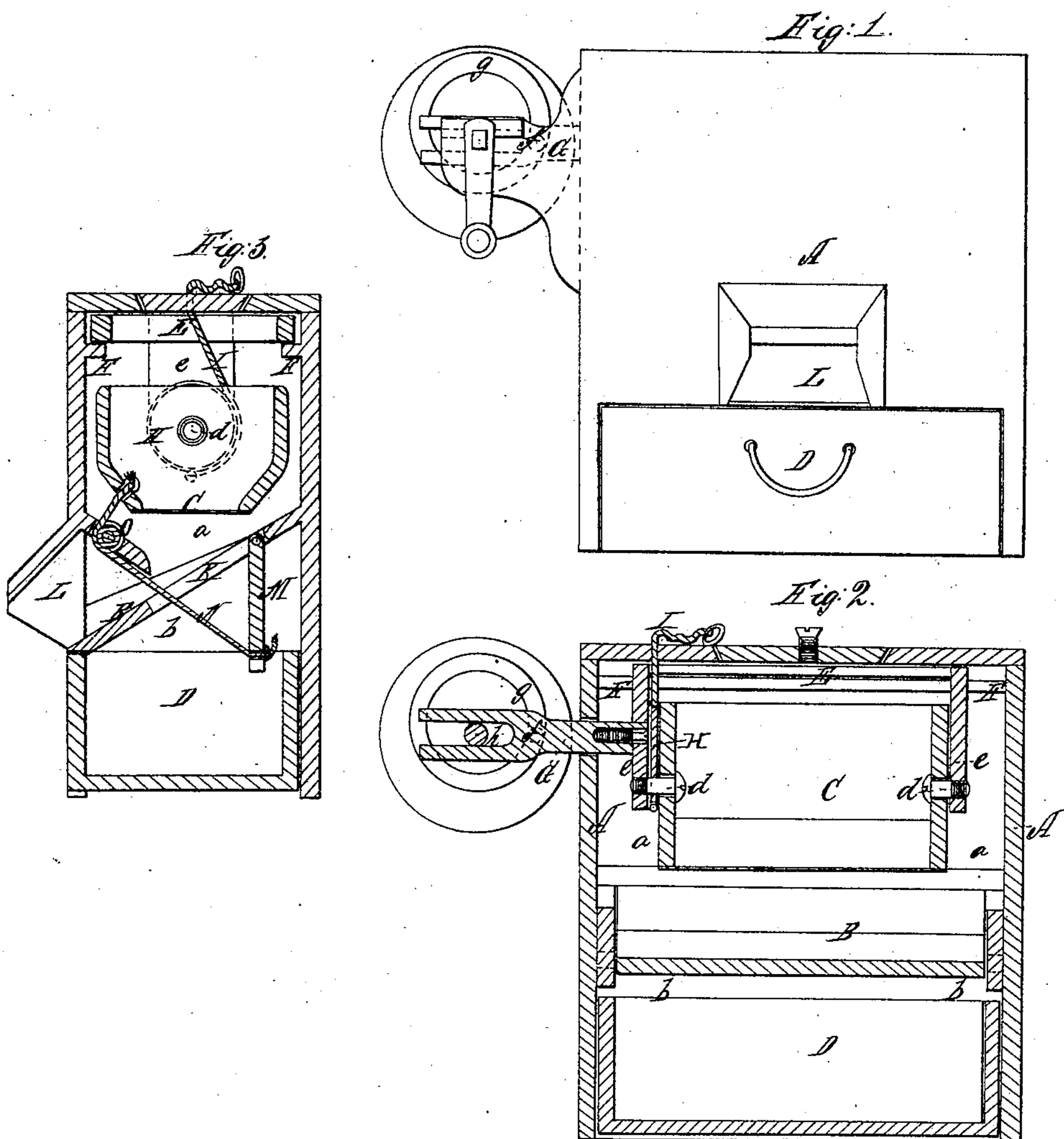


L. H. Proctor.

Coal Screen

No 20, 662.

Patented June 22, 1858.



UNITED STATES PATENT OFFICE.

L. H. PROCTOR, OF EAST SAUGUS, MASSACHUSETTS.

APPARATUS FOR SIFTING COAL-ASHES, &c.

Specification of Letters Patent No. 20,662, dated June 22, 1858.

To all whom it may concern:

Be it known that I, LEVI H. PROCTOR, of East Saugus, in the county of Essex and State of Massachusetts, have invented an
5 Improved Apparatus for Sifting or Screening Coal-Ashes or other Matters; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

10 Figure 1, is a side elevation of it. Fig. 2, a vertical and longitudinal section of it. Fig. 3, a transverse section of it.

The case, A, of the sifter is divided into
15 two chambers, *a*, *b*, by means of an inclined partition, B, arranged in the said case, as shown in Figs. 2, and 3. In the superior chamber, the sieve, C, is placed, while, the inferior chamber, if desirable may contain
20 a drawer, D.

The sieve C, is supported by journals, *d*, *d*, within bearings formed in projections, *e*, *e*, of a rectangular frame, E, that is supported on rails or ways, F, F, affixed to
25 opposite sides of the superior chambers, such frame E, having an arm, G, extending from one end of it through the side of the case, and furnished with a stud and friction roller, *f*, to enter a grooved cam *g*, fixed on
30 a shaft, *h*, the same being so that during the revolutions of the shaft, a reciprocating rectilinear motion may be imparted to the frame E, and the sieve.

The sieve is applied to its frame so as to
35 be capable of being turned over or tilted laterally in a manner so as to discharge from it any matters which may be too large to pass through its meshes, and for this purpose there is a wheel or pulley, H, fixed on
40 one of the journals of the sieve as seen in Fig. 2. To the periphery of this wheel, a cord, I, is fastened and wound about the same and from thence carried upward through the top of the case. By pulling on
45 such cord the sieve may be turned over in one direction. If necessary, a weight may be affixed to one side of the sieve, in order that the power of gravity may be employed to facilitate or cause the sieve to return to

its original position when the cord is re- 50 lieved of the pulley force. Furthermore, the superior or sieve chamber is provided with two discharging orifices or passages, K, L, one of which (viz. K) is made through the bottom or partition, B, while the other 55 (or L,) extends out of the side of the sieve chamber and just above the lower end of the inclined partition, B, as shown in Figs. 1, and 3.

The passage, K, is furnished with a 60 hinged flap or valve, M, of sufficient size to close it, it being so hinged to the partition as to be capable of turning downward into the inferior chamber of the case, and so as to permit any materials dropped from the 65 sieve to pass through the opening, K, and into the drawer of the inferior chamber. Furthermore, this valve, when drawn upward closes the opening, K, and constitutes 70 with the partition a chute to direct any matter which may be received thereon, toward and out of the passage, L.

From the valve or flap, a cord, N, is led around a fixed pulley, O, and from thence to the sieve the whole being in such man- 75 ner as to cause the flap or valve to be raised upward and close the opening, K, during that rotary movement of the sieve by which its contents are to be discharged from it, the return rotary movement of the sieve 80 allowing the gravitating power of the flap to cause it to fall and open the passage, L.

From the above, it will be seen that coal ashes or any other material may be sifted or screened, by the apparatus above de- 85 scribed, the finer portions being received in the drawer, and the coarser parts subsequently discharged out of the opening, L.

I do not claim the application of the sieve, C, to its vibrating frame, E, in manner so 90 as to enable such sieve to be tilted or turned over laterally so as to discharge out of it such contents or matter as may not be small enough to pass through its meshes, but

What I claim is—

1. The arrangement of the inclined partition or chute, B, and the two discharging

openings K, L, with respect to the sieve, C, made capable of being revolved in manner substantially as set forth.

2. I also claim in combination with the
5 discharging passages K, L, (arranged so as to lead out of the sieve chamber as described), a flap or valve M, so combined or connected with the turning sieve, C, as to operate with respect to the two discharging

passages K, L, substantially as described 10 during the rotary or tilting movements of the sieve.

In testimony whereof, I have hereunto set my signature.

LEVI H. PROCTOR.

Witnesses:

L. LYONS,

F. R. HALE, JR.