in the same plane as the slots *c*, and consequently there will be no danger of the latter becoming choked up with cinders.

When designed for sifting purposes in foundries, manufactories, and other large establishments, the shaft H may be provided with a pulley or gear-wheel for application of power.

Finally, nails or pins may be substituted for the handles G G'.

I claim as my invention—

1. An ash-sifter consisting of a cylinder, C, perforated at the bottom *c*, and terminating at the rear with an inclined chute, D, said cylinder being traversed with a revolving shaft, H, armed with projections I, for the purpose specified.

2. An ash-sifter provided with loops G G', that perform the twofold purpose of handles and bearings for the implement, as herein described.

3. The ash-sifter C D H I, supported in front by the loops G G', or their equivalents, and at rear by the lower edge of the inclined chute D, as herein described.

4. The combination, in an ash-sifter, of a slotted or perforated cylinder and a revolving shaft armed with pins, which latter are in the same plane with the spaces between said slots, for the purpose specified.

5. The sheet-metal linings *a b*, applied respectively to the inner surfaces of the wooden heads A B of an ash-sifter, for the purpose specified.

6. An improved ash-sifter, consisting of the heads A B, perforated cylinder C *c*, inclined chute D, rail E, hinged flap *e e'* F, bearings G G', and agitator H I, as and for the purpose specified.

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

ANDREW SCHIEFER.

Witnesses:

JAMES H. LAYMAN,
SAML. S. CARPENTER.