

(No Model.)

T. S. BAYLEY.
GRAIN CLEANING APPARATUS.

No. 261,653.

Patented July 25, 1882.

Fig. 1.

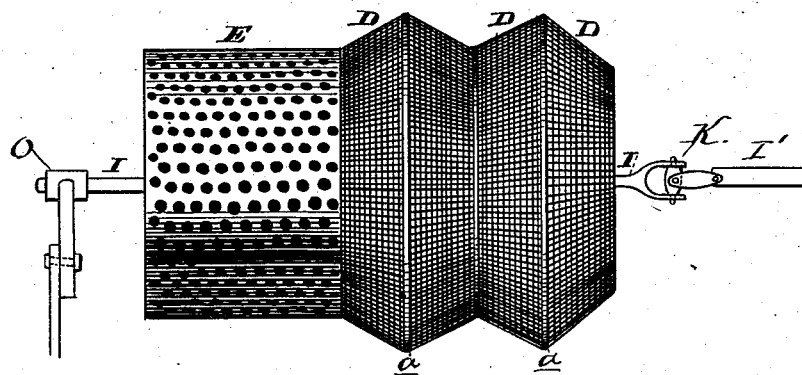


Fig. 2.

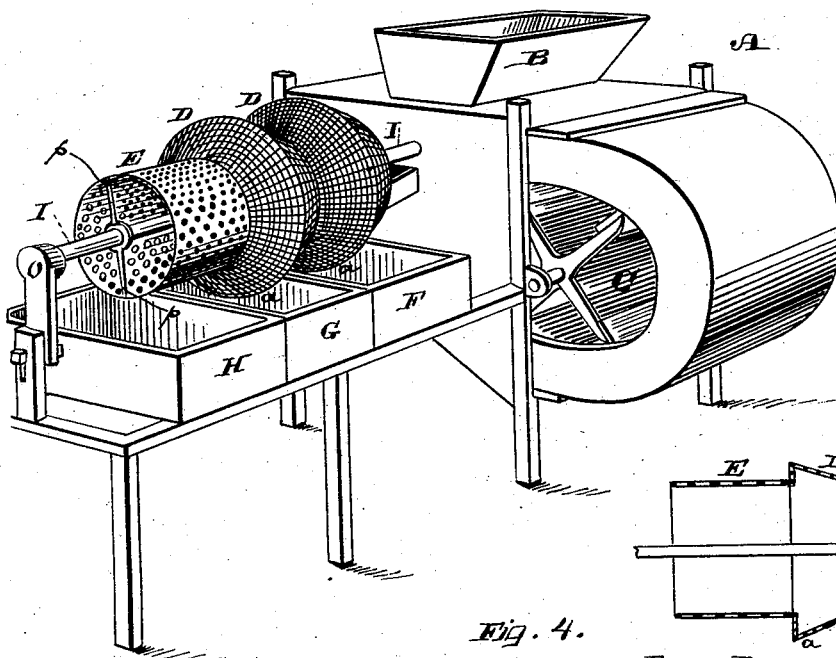


Fig. 3.

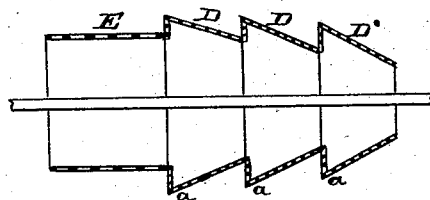
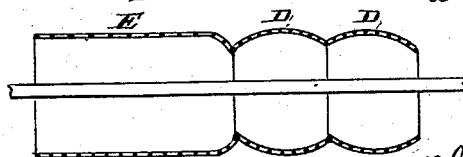


Fig. 4.



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UNITED STATES PATENT OFFICE.

THOMAS S. BAYLEY, OF CHICO, CALIFORNIA.

GRAIN-CLEANING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 261,653, dated July 25, 1882.

Application filed April 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS S. BAYLEY, of Chico, county of Butte, State of California, have invented an Improved Grain-Cleaning Apparatus; and I hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to an improved device for cleaning grain after it has been thrashed; and it consists in certain details of construction, as hereinafter described and specifically claimed.

Figure 1 is a view of the screen and its adjuncts. Fig. 2 shows its connection with a fanning-mill. Figs. 3 and 4 show modifications of the form of rotating sieve or screen.

A is any suitable grain-cleaning apparatus. In the present case I have shown an ordinary fanning-mill having a hopper, B, into which the grain is fed.

O is the fan, which is driven by suitable power, and the blast from it passes up through the screen in the usual manner. After leaving this screen the grain is led into the device, consisting of the wire or perforated truncated cones D and cylindrical section E, which may be united in any suitable or desirable manner to retain the grain for some time. This may be done by placing the truncated cones base to base, as shown in Fig. 1, the object being to provide a series of depressions, *a*, into which the grain may settle and be retained for a considerable time during the revolution of the apparatus, so as to separate out all the cheat, mustard, and smaller impurities before the grain passes out into the next section. As many of these sections may be employed as desired, and from the last of them a cylindrical portion, E, extends somewhat farther, and is perforated, so as to allow the barley and wheat to be separated by it. Boxes F, G, and H are placed beneath each conical section and the cylinder, to receive what may be discharged from them, and from which the contents may be removed at pleasure. As the grain leaves the machine it passes into the sections D, which extend out at right angles, or nearly so, from the side of the machine, and the grain will accumulate in the depressions of the sections, so as to be retained therein for a considerable time.

The cylindro-conical sieve is provided with a shaft, I, which extends through it, and is held in place by radial arms *p p*. One end is fitted to turn in a box at O, which supports the outer end, and which is arranged to be raised

or lowered by means of a slotted standard and set-screw, so as to adjust the incline at which the screen stands. At the end nearest to the machine this shaft is fitted with a universal-joint coupling, K, by which it is connected with the driving shaft I' upon the machine itself, and which allows any desired change of angle to be given to the rotary screen. When this screen is rotated the grain, being retained for some time in the depressions *a*, will be turned over and over until all the smaller impurities have been discharged through the meshes of the screen. The grain moves slowly from one section to the next, undergoing the same operation until it is entirely clean of the smaller impurities, after which it passes into the cylindrical section or barley-screen. The meshes or openings in this portion are large enough to allow the wheat to fall through into the receptacle below. The barley escapes at the end of the cylinder. The perfection of the cleaning will depend upon the position of the cylinder, its rapidity of rotation, and the feed.

No blast passes through the cylindro-conical section. It is light, simple, and durable, and has great capacity. It is especially adapted for grading grain after it has been cleaned in the ordinary screens of a cleaner, as by a proper construction of the meshes the smaller grain and cheat may be perfectly separated from the best in the different sections.

A smaller cylindrical sieve may be used inside of the large one, if desired to increase the cleaning capacity of the machine, by dividing the work between the outer and inner cylinders.

No complication of gearing is necessary, only a single shaft, and, as it extends out from the side of the machine, the rear end is left free for the discharge of chaff and dust.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a grain-cleaning apparatus, the rotating hollow screen D E, having depressions *a* formed at intervals in its length, in combination with the preliminary cleaner A, the shaft I, the universal joint K, and the vertically-adjustable box O, substantially as herein described.

In witness whereof I hereto set my hand.

THOMAS S. BAYLEY.

Witnesses:

S. H. NOURSE,
G. W. EMERSON.