A. ROOT.

SIEVE.

No. 170,117. Patented Nov. 16, 1875.

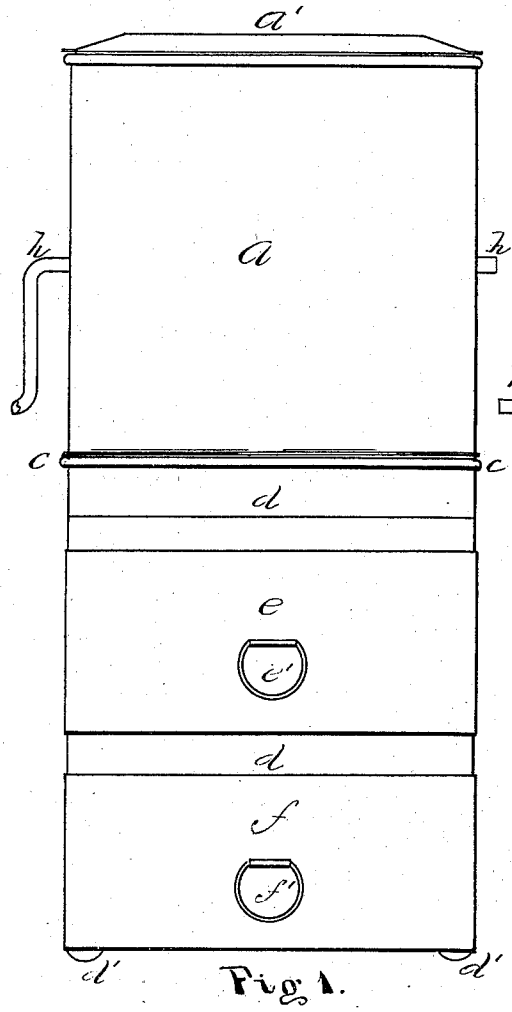

Fig. 1.

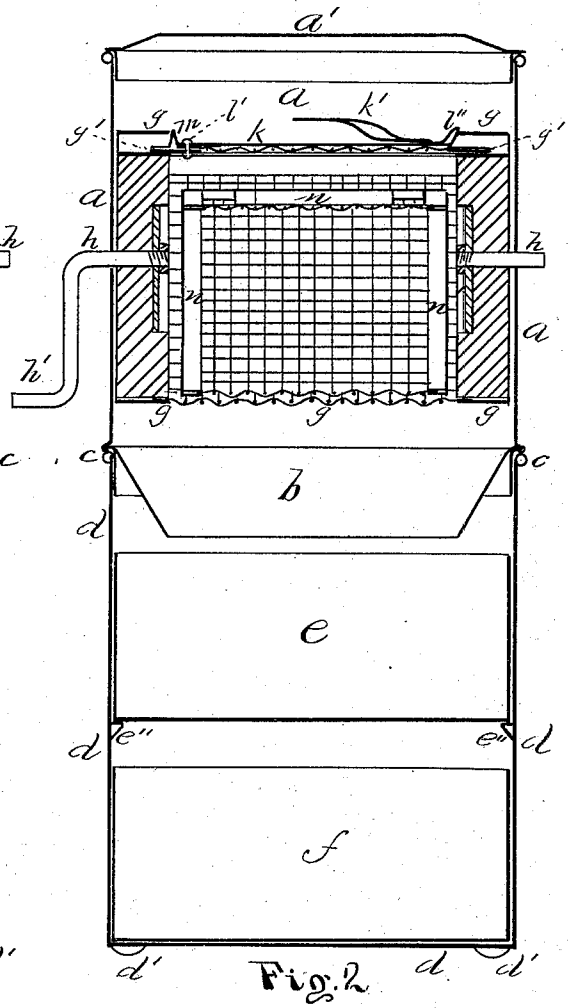

Fig. 2.

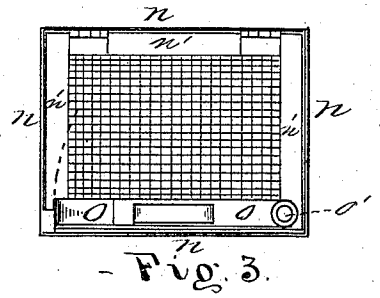

Fig. 3.

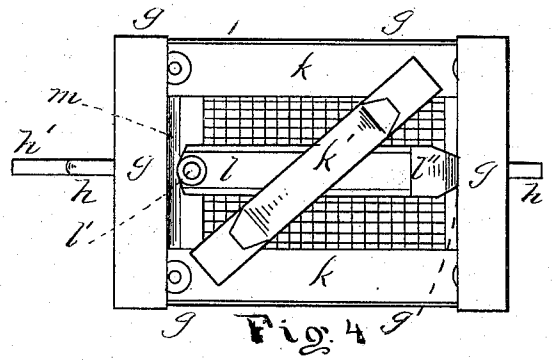

Fig. 4.

Witnesses

E. A. Ober.

L. B. W. Williams

Inventor.

By his Att'ys Augustine Root

Henry W. Williams & Co

UNITED STATES PATENT OFFICE.

AUGUSTINE ROOT, OF TAUNTON, MASSACHUSETTS.

IMPROVEMENT IN SIEVES.

Specification forming part of Letters Patent No. **170,117**, dated November 16, 1875; application filed April 15, 1875.

To all whom it may concern:

Be it known that I, AUGUSTINE ROOT, of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and valuable Improvement in Sifters, of which the following, when taken in connection with the accompanying drawing, is a full, clear, and exact specification:

This invention is intended particularly to be used as a coal or ash sifter, but it is also well adapted for sifting sand, emery, and various other articles or substances. I propose to use it for sifting anything to which it may be adapted.

The coal to be sifted is placed in a rectangular revolving receiver, which is placed in a dust-tight chamber, and is turned from the outside by means of a crank. The ashes drop into a drawer beneath, and the coal may be let fall into another drawer by removing the cover from the receiver above mentioned.

The invention in detail is described below.

In the accompanying illustration, Figure 1 is a front elevation of my sifting apparatus. Fig. 2 is a vertical section of the same. Fig. 3 is a small receiver sometimes used, and Fig. 4 is the large or principal receiver.

Similar letters of reference indicate corresponding parts.

a is a box, made of tin or other material, and holding the receiver in which the coal is sifted. *a'* is the cover, made, as nearly as possible, dust-tight. *b* is a flange, (of which there are four,) serving to guide the sifted ashes directly into the center of the receptacle prepared for them.

At the point *c* the box *a* is set into or upon a box, *d*, said box *d* being provided with feet *d'*. The two boxes *a d* may be attached together or not, as desired, or they may both be made in one piece, if considered preferable. *e* is a drawer, sliding upon *e''*, and provided with handle *e'*, into which the sifted ashes drop. *f* is a drawer, provided with handle *f'*, into which the coal drops after the ashes are sifted out of it. *g* is a receiver, having wire net-work upon its top, bottom, and sides, and suspended in the center of the box *a* by means of the shafts *h*, one of which terminates in a crank, *h'*. *k* is the top or cover of the receiver *g*. *k'* is the handle. *l* is the device for locking the cover *k* upon the receiver *g*. It swings from the point *l'*, and, by means of its raised end *l''*, presses against the frame of the receiver, and forces the opposite ends of the cover *k* into the spaces *g'* under the said frame, thus securely fastening the cover in the receiver. *m* is a ridge, built in the cover *k*, and, with the raised end *l''*, keeps the cover tightly in place.

When my sifting device is to be used, the cover *a'* is removed from the box *a*. The swinging device *l''* is swung back in the direction of the broken lines in Fig. 4, and the cover *k* removed by means of the handle *k'*. Enough coal and ashes to nearly fill the receiver *g* are then placed in it, and the cover *k* is then firmly locked in the receiver *g*.

To replace the cover *k*, first place the right-hand end into the space *g'*; then push the left end into the opposite space *g'* until the ridge *m* strikes the frame of the receiver; then force the swinging piece into the position shown in Fig. 4.

By turning the crank *h'*, the contents of the receiver are violently shaken, receiving, as it were, a series of falls, and in less than a minute are thoroughly sifted, the ashes falling into the drawer *e*. The drawer *e* is then removed, the cover *k* taken off, and the crank *h'* turned until the coal in the receiver falls into the lower drawer *f*. The coal and ashes are now separated and ready for use.

As this sifter is intended to sift other things, as sand, emery, &c., as well as coal, I have shown a smaller and finer receiver, which may be placed inside the receiver *g*, if desired. This receiver is lettered *n*, *n'* being the cover, and *o* the lock swinging from the point *o'*. This may be used to make finer ashes, if deemed advisable.

It will be seen that by means of this invention the coal can be thoroughly sifted, the coal and ashes dropped into separate receptacles, and no dust raised, in an almost incredibly short space of time.

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

The sifting device above described, consisting of the box *a a'*, box *d*, receiver *g k*, receiver *n n'*, flanges *b*, and drawers *e f*, constructed, combined, and arranged substantially as herein described.

AUGUSTINE ROOT.

Witnesses:

HENRY W. WILLIAMS,

E. H. OBER.