2 Sheets—Sheet 1.

# B. H. VELLINES.

## Machine for Cleaning Peanuts.

**No. 211,535.** **Patented Jan. 21, 1879.**

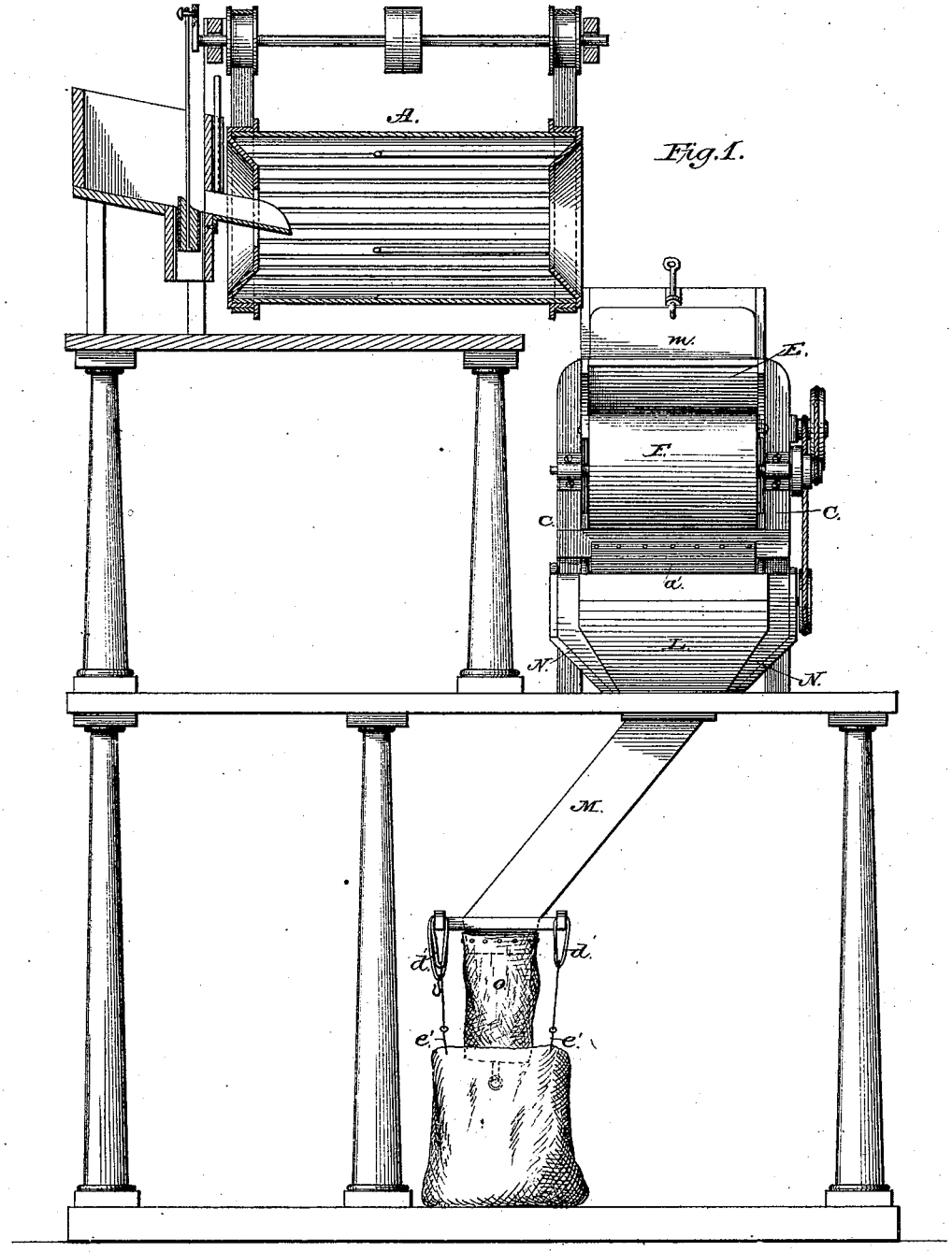


*Fig. 1.*

WITNESSES

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2 Sheets—Sheet 2.

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## Machine for Cleaning Peanuts.

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*Fig. 2.*

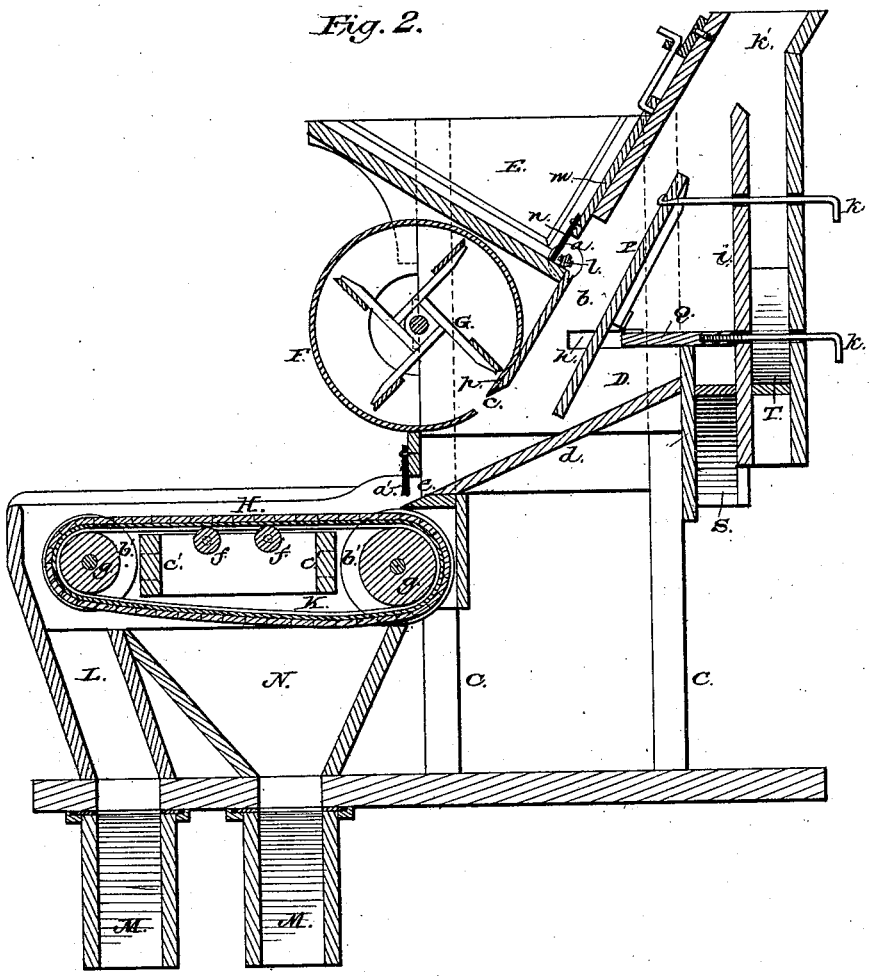
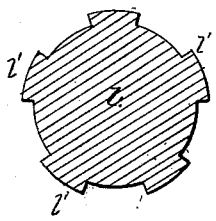



*Fig. 3.*




WITNESSES.

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# UNITED STATES PATENT OFFICE.

BENTON H. VELLINES, OF NORFOLK, VIRGINIA.

## IMPROVEMENT IN MACHINES FOR CLEANING PEANUTS.

Specification forming part of Letters Patent No. **211,535**, dated January 21, 1879; application filed October 7, 1878.

*To all whom it may concern:*

Be it known that I, BENTON HARPER VELLINES, of Norfolk, in the county of Norfolk and State of Virginia, have invented a new and valuable Improvement in Machines for Cleaning, Separating, and Picking Peanuts, &c.; 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 drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my improved apparatus, its upper part being in section. Fig. 2 is a longitudinal vertical section of the fanning and separating device, and Fig. 3 is a sectional detail.

The nature of the invention consists in the construction and novel arrangement of parts, as will be hereinafter shown and described.

In the accompanying drawings, the letter A designates the main cleaning cylinder or machine, which is usually of the character described in Letters Patent granted to me November 5, 1878, No. 209,730—that is to say, a horizontal cylinder cleaner, having motion of rotation, and discharging automatically. B indicates the fanning devices, constructed usually with corner uprights C and walls D. E represents the hopper, opening at *a* into the interior chamber or main chute *b* of the fanning-mill. F represents the fan-drum, opening at *c* into the main chute *b*, and G is the fan. The inclined bottom board or delivery-board, *d*, of the main chute extends downward under the fan-drum at an angle of about forty-five degrees to the discharge-opening *e*, terminating at the level of the endless picking-apron H, whereof the inner roller, *f*, is arranged below said opening, and parallel with the same, this opening being horizontally elongated, and of equal width, or nearly equal width, with said apron. The outer roller, *g*, is at the end of the apron-frame K, which is provided with an end chute, L, into which the apron discharges, and side chutes or passages N, extending along the side edges of the apron, and converging under the same to a common discharge-spout, M. The discharge-spouts are usually arranged at an angle of about forty-five degrees, to avoid breaking or bruising the nuts.

In the main chamber *b* of the fanning portion of this machine is transversely pivoted the inclined wind-board P, having hinged to its middle portion in rear the horizontal stop-board Q, the ends of which are arranged to slide in ways *h* of the main frame or casing. Adjusting-rods *k k* are attached to the boards P and Q, and, extending through the casing-wall, serve to enable the operator to adjust these boards according to requirement. To the rear of the wind-board P, or on the opposite side of the same from the fan, are two oppositely-inclined chutes, S and T, one arranged in rear of the other, separated from each by a vertical transverse partition, *i*, the upper edge of which is below the uptake *k'* of the main flue *b*. These oppositely-inclinded chutes S and T discharge on opposite sides of the casing, as shown in the drawings, the inclined bottoms of the chutes being arranged at an angle of about forty-five degrees.

The operation is as follows: The peanuts in the hopper E having been cleaned by the cleaning-machine above, are fed by means of a roller, *l*, of iron or steel, which is formed with alternate grooves having convex bottoms and square-edge ribs *l'*, which seize the nuts and move them without choking in the roller, thereby preventing them from bridging over the feed-opening of the hopper. The gage-slide or gate *m* has at its lower end a rubber or other flexible extension, *n*, which hangs above the roller, and, while it serves as the marginal guard, prevents the nuts from being bruised or broken as they are fed through the opening. This curtain is arranged above the roller, so as to cut off the feed from said roller when closed down against the opposite hopper-wall, thereby keeping the nuts entirely from the roller, the square edges of which would otherwise feed them forcibly against the curtain. Having passed through this opening into chamber *b*, the nuts, trash, and pops or empty shells fall downward, and the blast from the opening or mouth of the fan-drum blows the pops, trash, and dust upward toward the uptake *k'*, the sound nuts, which are of different qualities, falling upon the inclined bottom of the chute *b*, and passing to the picking-apron.

A powerful blast is required to separate the pops or empty shells, and this is secured by extending the upper margin of the mouth of the fan-drum inward, bringing it close to

the outer edges of the fan-wings, and forming a cut-off, *p*, which forcibly diverts the dead air which is usually carried around with the fan, so that it passes through the mouth of the case and adds to the blast. The pops, being the heaviest portion of what is carried upward, fall first, and descend through the first chute S to its spout, by which they are discharged.

The strings and trash are carried over the margin of the partition *i;* all fall through the outer chute, T, being discharged by its spout on the other side of the casing. The dust is blown upward and out through the uptake *k'*, which is usually arranged to discharge upon an upper floor. The regulation of the blast according to the character of the stock and the rapidity of the feed is readily accomplished by means of the hinged wind-board and its horizontal slide, which affords a ready means of narrowing or widening the entire flue, as well as changing the angle of the wind-board.

The light pops, dust, and trash having been taken out by the blast, the sound nuts, which are of two qualities, dark and light, descend by the inclined bottom board to the apron, upon which they fall in a spread or scattered and uniform manner, this being accomplished mainly by the rubber or flexible check or curtain *a'*, which, being attached to the casing-wall, hangs over the elongated discharge-opening leading to the picking-apron. This apron is made of thin slats, which are secured to cloth or strips underneath, and are coated with white paint, with the two-fold object of contrast and cleanliness, as it is important that the pickers, who stand on either side of the apron, shall readily distinguish the color of the nuts being carried along on the apron. The rollers of this apron are provided with bevel spool-heads or flanges, as indicated at *b'*, which keep the apron properly centered, and prevent binding. Its middle portion is supported by the ledges *c'*, and it forms a firm white moving table, on which the nuts pass along between the pickers stationed on the sides, who distinguish and pick out the darker nuts, dropping them into the elongated side chutes, which extend along the edges of the apron below their hands. These dark nuts form the second grade. They descend through the oblique spout below the apron frame, which is usually arranged in the story below, where they are received in suitable sacks. The white or first grade of nuts pass over the end of the apron into the chute, through which they also descend, and are received into sacks below. The ends *o* of the spouts M and S are made with flexible material, canvas being preferred, and a strap is attached to the edge of the flexible extension, so that it can be looped up with a bend when the sack below is full, checking the flow and avoiding waste. The sack-holders are elastic cords *d'*, having hooks *e'* at their ends. These cords are attached to strips or cross-frames at the lower ends of the spouts, and the mouths of the sacks are attached to the hooks. As a sack is longer before it is filled and heavier afterward, the elastic cords yield according to requirements, and when a sack is filled it is readily detached by stretching the cord in unhooking, the sack being, when full, too heavy to be easily lifted.

The entire cleaning, fanning, and separating mechanism is designed to be run from a single power-shaft.

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

1. The combination, with the fanning and separating devices B, of the endless picking-apron H, receiving the discharge from the same, and the cleaner A, arranged above said fanning and separating devices, and discharging into the hopper thereof, substantially as specified.

2. The combination, with the fanning devices B and the chutes thereof, of the endless horizontal apron H, its end chute L, and side chutes N, delivering through independent discharge-spouts, substantially as specified.

3. The combination, with a fanning-mill or separator, of an endless level picking-apron, running from the mouth of the discharge-chute of said mill or separator, substantially as specified.

4. In a separating-machine, the combination, with the endless picking-apron, receiving from the chute-mouth *e*, of the flexible curtain *a'*, arranged above the lower end of the chute-board and overhanging the discharging-mouth, to check the discharge and spread the same, substantially as specified.

5. The combination, with a hopper and its ribbed roller *l*, of the flexible overhanging curtain *n*, attached to the adjustable gage-board of said hopper, and arranged above the roller to close against the opposite wall of the hopper and cut off the feed entirely from said roller, when desired, substantially as specified.

6. In combination with the upward chute and the two downward chutes leading therefrom, one being in rear of the other, the fan-case F, having side inlets and close cylinder-wall, having a single transverse opening or mouth, and the cut-off board or lip *p*, arranged at the margin of said mouth with its edge close to the edges of the fan-blades, substantially as specified.

7. In the fanning-mill, the horizontally and angularly adjustable wind-board P, having the adjusting-rods *k k*, substantially as specified.

8. The open-ended flexible cut-off extensions O O', attached to the spout ends, and having hooking-up devices to hold the same, closed to form the checks for the discharge, substantially as specified.

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

BENTON HARPER VELLINES.

Witnesses:
K. B. ELLIOTT,
E. T. R. JONES.