(No Model.)

B. H. VELLINES.

REVOLVING CLEANER FOR NUTS, GRAIN, &c.

No. 464,468. Patented Dec. 1, 1891.

Fig. 1.

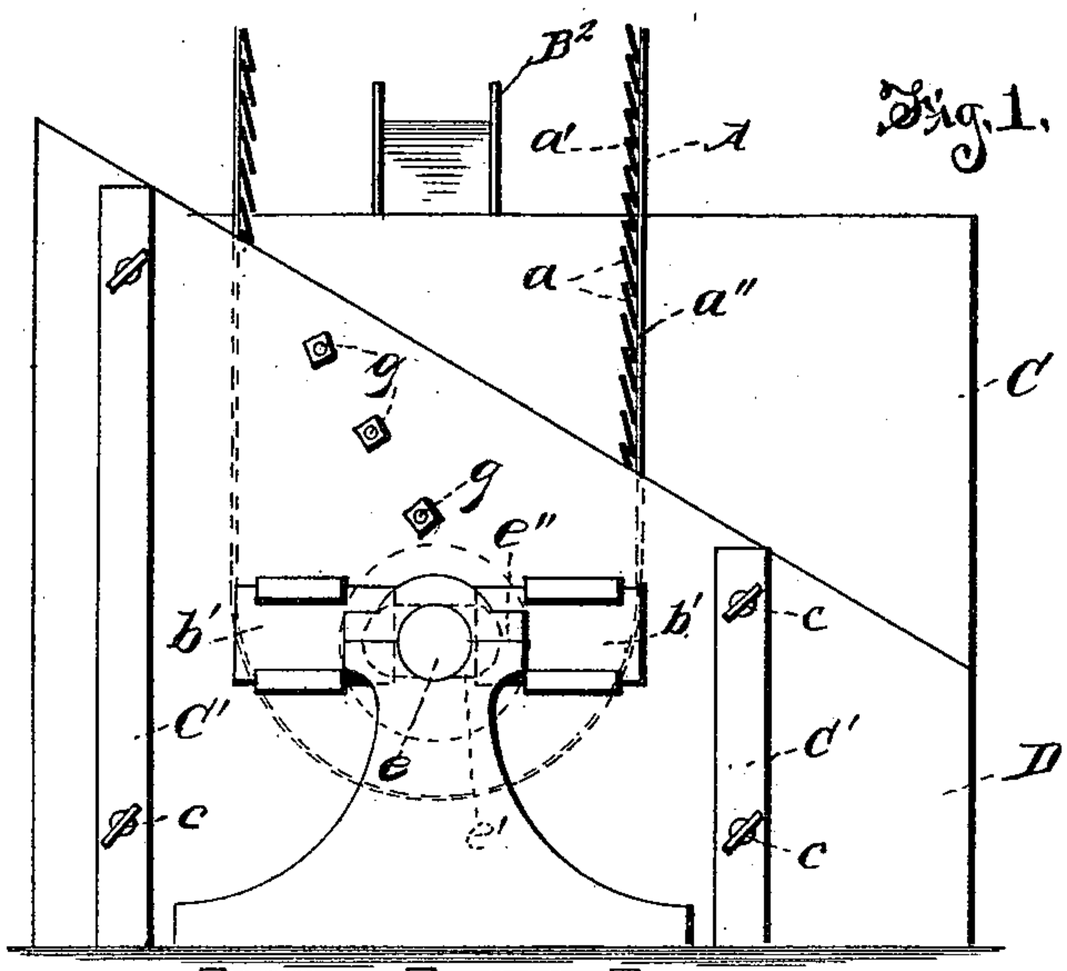


Fig. 2.

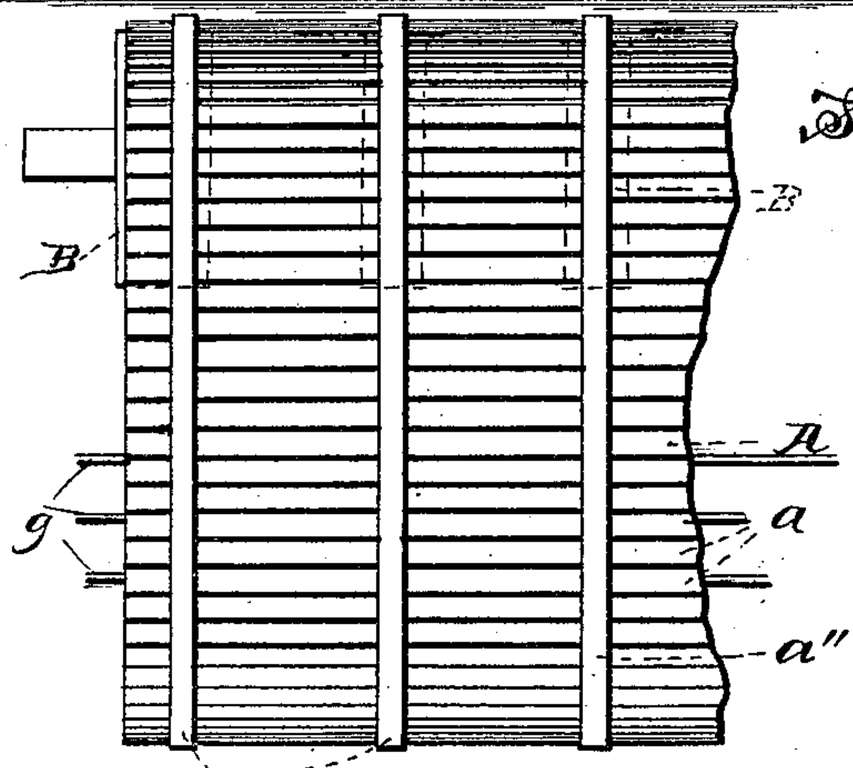
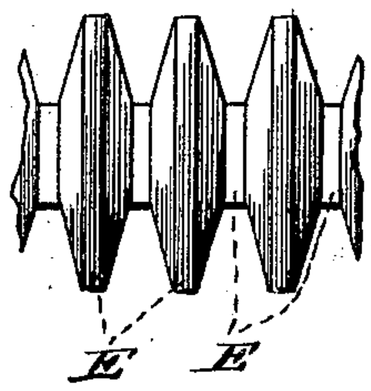


Fig. 5.



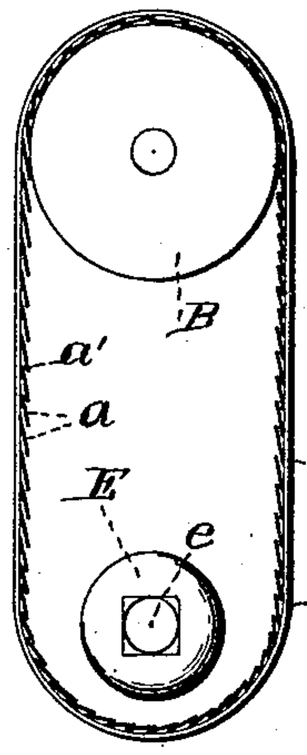
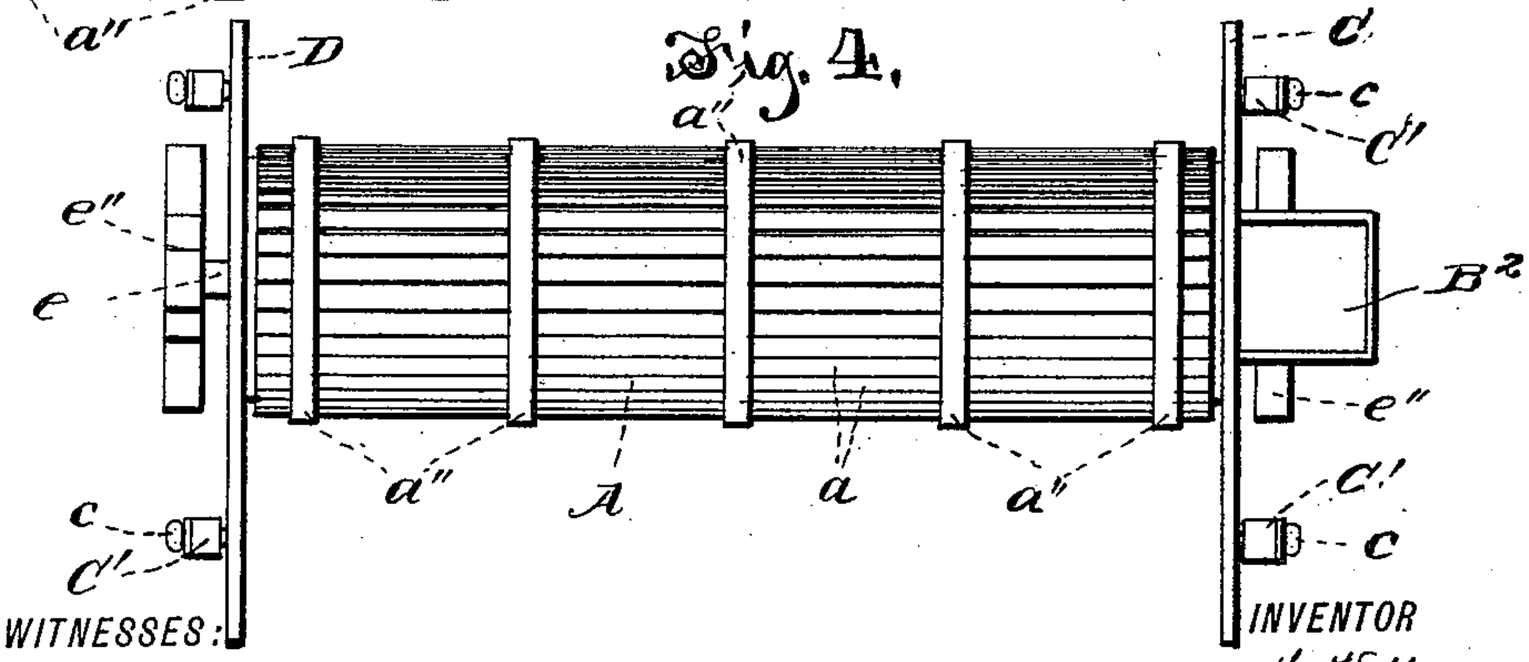


Fig. 3.

Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

BENTON H. VELLINES, OF NORFOLK, VIRGINIA, ASSIGNOR TO THE NORFOLK, VIRGINIA, PEANUT COMPANY, OF SAME PLACE.

REVOLVING CLEANER FOR NUTS, GRAIN, &c.

SPECIFICATION forming part of Letters Patent No. 464,468, dated December 1, 1891.

Application filed July 2, 1891. Serial No. 398,273. (No model.)

To all whom it may concern:

Be it known that I, BENTON HARPER VELLINES, a citizen of the United States, and a resident of Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Revolving Cleaners or Nuts, Grain, &c.; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is an end view of the machine. Fig. 2 is a front view, partly broken away. Fig. 3 is an end view of the cleaner-belt. Fig. 4 is a top view of the machine, and Fig. 5 is a detail view of the cleaners.

This invention has relation to machines for cleaning nuts and grain, and particularly for cleaning peanuts from adhering soil, stems, and other extraneous matter; and it consists in the novel construction and combination of devices, all as hereinafter set forth.

The invention refers, mainly, to those cleaners which have the form of endless belts traveling over revolving pulleys, whereby they are suspended, and is in some respects an improvement on the construction shown in a patent granted me on the 2d of February, 1886, No. 335,402.

In the accompanying drawings, the letter A designates the endless cleaner-belt; B, the rotating pulleys whereon it is suspended and by which it is carried; C, the adjustable head board or plate at the feeding end of the belt, and D the adjustable board or plate at the other end of the belt, over which the nuts and grain are discharged.

The cleaner-belt A is constructed of slats *a*, preferably of steel, said slats being lapped at their edges in a uniform manner, as indicated at *a'*, so that there are practically no interstices, the joints being closed. The slats are secured by rivets to a series of exterior endless bands *a''*, which hold them together and give the requisite flexibility to the endless belt. These bands also strengthen the belt along those portions which bear upon the rotating pulleys B, whereby it is suspended and moved. The belt extends horizontally and revolves in vertical planes, and its ends are finished to move as nearly as possible in true vertical planes. At one end of the belt adjacent to its lower portion is placed a head or plate C, which extends transversely and is designed to close in the lower portion of the belt at this end in order that the nuts or other stock therein may not fall out at the edge of the belt. The feed is made through a spout B^2, directed over the upper edge of the board or plate; and although this board is designed to be close enough to the belt to prevent the escape of the nuts it is nevertheless capable of slight adjustment toward or from the edge of the belt in order to provide for the escape of the dust and fine débris when this accumulates in too great a degree. Generally, however, this dust or débris is retained in the interior of the belt, and it forms a valuable assistant in the cleaning and polishing process going on therein when the belt is in revolution. The adjustment is effected by means of set-screws *c*, seated in the posts or bearings C' and acting against the head-plate C, which is placed between the posts and the edge of the cleaner-belt. The outward pressure or the charge in the belt is sufficient to keep the plate clear from the moving edge of the belt or as far away therefrom as the set-screws will permit. At the other end of the cleaner-belt is the adjustable discharging board or plate D, the upper edge of which is inclined in order that the discharge over this edge may be regulated by moving the plate endwise. This plate is also adjustable toward or from the edge of the belt by means of set-screws *c*, seated in posts or bearings C'.

The head-plates C and D are usually horizontally slotted to provide for the passage of the ends of the shaft *e*, which carries the friction-disk E, said shaft extending through these slots *e'* to its bearings *e''*. In order to close the slots the slides *b'* are provided one on each side of the shaft and movable in ways or guides at the edges of the slots.

The friction-disks E are preferably of hard wood and double convex or double conical, as

indicated, their eyes being square to engage the squared body of the shaft. Between the disks are collars or separating-washers E′, which serve to prevent the nuts from being caught between the disks and clogging the same. In the operation of the cleaning devices it is designed that the disks shall be rotated at a much higher speed than that of the movement of the cleaner-belt and usually in the opposite direction.

In order to remove stones I have provided the longitudinal wires *g g*, which extend through the belt along one side of its lower portion, being attached to the head-plates C and D usually and in a removable manner, the ends of the wires being threaded for the reception of nuts.

For cleaning small grain the wires will not be necessary, nor are the friction-disks always essential; but for cleaning peanuts these devices are regarded as important adjuncts.

The belts and disks are rotated by power applied in any convenient manner.

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

1. In a revolving cleaner for nuts, grain, &c., the combination, with the suspending pulleys, of the endless cleaner-belt carried by said pulleys, said belt being adapted to revolve in true vertical planes, and comprising longitudinally-lapped slats forming close joints and secured to a series of exterior endless bands, substantially as specified.

2. The combination, with the revolving endless cleaning-belt and its supporting-pulleys, of the transverse heads or plates C and D, located at the respective ends of said belts and closing a portion thereof, said heads being adjustable toward and away from the ends of said belt the plate D having an inclined upper edge, and means for the horizontal lateral adjustment of said plate, whereby the discharge is regulated, substantially as specified.

3. The combination, with the revolving cleaning-belt, its supporting revolving pulleys or ways, and the adjustable heads at the ends of said belt and closing a portion thereof, of a series of disk-cleaners on a longitudinal shaft extending through the lower portion of said belt and through slots in said adjustable heads to its bearings, said slots being closed by slides, substantially as specified.

4. In a cleaner for nuts, grains, &c., the endless cleaner-belt adapted to revolve in vertical planes and formed of close-lapping slats secured to an exterior series of endless bands, said belt being suspended and carried by revolving pulleys and having a longitudinal shaft extending through its lower portion and carrying a series of double-convex disks, and a series of wires also extending longitudinally through said belt, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

BENTON H. VELLINES.

Witnesses:
D. S. BURRETT,
W. J. SMITH.