

H. B. OSBORNE.
ROTARY SCREEN.

No. 182,283.

Patented Sept. 19, 1876.

Fig. 1.

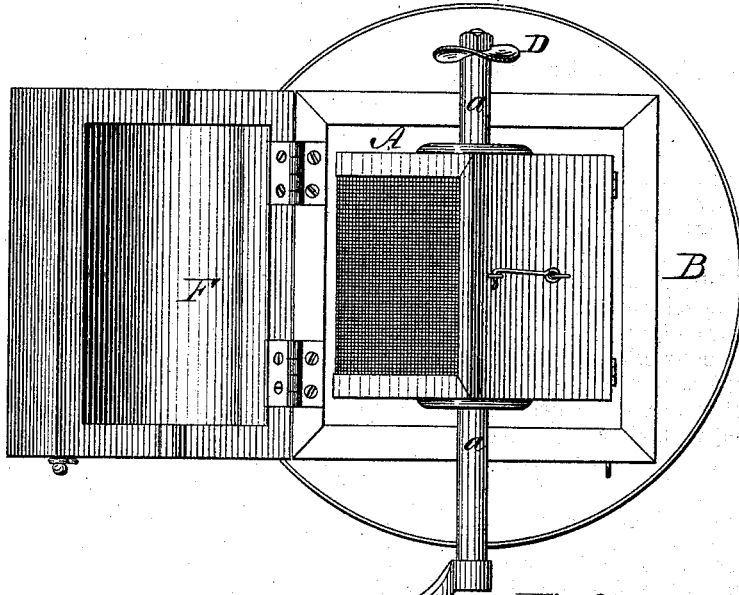


Fig. 3.

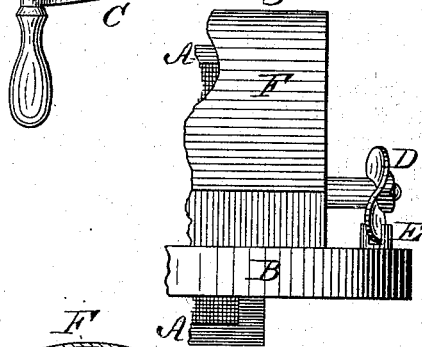
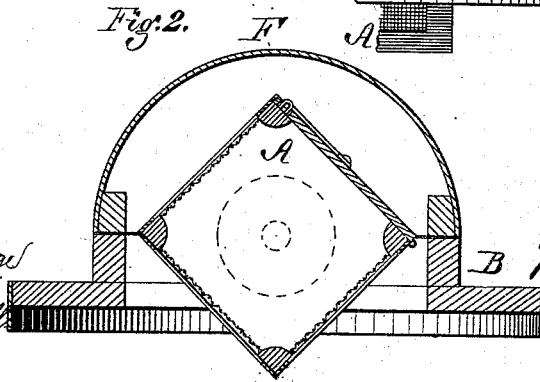


Fig. 2.



Witnesses:
Will H. Dodge
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Inventor:
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UNITED STATES PATENT OFFICE

HENRY B. OSBORNE, OF WILTON, CONNECTICUT.

IMPROVEMENT IN ROTARY SCREENS.

Specification forming part of Letters Patent No. 182,283, dated September 19, 1876; application filed March 19, 1875.

To all whom it may concern:

Be it known that I, HENRY B. OSBORNE, of Wilton, in the county of Fairfield and State of Connecticut, have invented certain Improvements in Rotary Screens, of which the following is a specification, reference being had to the accompanying drawings.

My invention consists in a screening drum or body having a combined rotating and reciprocating motion; and in a peculiar manner of mounting and inclosing the same, to adapt it for use on a barrel as hereinafter explained.

Figure 1 represents a top-plan view of my screen with its top or cover open. Fig. 2 represents a vertical cross-section of the same on the line *x x*, with the cover closed. Fig. 3 represents an elevation of one side or end of the same, showing the manner in which the reciprocating motion is imparted to the screen.

A represents a rectangular body with wire-gauze sides, provided at its ends with journals *a*, by which it is supported in an opening in a frame or support, B, as shown. One of the journals *a* is provided with a hand-crank, C, by which to rotate the drum, while the other journal is provided with a cam-wheel or disk, D, having a waved or corrugated edge, which fits into a slotted stud, E, on the frame B, as shown in Fig. 3, so that as the drum is rotated the cam causes it to reciprocate endwise. In this way the drum is given, it will be observed, a compound rotating and reciprocating motion, the effect of which is to give a thorough agitation to its contents, and improve its operation very materially over those having simply a rotary motion. One side of the body is hinged to swing outward, in order to permit the introduction and the removal of the material to be screened, and is provided with a hook by which to fasten it shut. In the present instance I have represented the hinged side as being solid or tight, but, in practice, I propose to provide it also with wire-gauze similar to that in the other sides. The body or support B is made of a circular

form, and provided with a depending rim or flange, so that it may be applied to the top of an ordinary barrel and held in place thereon by the rim or flange.

The opening in which the drum or body is mounted is surrounded by a raised flange or rim, in the upper edges of which notches are made to receive the journals of the drum, as shown. To the rim or flange there is hinged a concave hood or cover, F, which closes over and around the drum or body, as shown, to retain the dust and ashes and prevent them from flying about. In using the apparatus the cover F is turned back, the side of the drum or body opened, the material introduced, and then the side and the cover closed, and the drum rotated by means of the crank until a thorough screening of the material is effected, after which the cover and the drum are opened, the drum lifted from its place, and the screened material discharged from it.

It is obvious that the form and construction of the parts may be varied in some respects without departing from the limits of the invention.

I am aware that a case has before been made with a cover, having a circular hoop to fit around the top of a barrel, with a flat cover, and a reciprocating screen, and I do not claim such; but

Having described my invention, what I claim is—

1. The rectangular rotating screen-box A, having its shaft *a* provided with the worm-cam D, arranged to operate in the slotted stud or bearing E, substantially as shown and described.

2. An ash-sifter composed of the case B, having the semicircular hinged cover F, with the rectangular rotating and oscillating screen A mounted therein, the whole being constructed and arranged to operate substantially as described.

HENRY B. OSBORNE.

Witnesses:

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