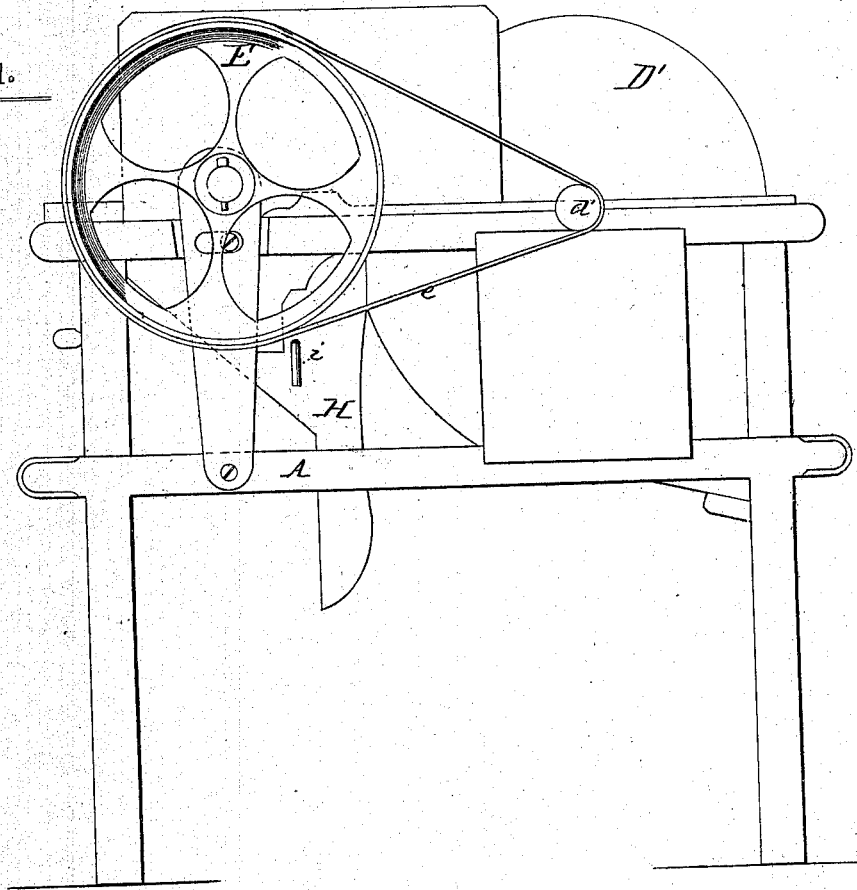


B. BARNEY.  
Grain Winnower.

No. 112,407.

Patented Mar. 7, 1871.

Fig. 1.



Witnesses.

Chas. Henry,  
Cov. P. Mai.

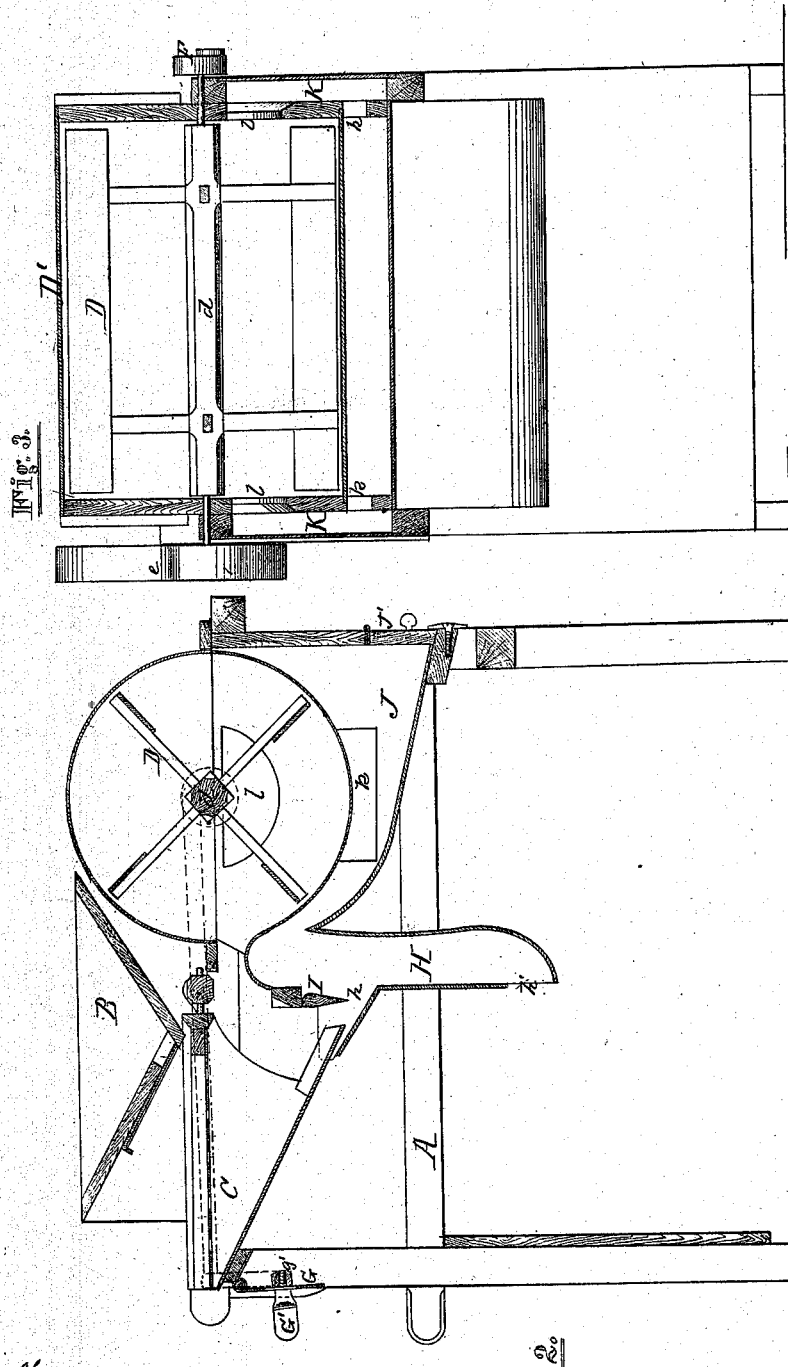
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# United States Patent Office.

BENJAMIN BARNEY, OF TIME, ILLINOIS.

Letters Patent No. 112,407, dated March 7, 1871.

## IMPROVEMENT IN FANNING-MILLS.

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, BENJAMIN BARNEY, of Time, in the county of Pike and State of Illinois, have invented a new and valuable Improvement in Fanning-Mills; 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 said mill.

Figure 2 is a vertical longitudinal section.

Figure 3 is a vertical transverse section.

My invention relates to certain improvements in fanning-mills for cleaning wheat and other grain, in which the cheat and light offal are removed by means of a rapid current of air directed into the grain while it is being shaken or conveyed through the several proper apartments of the machine.

The improvements have reference to the general construction of a fanning-mill to secure the proper result.

In the accompanying drawing—

A represents the frame of the mill.

B represents the hopper, communicating with a longitudinally-vibrating riddle, C.

D represents the fan, situated behind the riddle, the shaft *d* being journaled transversely in the frame A.

E is the driving-wheel, from which motion is given to the fan by means of a belt, *e*, which passes from the wheel E around the pinion *d'*, secured to one end of the fan-shaft. The other end of said shaft holds an eccentric wheel, F, from which vibratory motion is conveyed to the riddle through the arms *f* and *g*, shaft *g'*, and adjustable hinge G.

G' represents a key for securing said hinge to the shaft *g'* at any position to which it may be adjusted. The object of said hinge, it will be observed, is to regulate the proper height and incline of the riddle.

D' represents a cylindrical fan-case, which communicates with the riddle so as to admit the current of air, as set in motion by the fan, to the agitated grain.

H is a vertical spout, situated between the sides of

the frame A, and also between the fan-case and riddle.

*h* is an inlet to, and *h'* an outlet from, said spout, for the admission and escape of grain, respectively.

I is a door, designed to regulate the size of the inlet *h*, and is provided with an operating-handle, *i*, outside the spout.

J is the cheat-box, inclined, as shown in fig. 2, toward the rear end of the machine, where it is provided with a door, *J'*.

The forward end of the cheat-box communicates with the upper end or throat of the spout H.

The fan and cheat-boxes have double walls on either side, forming air-passages, K, which open into the respective boxes at *k* and *l*.

The upper half of the fan-box, with the hopper, may be taken off.

The operation of this machine is as follows:

The grain escaping from the hopper to the riddle is agitated, and, passing through the screen, comes in contact with the current of air from the fan-box, which releases the light particles of cheat. The grain then passes from the shoe into the suction-spout H, where it meets an upward current of air rushing into the air-passages and fan-case to supply the vacuum created by the fan.

This upward current carries the cheat and lighter particles with it and deposits them in the cheat-box, from which they are taken through the door *J'*, while the purified grain escapes through the outlet of the spout.

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

The fanning-mill herein described, having the suction-spout H, cheat-box J, air-passages K, riddle C, fan D, eccentric F, rock-shaft *g'*, and adjustable hinge G, all constructed substantially as described, and combined and arranged for operation in the manner and for the purposes set forth.

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

Witnesses: BENJAMIN BARNEY.

GEO. W. JONES,

JOS. J. TOPLIFF.