

N. W. STARR.  
SIFTER.

No. 187,427.

Patented Feb. 13, 1877.

Fig. 1.

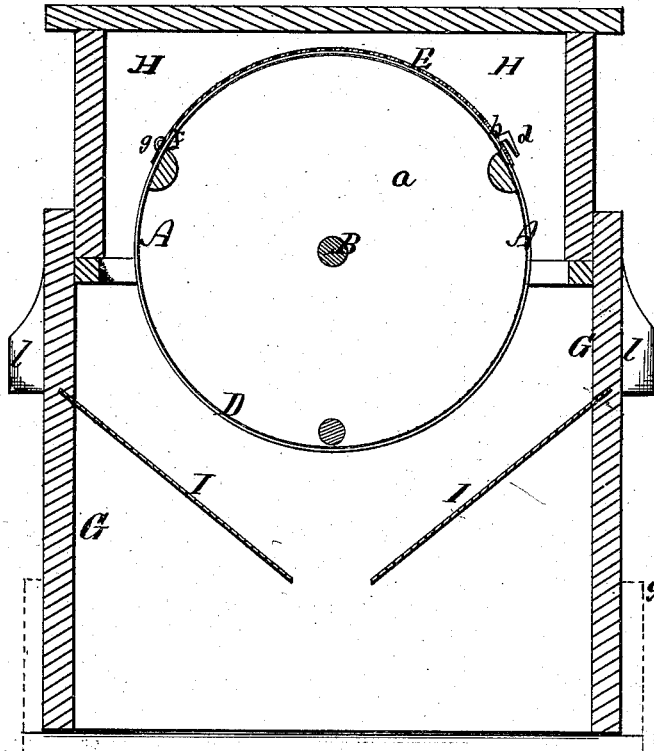


Fig. 3.

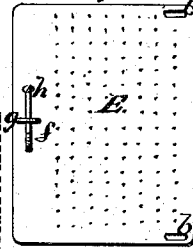
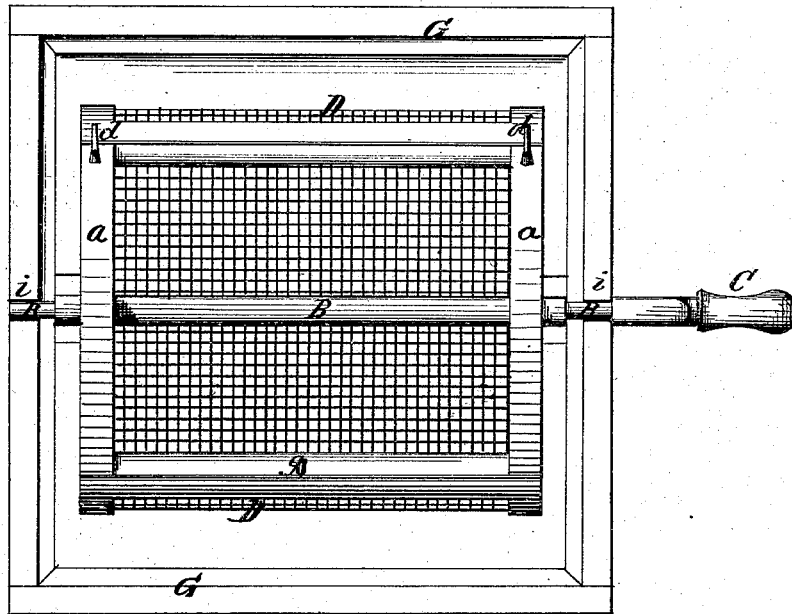


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SIFTERS.

Specification forming part of Letters Patent No. 187,427, dated February 13, 1877; application filed July 31, 1876.

*To all whom it may concern :*

Be it known that I, NATHANIEL W. STARR, of Kingston, in the county of Ulster and State of New York, have invented an Improved Sifter; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a transverse vertical section of the sifter; Fig. 2, a top view of the same as opened for the reception of the material sifting; Fig. 3, a view of a part detached.

Like letters designate corresponding parts in all of the figures.

My invention consists in an improved construction of a revolving sieve, and of a box or case, and their peculiar arrangement in combination, substantially as herein specified.

The revolving sieve A is of cylindrical or equivalent form, and has a central shaft or journals, B, on which it turns, one end being provided with a crank, C, to turn it by. The periphery of the sieve, attached to any suitable heads *a a*, is of wire-cloth, hair-cloth, perforated sheet-metal, or of any other suitable material. It is divided into two unequal parts, D E, the main part, D, being, say, two or three times larger than the smaller part, E, Figs. 1 and 3, which serves as a removable cover or door to open or remove for introducing and discharging the material sifted. As a convenient means of attaching it to the main part D it has, at one edge or two corners, slots or holes *b b*, to catch upon hooks *d* on the main part; and another slot or hole, *f*, in the middle of the opposite edge, to fit over an eye or staple, *g*, on the main part, into which staple a pin or key, *h*, may be inserted to secure the part in place.

The box or case consists of a body or main part, G, of proper dimensions, and of rectangular or other suitable shape, into open bearings *i i* of which, in the upper edge, the shaft or journals of the sieve may turn; and of a close cover, H, which fits closely in the top of the main part, G, and is large enough to inclose the sieve when in place in

the said main part or body, as shown. This cover, though tightly fitting, is easily removable. Inside of the body G of the box are two inclined plates or surfaces, I I, arranged substantially as shown in Fig. 1, with a narrow opening between them, through which the materials drop after being collected together by the inclined plates, and thus all are conveniently gathered into a receptacle.

The sieve, as constructed with two unequal parts, and as mounted in the body of the box or case, is in a position most convenient for introducing the material for sifting or screening, since the edges of the main part D are higher than the upper edge of the body G of the box; and, to render the operation still more convenient, the handle or crank C of the cylinder is arranged in a direction opposite to the small part, or the opening of the cylinder, so that when at rest the weight of the said crank will always insure the cylinder being right side up, as shown in Figs. 1 and 2, for introducing the materials, or for opening before discharging the contents.

The bottom of the box being open, and the inclined plates I I being at some distance above the lower edges thereof, the box can be placed over a vessel or receptacle to receive the contents, as shown by dotted lines in Fig. 1.

In using the improved sifter a sufficient quantity of the material is introduced into the cylinder A, the smaller part or cover E having been removed, which is then secured tightly on the other part, and the cover H is placed on the box, covering the sieve. The sieve is then turned by its crank a few times, all dust or fine material being kept closely inside of the box while the sifting is going on. The box is then lifted by suitable handles *l l* away from the place or receptacle which receives what is sifted from the sieve, and is placed over another position or receptacle to receive what remains in the sieve. The smaller part or cover E of the sieve is then removed, and the cylinder is turned half a revolution, which discharges the contents into the box, wherein they are gathered, and directed into a receptacle beneath.

What I claim as my invention, and desire to secure by Letters Patent, is—

A sifter constructed with a revolving sieve, A, divided horizontally into two unequal parts, and a case or box, G, open or capable of being uncovered at the top and bottom and provided with inclined plates or surfaces I I inside of the main walls thereof, and elevated above the bottom, substantially as and for the purposes herein specified.

Specification signed by me this 29th day of April, 1876.

NATHANIEL W. STARR.

Witnesses:

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