H. COOK.

Grain Separator.

No. 107,338. Patented Sept. 13, 1870.

Fig. 1,

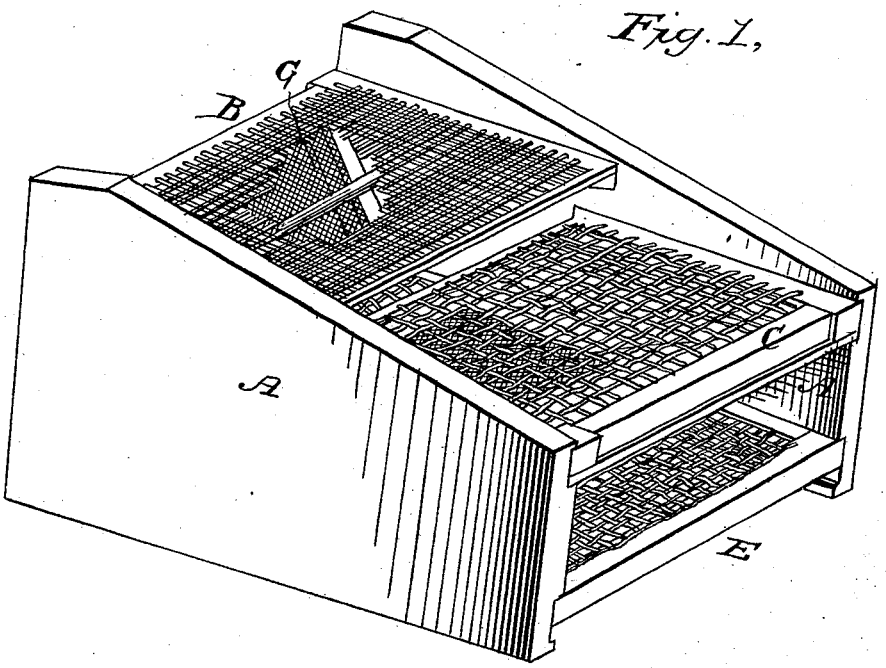
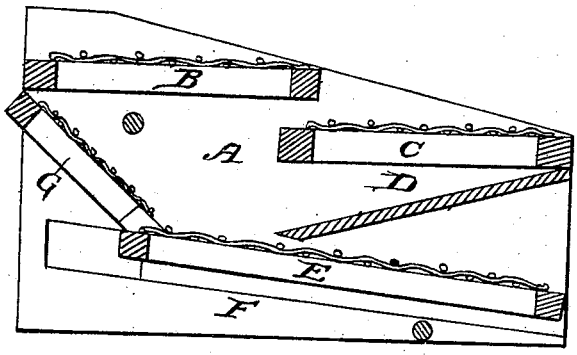


Fig. 2,



Witnesses

Charles A. Hortenser
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HEZEKIAH COOK, OF DILLSBURG, PENNSYLVANIA.

Letters Patent No. 107,338, *dated September* 13, 1870.

IMPROVEMENT IN GRAIN-SEPARATOR.

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, HEZEKIAH COOK, of Dillsburg, in the county of York and State of Pennsylvania, have invented a new and useful Improvement in Grain-Separators; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 is a perspective view of my invention.

Figure 2 is a vertical longitudinal section of the same.

My invention relates to that class of separators known as fanning-mills, which is intended to separate thrashed grain from the husks, straw, and chaff; and

It consists of a peculiar arrangement of screens, &c., in a vibrating shoe, to be placed in the ordinary fanning-mill, whereby the separation is rendered almost or entirely perfect at one operation, so that it is not necessary to repass the tailings through the machine.

That others may fully understand my invention, I will particularly describe it.

The shoe A is constructed and placed in the mill, in the same manner as the ordinary shoe of a fanning-mill. It may also be vibrated by the same appliances, so that there will be no difficulty experienced in replacing the ordinary shoe of any mill with one like my invention, herein described.

The sieves or screens are, however, arranged in a manner different from any other mill with which I am acquainted.

In the first place, instead of employing a single screen at the top of the shoe, and extending its whole length, I employ two short or half screens, B C, the latter slightly below the other, and with the edges chamfered away, so as to permit the freest passage for air between the adjoining edges of said screens.

The blast comes into the shoe in the ordinary direction, shown by arrows, and passes upward through the sieves B C, lifting the chaff from the grain.

As the grain falls over the lower edge of the upper sieve, it is exposed to a direct and free blast, coming between the adjoining edges of the screens, and said blast can, at that time, separate the chaff from the grain much more effectually than when broken by passing through the meshes of the screen. The chaff, in short, is more effectually loosened from the grain, and more easily blown over the tail of the machine.

The grain which passes through the screen C will be accompanied by a small quantity of dirt and chaff, and will be returned to the front end of the screen E, by the return-board D.

A slide, F, is placed below the screen E, to receive the grain as it passes through said screen, and by said slide the grain is returned to the long screen at the bottom of the machine, by means of which small foreign seeds are separated from the good grain.

The inclined guard-screen G receives a portion of the grain which falls through the upper end of screen B, and causes it to pass down to the lower screen E.

As shown in fig. 2, the screen E and slide F are both made adjustable in their grooves, so as to secure the most efficient and satisfactory action.

Having described my invention,

What I claim as new is—

1. The combination and arrangement of the half sieves B C, the guard-screen G, and the lower screen E, as described and shown, and for the purpose set forth.

2. The combination and arrangement of the half sieves B C, guard-screen G, return-board D, screen E, and riddle-board F, as described and shown, and for the purpose set forth.

Witnesses: HEZEKIAH COOK.

R. D. O. SMITH,

JOSEPH DEARDORFF.