

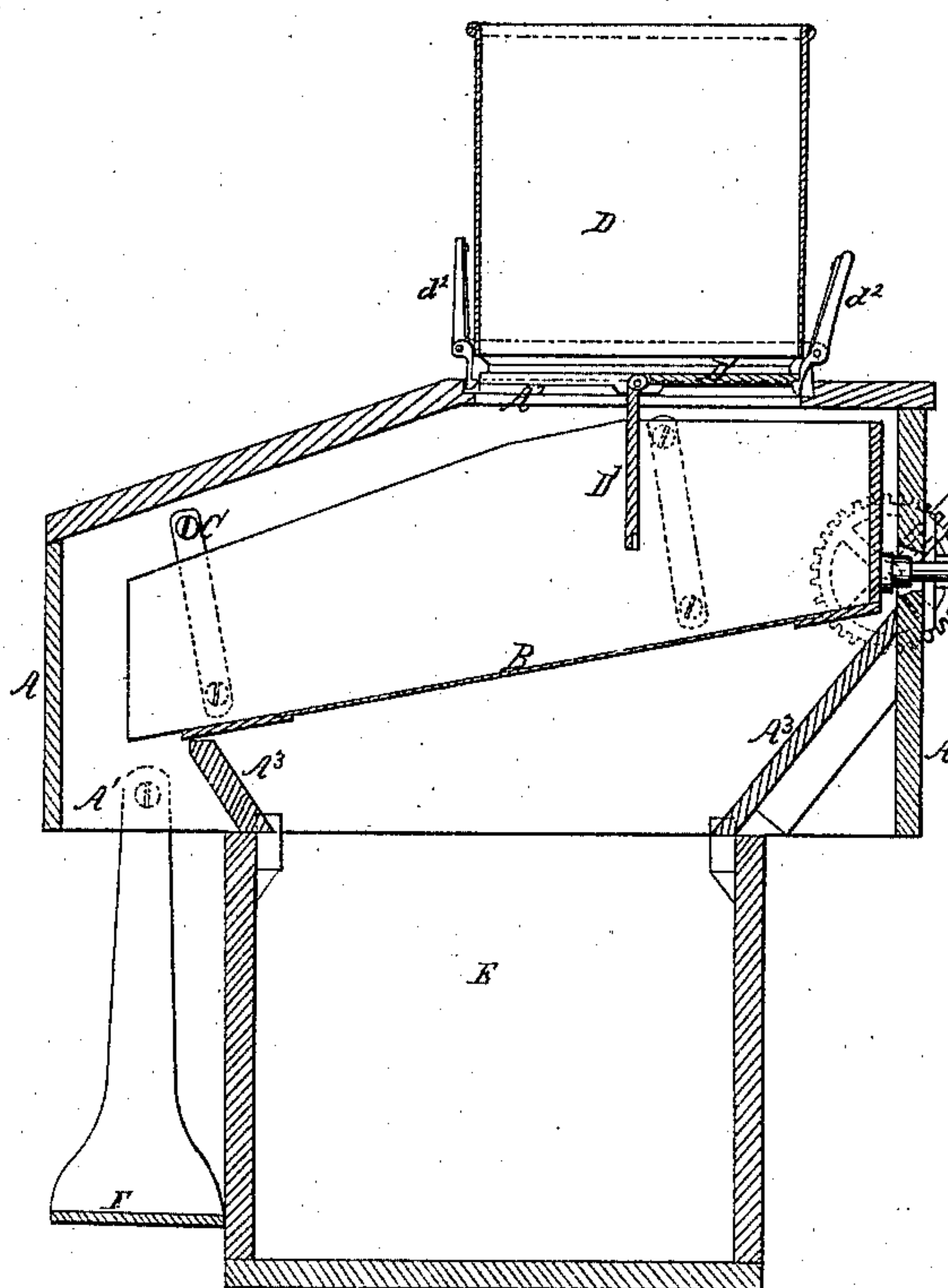
*C. L. Pierce,*

*Ash Sieve.*

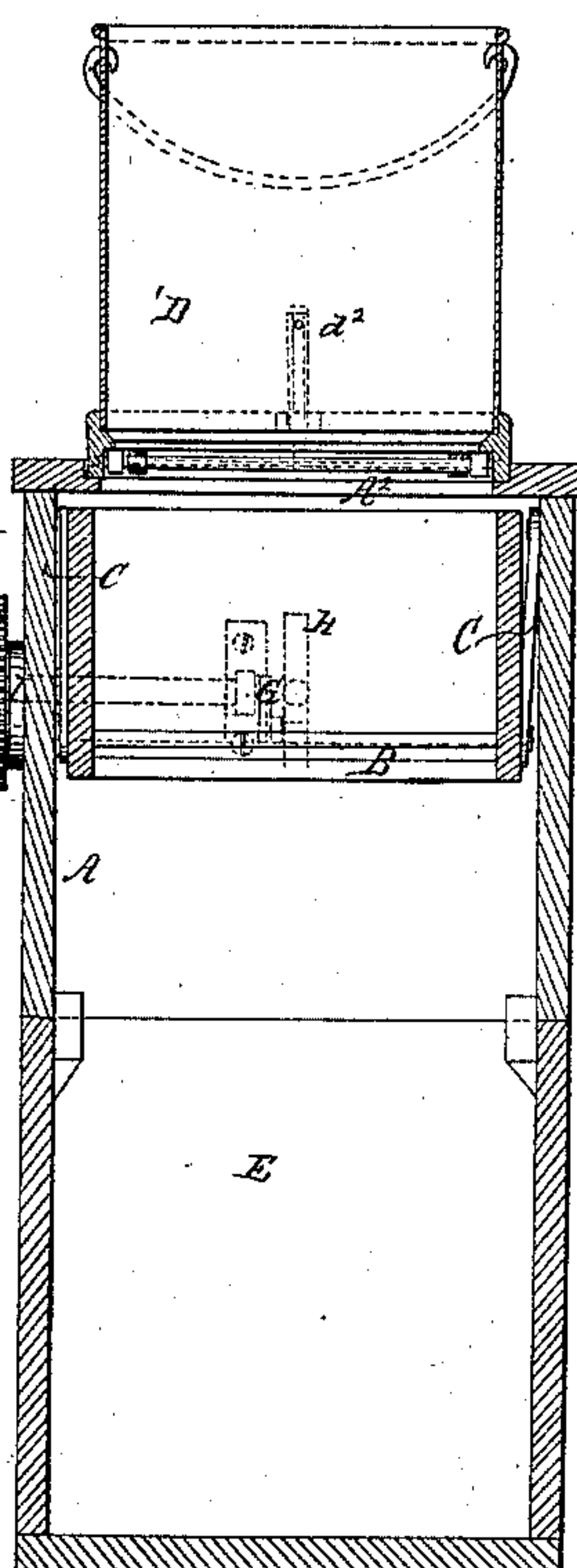
*No 58,132.*

*Patented Sep. 18, 1866.*

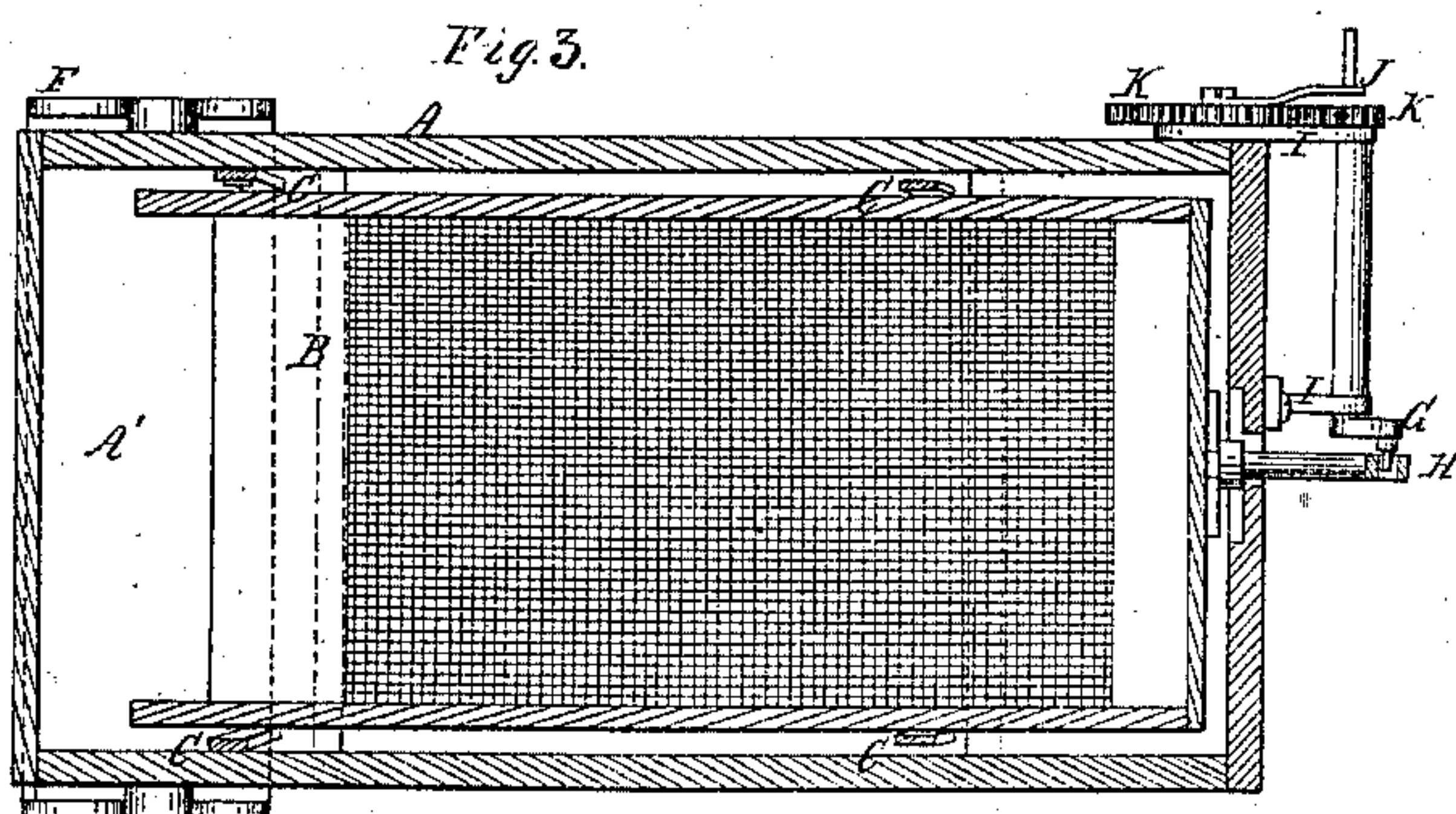
*Fig. 1.*



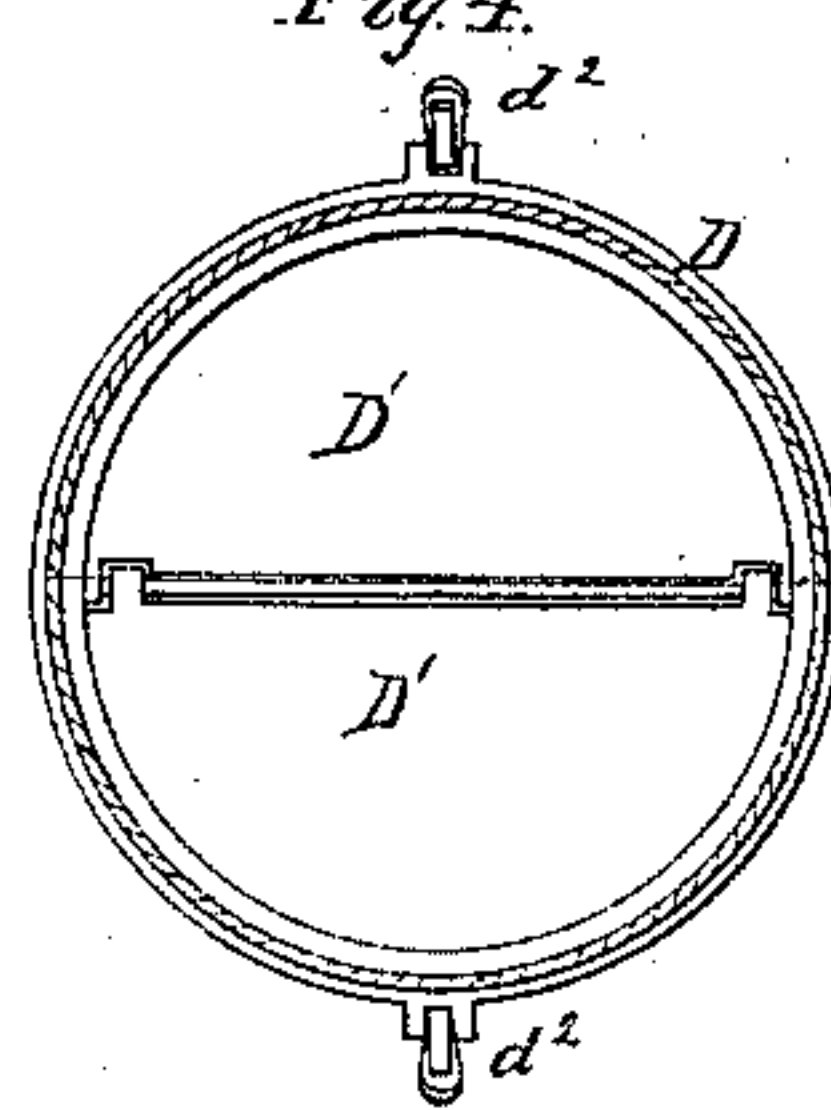
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



*Witnesses,*  
*B. H. Muehle*  
*R. S. Langworthy*

*Inventor,*  
*Chas. L. Pierce*



# UNITED STATES PATENT OFFICE.

CHARLES L. PIERCE, OF BUFFALO, NEW YORK.

## IMPROVEMENT IN ASH-SIFTERS.

Specification forming part of Letters Patent No. 58,132, dated September 18, 1866.

*To all whom it may concern:*

Be it known that I, CHARLES L. PIERCE, of the city of Buffalo, county of Erie, and State of New York, have invented an Improved Ash-Sifter; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a longitudinal sectional elevation of my improved machine. Fig. II is a cross-sectional elevation. Fig. III is a sectional plan of same, and Fig. IV is a section of ash-charger.

Like letters refer to like parts in each of the figures.

The object of this invention is to provide a machine for effecting the separation of the unconsumed lumps of coal from the coal-ashes which are drawn from a stove or furnace, which machine shall be convenient and effective, and shall confine and retain within itself the dust necessarily arising from the operation, so that the use of the machine may be neither disagreeable nor uncleanly, as is the case with other devices for this purpose now in use.

The nature of this invention consists in arranging a separating-sieve within a tight inclosing case or box having a removable ash-charger above the sieve, a storage-receptacle for the sifted ashes below, and a discharge-orifice for the issue of the separated coal, so that the dust may be confined within the machine for the object above stated.

A represents the inclosing box or case, within which the separating-sieve is arranged.

B represents the sieve, suspended within the case A by four parallel suspension-arms, C, two upon each side, one end of which is hinged to the sides of the case and the other to the side boards of the sieve, so that a reciprocating or vibratory motion may be given to the sieve upon said suspension-arms.

The plane of the sieve is inclined to the horizon and the lower end of the sieve-box is left open, so that matter which will not pass through the meshes of the sieve will gravitate toward said open end, and there be discharged through an opening, A', in the bottom of the case.

D represents a removable ash receptacle or charger surmounting the case A, but communicating with the interior thereof by an opening, A<sup>2</sup>, through the top of the case.

The charger-bottom is formed by two hinged doors, D', the opening of which will dump the ashes contained in the charger onto the sieve. This charger may be either a fixture of the case, or may be made removable therefrom, and, being provided with a bail or handle, answers the purpose of an ash-pail for carrying the ashes to the sifter.

The hinged doors D' are retained in their closed position by spring-latches d<sup>2</sup>.

A sliding door or bottom may be used instead of the hinged doors, if preferred.

E represents an ash-box for receiving the sifted ashes, placed beneath the inclosing-case A, and supporting the same. The ashes, as they pass through the sieve, drop into this box, the ends of the inclosing-case being hopped, as shown at A<sup>3</sup>, to insure the collection of the ashes into the receiving-box. A common barrel may be used instead of the box E by making the bottom of case A of proper form to set thereon. The discharge-opening A' overhangs the box E, so that a coal pail or scuttle may be set beneath to receive the discharge from the opening A', a platform, F, suspended from the case, being provided as a matter of convenience to support such pail. A quick reciprocating motion is given to the sieve by a crank, G, working in a slotted arm, H, projecting from the sieve-box through the case, the crank-shaft being supported in bearings I on the outside of the case. The crank-shaft is driven by a winch-handle, J, acting through multiplying-gear K K.

The operation of the machine may be briefly summed up as follows: The charger D being filled with the ashes to be sifted, a portion of the same may be dumped upon the sieve by opening one of the doors D', and then closing the same by any suitable means. By turning the winch-handle a quick reciprocating motion will be imparted to the sieve, which will cause the fine ashes to work through the meshes thereof and drop into the ash-box E, while the cinders and unconsumed lumps of coal will be retained upon the surface of the sieve until

the motion of the same and its inclined position will cause them to gravitate toward the lower and open end of the sieve, and there discharge through the opening A' into a pail set to receive them upon the platform F. During the operation the dust necessarily arising from the agitation of the ashes will be retained and confined within the case A, so that all uncleanness from the use of the machine is avoided.

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

The inclosing-case A and removable charger D, the said case being fitted to receive and support the charger, and the charger having a hinged bottom, so that its contents may be discharged into the sieve, the inclined open-end sieve B, the operating gearing, and the ash-box E, combined as herein described.

CHAS. L. PIERCE.

Witnesses:

B. H. MUEHLE,

F. A. LANGWORTHY.