

S. HARRISON.
Potato-Separator.

No. 40,258.

Patented Oct. 13, 1863.

Fig. 1.

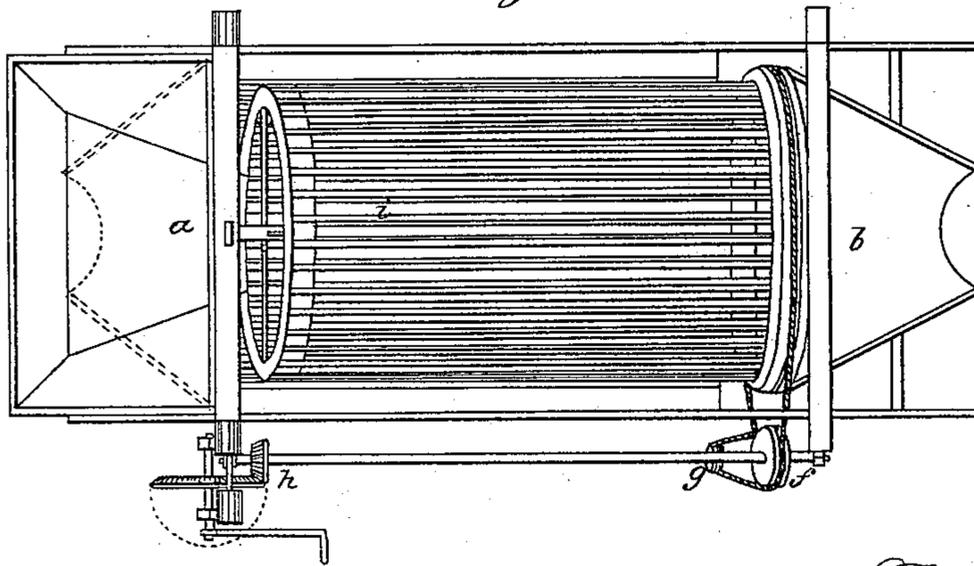


Fig. 3.

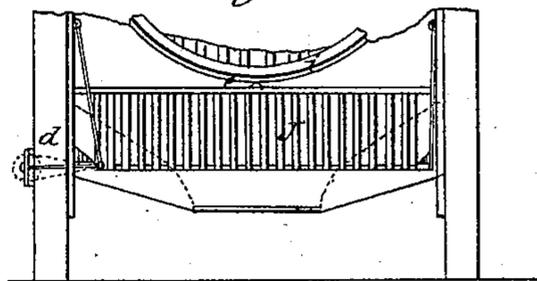
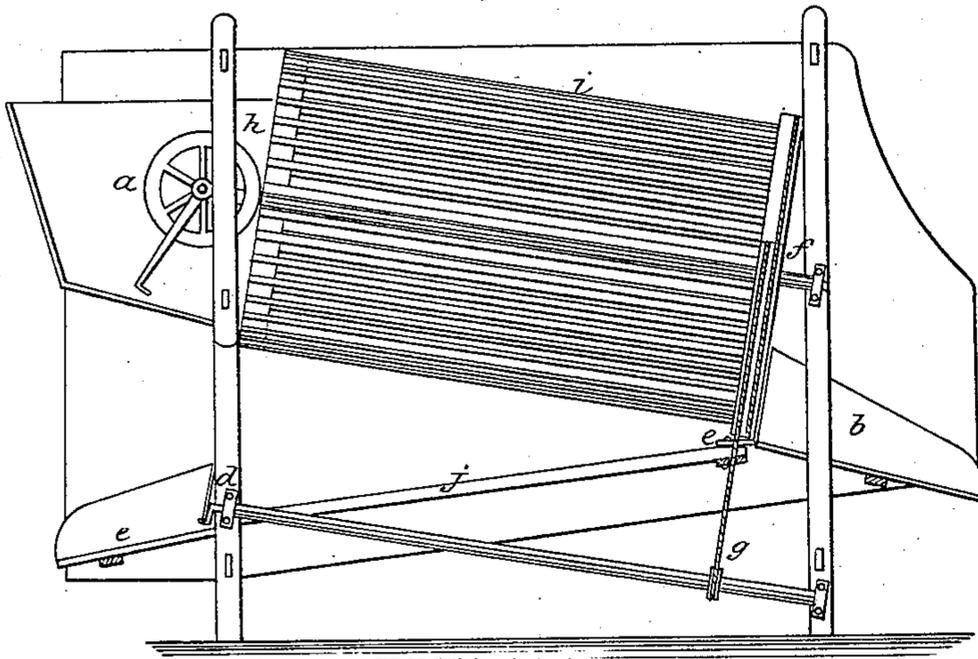


Fig. 2.



Witnesses:

Wm H Fairbank
Benjamin Severson

Inventor:

Stephen Harrison

UNITED STATES PATENT OFFICE.

STEPHEN HARRISON, OF ST. MICHAELS, MARYLAND.

POTATO-SEPARATOR.

Specification forming part of Letters Patent No. 40,258, dated October 13, 1863.

To all whom it may concern:

Be it known that I, STEPHEN HARRISON, of St. Michaels, in the county of Talbot, in the State of Maryland, have invented a new and useful machine for separating potatoes, that will in one operation separate them in two, three, or more sizes, and deliver each size into a separate bag, basket, or pile; 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, in which—

Figure 1 is a view of the machine as seen from above in a vertical direction. Fig. 2 is a side view of the internal parts with an outline of the opposite side covering, the front covering, which is similar to its opposite, being left off for the purpose of allowing a clear view of the interior of the machine. Fig. 3 is an end view of the inclined vibrating screen.

Similar letters refer to corresponding parts of the machine.

At *i* is a hollow cylinder formed of rings at each end, to which slats are attached in such a manner as to form the cylinder. Between the slats are open spaces of such width as will correspond with the size of potatoes designed to pass through them.

At *j* is an inclined plane, also formed of slats, with open spaces corresponding with the next size of potatoes to be separated. The cylinder and the slatted plane beneath it are inclined in opposite directions and at nearly equal angles. This is to facilitate the passage of the potatoes through, between, and over the slats; and the degree of inclination of each may be regulated by raising or lowering an end by any of the well-known means of keys or screws acting on the bearings of the ends. The upper end of the plane *j* is loosely suspended at *e* by means of a pivot-bolt. Its opposite or lower end is suspended by means of two rods attached to its sides, and at higher points to the sides of the machine-body; and there is

also a horizontal connection between its lower end and the crank at *d*, by means of which the crank gives to this end of the incline plane a lateral vibrating motion, its upper end turning correspondingly on the pivot-bolt at *e*.

At *c* and *b* are spouts for conducting different sized culled potatoes to their respective places.

At *a* is a hopper to receive the potatoes for culling.

The dotted lines at *c* within the hopper indicate the form of the spout *c* underneath it, as seen from above. By turning the crank at *h* by hand or other power rotary motion by means of the bevel-gearing is given to the first shaft and to the pulley at *f*. This pulley being connected with the cylinder *i* by means of a band, and by another band to the crank-shaft beneath, rotary motion will thus also be communicated to the cylinder *i*, and by means of the crank at *d* a lateral vibrating motion to the incline plane *j*. Hence providing a supply of unculted potatoes in the hopper it is only necessary to turn the crank at *h* to put the whole machine in operation and to insure a steady flow of culled potatoes, the largest through the spout at *b*, the next size through the spout at *c*, and the smallest will fall underneath the vibrating incline plane *j*.

The number and gradation of the sizes will depend on the number of inclined cullers in the machine and on the width of the openings between the slats.

What I do claim as my invention, and desire to secure by Letters Patent, is—

The revolving screen *i*, inclined in one direction, in combination with the vibrating screen *j*, inclined in an opposite direction, constructed and operating substantially as and for the purposes set forth.

STEPHEN HARRISON.

Witnesses:

WM. H. FAIRBANK,
BENJAMIN SEVERSON.