No. 864,164. PATENTED AUG. 27, 1907.

L. A. HAYDEN.

CRANBERRY SEPARATOR.

APPLICATION FILED DEC. 20, 1906.

Fig. 1.

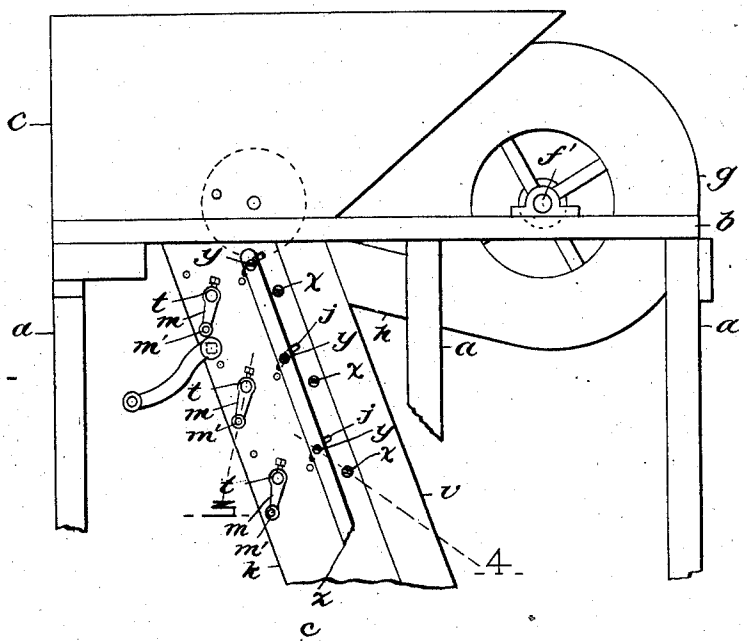
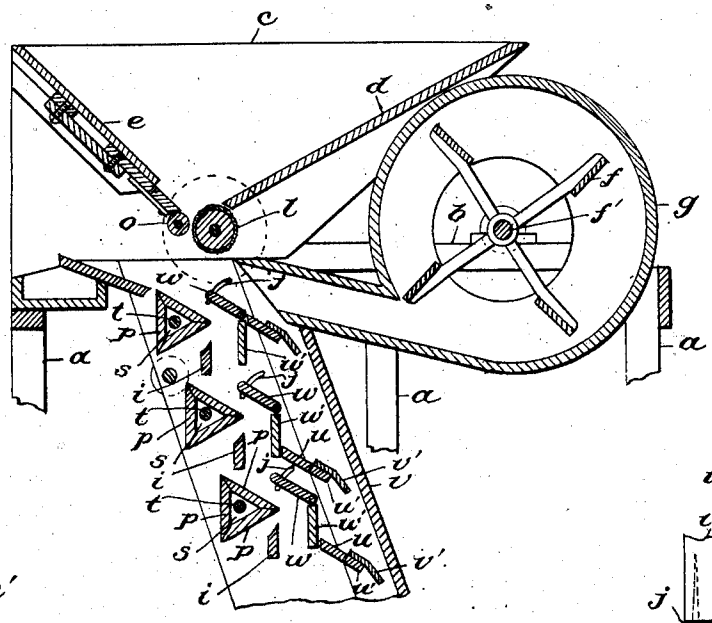


Fig. 2.



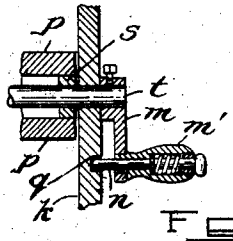


Fig. 3.

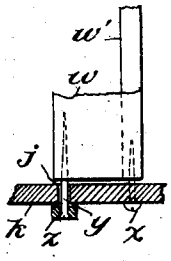


Fig. 4.

WITNESSES:

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CRANBERRY-SEPARATOR.

No. 864,164. Specification of Letters Patent. Patented Aug. 27, 1907.

Application filed December 20, 1906. Serial No. 348,735.

To all whom it may concern:

Be it known that I, LOTHROP A. HAYDEN, a citizen of the United States, residing in South Carver, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Cranberry-Separators, of which the following is a specification.

This invention relates to cranberry-separators of the general class described in Letters-Patent of the United States numbered 661,801, granted November 13, 1900, and Number 805,542, granted November 28, 1905, to which reference is made. In cranberry-separators of this class the good or sound berries drop upon boards and bound therefrom over dividing-boards, and the decayed or poor berries drop upon the same boards as the good berries, but bound but little and not over the dividing-boards and fall elsewhere.

It is found in practice that the bounce-boards quickly accumulate dirt and require to be frequently cleaned—the machine having to be stopped for the purpose. A principal object of this invention is to construct bounce-boards which are provided with at least three sides or surfaces and which are applied to the apparatus in such a manner that when one side of a bounce-board becomes foul it can be rotated without stopping the machine until another side is brought into use. Thus time is saved and the different surfaces of the bounce-boards can be rotated outward into a convenient position to be cleaned without stopping the machine.

The nature of the invention is fully described below, and illustrated in the accompanying drawings, in in which:—

Figure 1 is a side elevation of the upper portion of a cranberry-separator embodying my invention. Fig. 2 is a vertical section of the same. Fig. 3 is an enlarged sectional detail on line 3, Fig. 1. Fig. 4 is an enlarged sectional detail on line 4, Fig. 1.

Similar letters of reference indicate corresponding parts.

a, *b* represent respectively uprights and cross-pieces making parts of the frame.

c is the hopper, *d* the bottom there of and *e* the end-board, constructed substantially as illustrated in Letters-Patent numbered 805,542.

f is the fan-blower driven by the shaft *f'* and supported in a suitable case *g* from which a nearly horizontal flue *h* extends.

k represents the two substantially upright parallel boards which support the bounce-boards and dividing-boards and between which the berries fall from the hopper between the driven roll *l* and small roll *o*, being subjected as they drop from the hopper to a blast of air from the blower for the purpose of freeing them as far as possible from sand or dirt.

Thus far the invention contains nothing new over the Letters-Patent above referred to, and is operated as described therein.

Instead of the stationary flat bounce-boards illustrated in the Letters-Patent above referred to, I provide in this invention a series of rotatable bounce-boards each of which consists of a box having at least three sides or surfaces. In the drawing I have shown the bounce-boards made of boxes comprising three sides or surfaces *p* and suitable end-pieces *s*, in shape of an equilateral triangle. Horizontal supporting shafts *t* are rigidly secured in the end-pieces and their opposite ends are supported by the uprights *k*. Each shaft is provided at one end with a crank *m* whose handle *m'* contains a locking bolt *n* whose inner end is held normally in a recesss *q* by a spring *r* contained in a chamber in said handle, as illustrated in Fig. 3. Thus it will be seen that by this construction of the bounce-boards, each of said boards is provided with at least three surfaces, and as soon as one of the surfaces becomes foul or has too much foreign matter adhering to it, the bolt *n* is withdrawn from the recess *q*, and the crank is rotated to the extent of one-third of a turn, bringing up another surface into position for use. It is evident that this can be done without shutting off the power and without stopping the machine. Hence all the time which has heretofore been occupied in cleaning the bounce-boards is saved.

i represents the vertical guide-boards rigidly secured to the uprights *k*. *u* are the inclined shelves rigidly secured at their opposite ends to said uprights, *u'* are cross pieces similarly secured to the uprights, and *v'* are flaps secured to a guide or trough *v*—all substantially as illustrated in Letters-Patent Number 661,801. In place of the dividing-boards shown in the said patent, I provide a series of dividing-boards each of which consists of the stationary vertical board *w'* secured to the uprights *k* and a swinging board *w* pivotally connected at *x* at its opposite ends to the uprights *k*. Near its upper edge the swinging portion *w* is provided with pins or bolts *y* which extend through curved slots *j* (Figs. 1, 2 and 4) in an upright *k* and into engagement with a bar *z* located next the outer surface of said upright. By means of this bar the angle of inclination of all the swinging parts *w* of the dividing-boards may be changed at the same time if desired. Hard berries will bound higher than soft ones, and will easily bound over the parts *w* when they are swung up to their highest point, while softer berries would require that the parts *w* should be swung down into approximately the position indicated in Fig. 2. When the swinging dividing-boards *w* are at their lowest points a larger proportion of the berries will jump over them, but when said boards are swung up to their highest points

a smaller proportion of the berries will jump over, and a larger proportion will be too soft to jump over and will be discarded.

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

1. In a cranberry-separator of the character described, the frame; a well or chute; a series of bounce-boards each consisting of a structure having not less than three sides or surfaces; a series of dividing-boards substantially opposite the series of bounce-boards; and means for supporting said bounce-boards rotatively in said well or chute whereby the different surfaces of the bounce-boards may be successively presented to the berries.

2. In a cranberry-separator of the character described, the frame; a well or chute; a series of bounce-boards each consisting of a structure having not less than three sides or surfaces; a series of dividing-boards substantially opposite the series of bounce-boards; and means intermediate of each bounce-board and the well or chute whereby each of said bounce-boards may be rotated independently of the others and independently of the driving mechanism of the apparatus, for the purpose set forth.

3. In a cranberry-separator of the character described, the frame; a well or chute; a series of bounce-boards each consisting of a structure of the shape in cross section of an equilateral triangle and having suitable end-walls; a series of dividing-boards substantially opposite the series of bounce-boards; shafts supporting said bounce-boards and supported by the well or chute; and means for rotating said shafts, whereby the different surfaces of the bounce-boards may be utilized, for the purpose set forth.

4. In a cranberry-separator of the character described, the frame; a well or chute; a series of bounce-boards and guide-boards in one side of the well or chute; a series of dividing-boards in the opposite side of the well or chute, each dividing-board consisting of a stationary board and a swinging board pivotally supported in the well or chute next the upper edge of the stationary board; and means for locking said swinging portions at different angles, for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOTHROP A. HAYDEN.

Witnesses:
HENRY W. WILLIAMS,
A. K. HOOD.