W. HERRICK.

Rice Cleaner.

No. 2,148. Patented June 26, 1841.

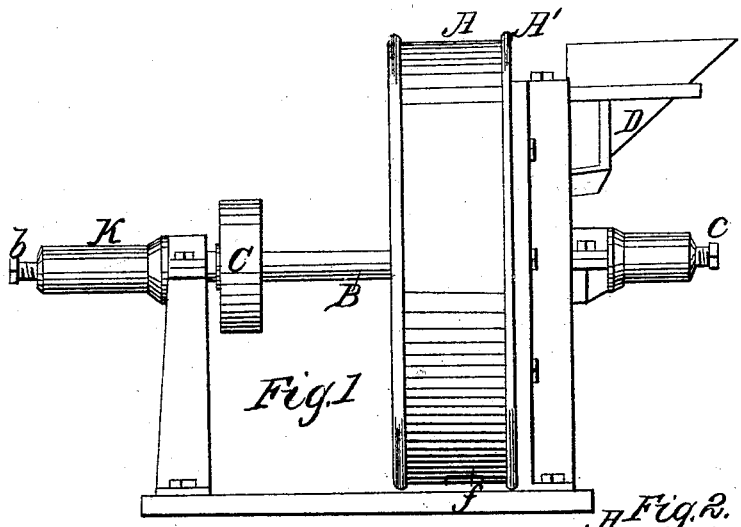


Fig. 1

Fig. 2.

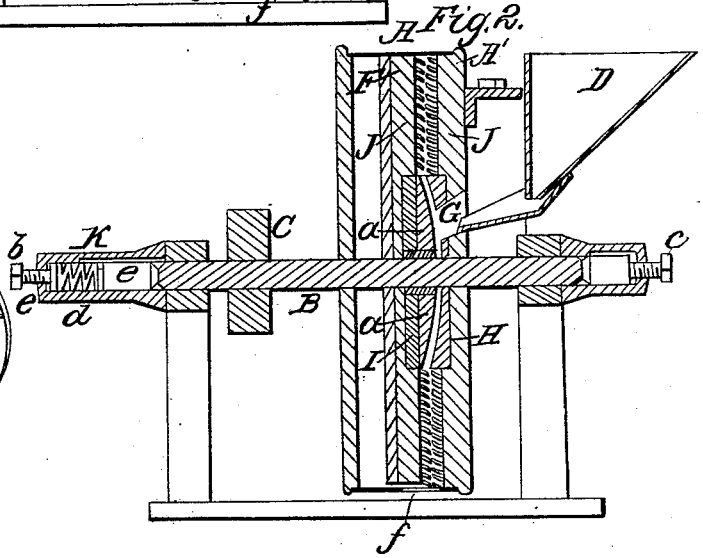
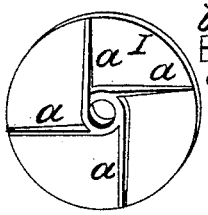


Fig. 3.



UNITED STATES PATENT OFFICE.

WEBSTER HERRICK, OF NORTHAMPTON, MASSACHUSETTS.

METHOD OF CONSTRUCTING A MACHINE FOR HULLING RICE AND OTHER GRAIN.

Specification of Letters Patent No. 2,148, dated June 26, 1841.

To all whom it may concern:

Be it known that I, WEBSTER HERRICK, of Northampton, in the county of Hampshire and State of Massachusetts, have invented an Improvement in the Manner of Constructing a Machine for Hulling Rice and other Kinds of Grain or Berries; and I do hereby declare that the following is a full and exact description thereof.

In my machine, the hulling is to be effected by causing the rice, or other grain, or article to be hulled, to be forcibly rubbed between two disks, each of which is armed, or covered, with stout wires, set in the manner of card teeth; one of said disks being stationary, and the other made to revolve in a vertical position; the revolving disk being borne up against that which is stationary by means of a spiral or other, spring acting against the end of its axis, or shaft.

In the accompanying drawing, Figure 1, is a perspective view of my machine, and Fig. 2, a section through the axis thereof.

A, is the case, or drum, which contains the stationary and the revolving disks, the head A′, constituting the stationary disk.

B, is the axis of the revolving disk, and C, the whirl by which motion may be communicated to it.

D, is the hopper for containing the grain, which is to be fed in through the stationary disk, near to its center, there being an opening through it for that purpose; a shoe, damsel, and sliding shutter are also used for effecting and regulating the feed, all operating in the ordinary way.

In the sectional view, Fig. 2, F, is the revolving, and A′, the stationary, disk. G, is the feed hole through which the grain, &c., is fed from the hopper. The central parts, H, and I, of these disks are of cast iron, and between the outer edges of these and their peripheries, the faces of the disks are covered with the elastic wire points, or stout card teeth, set in leather, as shown at J, J. The iron plate I, of the revolving disk has four, or any other convenient number of, ribs, or projecting pieces, cast on its surface, and these are intended to throw the grain toward the wire rubbers, as it is fed in; *a*, *a*, in Fig. 3, represent these projecting ribs, which rise gradually in a curve from each of their ends, and the plate H, is made concave to receive them; they are not to come into actual contact with, but to stand at a small distance from, H. The shaft, or axis, B, of the revolving disk is regulated at each end by tempering screws *b*, and *c*. In the tube, or barrel, K, there is contained a spiral spring *d*, which makes pressure upon the revolving disk, and gives it an elastic bearing upon the stationary disk, which pressure may be regulated at pleasure; this spring is contained between two sliding pieces of steel *e*, *e*. At the lower part of the drum A, there is an opening *f*, for the escape of the hulled rice, or other seed, which after passing through the machine is to be winnowed and cleaned in the ordinary way.

I am aware that machines for hulling rice and other grain have been constructed with rubbing surfaces covered with pointed wires, or card teeth; I know, also, that a patent was granted to T. F. Strong, and M. T. Moody, on the 29th of August, 1832, for a machine in which disks covered with card teeth were employed for that purpose; but in said patent it was expressly provided that these disks should be placed horizontally, the revolving disk being affixed to a vertical axis, or spindle, in the manner of ordinary mill stones. It has been found in practice, however, that with rice which contains much foreign matter, particularly a species of smut, which is a very common circumstance, the teeth of the lower disk become completely choked, in a very short space of time, by the lodging of the foreign matter between them, and the operation cannot be continued; but by placing the disks vertically, this matter is not accumulated, and the machine is rendered effective; the placing of the disks vertically, therefore, does not constitute a mere change of position, but is productive of a substantial benefit.

Having thus fully described the nature of my machine for hulling rice and other grain, or berries, and shown the manner in which the same operates, what I claim therein, and desire to secure by Letters Patent, is—

The employment of two disks, covered with pointed wires or with stout card-teeth,

one of which disks is made to revolve vertically within a drum, and is borne up against a stationary disk, similarly armed, by means of a spiral spring pressing against its shaft, and regulated by a tempering screw, in the manner herein set forth, and represented; and having combined therewith an iron center plate, or disk, provided with projecting ribs, for the purpose, and in the manner described and represented at *a*, *a*, in Fig. 3.

WEBSTER HERRICK.

Witnesses:

THOS. P. JONES,

B. R. MORSELL.