

D. D. BREWSTER.

Improvement in Buckwheat-Refiners.

No. 114,103.

Patented April 25, 1871.

Fig.1.

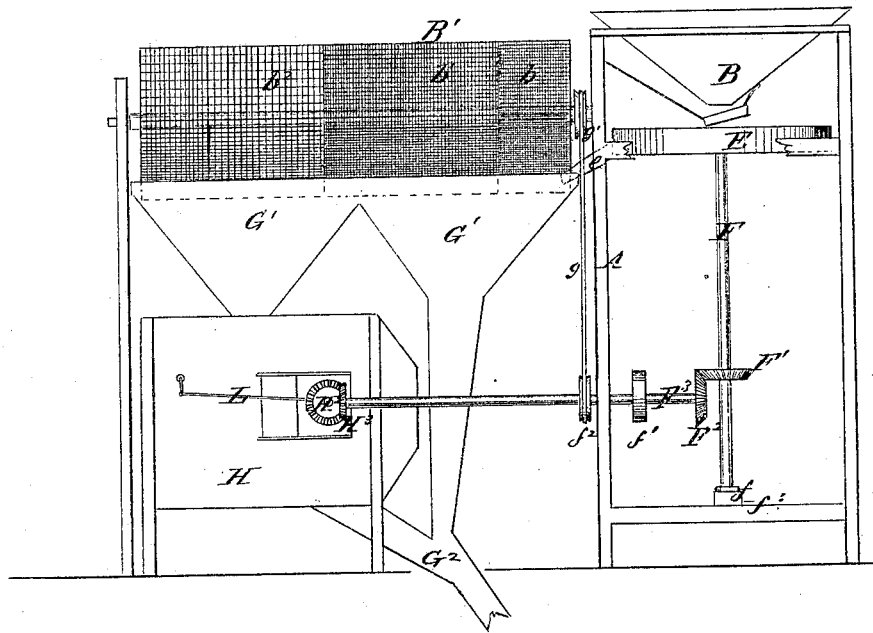
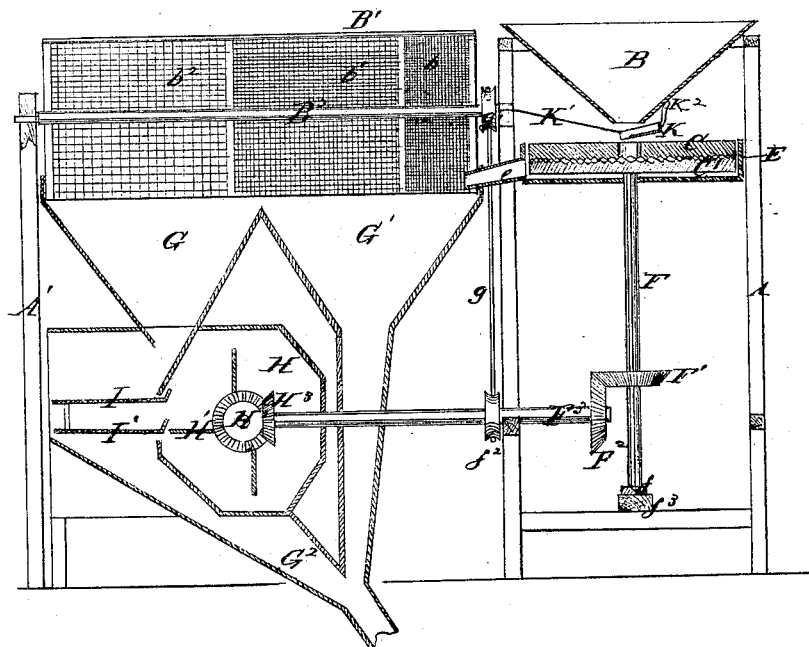


Fig.2.



Witnesses.
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United States Patent Office.

DANIEL D. BREWSTER, OF WEST LAURENS, NEW YORK.

Letters Patent No. 114,103, dated April 25, 1871.

IMPROVEMENT IN BUCKWHEAT-REFINERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DANIEL D. BREWSTER, of West Laurens, in the county of Otsego and State of New York, have invented a new and valuable Improvement in Buckwheat-Refiners; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a side elevation of my invention.

Figure 2 is a vertical longitudinal section.

My invention relates to certain improvements, hereinafter described, in buckwheat-refiners, in which the grain is broken between corrugated plates, thence conveyed to a reel-sieve divided into several compartments of different degrees of fineness, the last being coarsest; thence dropped into chutes, which direct the sifted grain to proper receptacles, the coarser particles being subjected, in passing through their chute, to the action of a current of air set in motion by a fan, and screened by vibrating screens.

In the drawing—

A represents the main frame, rectangular in form, and standing upright.

B is a hopper, arranged at the top of said frame.

C C', horizontally-arranged circular plates or burs, C being stationary and secured to the frame A by ears, and C' attached to a rotating vertical shaft, F, the lower end of which turns in a box, f, fixed on an adjustable cross-piece, f², operated by a set-screw at one end, the other end being hinged to the frame A.

The plates C C' are corrugated on their contiguous faces, and C has an opening in the center for the grain to drop into, after leaving the hopper, in order to be broken between said plates.

B' is a reel-sieve, the shaft of which is journaled to the frame A and upright A'.

It is divided into communicating compartments b b' b², of which the first is finest in texture and the third coarsest.

E is a metallic curb surrounding the plates C C', and provided with a suitable chute or trough for conveying the broken grain from the plates to the interior of said sieve.

G G¹ are hopper-chutes, situated below the sieve to receive the contents thereof.

The former receives what falls from compartment b, and nearly all of b', which is thence conveyed directly to the proper receptacle.

The latter receives the contents of compartment b² and part of b', and directs the same through a fan-box, H, containing a fan, H¹, and horizontally-vibrating screens I I', which thoroughly clean and separate the coarser particles which have dropped from the coarse compartments of the sieve.

Leaving the fan-box, it passes through an inclined chute, G², communicating with chute G.

Motion is given to the fan by means of bevel-gearing H² H³ from the revolving shaft F³, on which there is a drum, f¹, having belt connection with the driving power.

The same shaft gives rotary motion to the shaft F by bevel-gearing F¹ F², and to the reel-sieve by means of the belt-pulleys g¹ f², connected by the belt g.

K is a vibrating-shoe, hung below the hopper B, and operated by a crank-arm, K', connected with the reel-sieve shaft.

L is a pitman, conveying motion from the fan-shaft to the vibrating screens I I'.

The purpose of the adjustable cross-piece f² is to raise the lower plate C' to crush the grain into finer particles.

Having described my invention,

What I claim is—

1. The construction and arrangement, as heretofore described, of the sieve B', chutes G¹ G, in combination with the fan-box H, fan H¹, screens I I', and plates C C', as and for the purpose set forth.

2. The combined arrangement of the shafts F F³, plates C C', sieve B', bevel-gearing F¹ F² H² H³, fan H¹, chutes G G¹, rollers g¹ f², belt g, and screens I I', as and for the purpose specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DANIEL D. BREWSTER.

Witnesses:

J. LEE TUCKER,
HIRAM WEATHERLY.