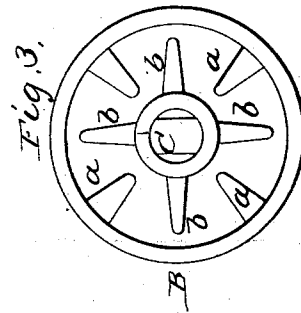
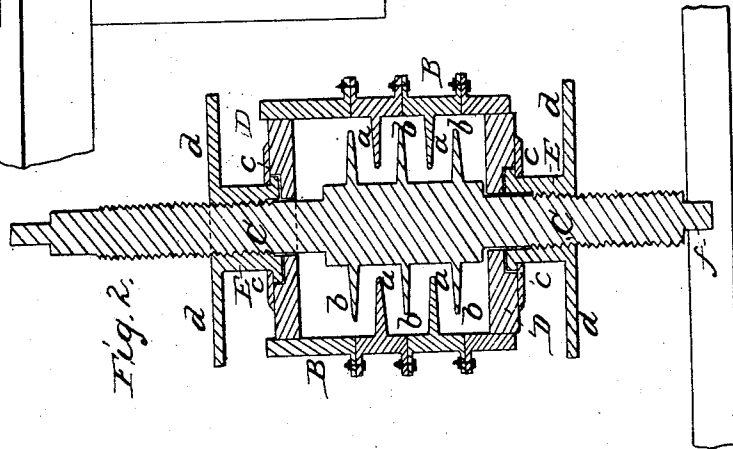
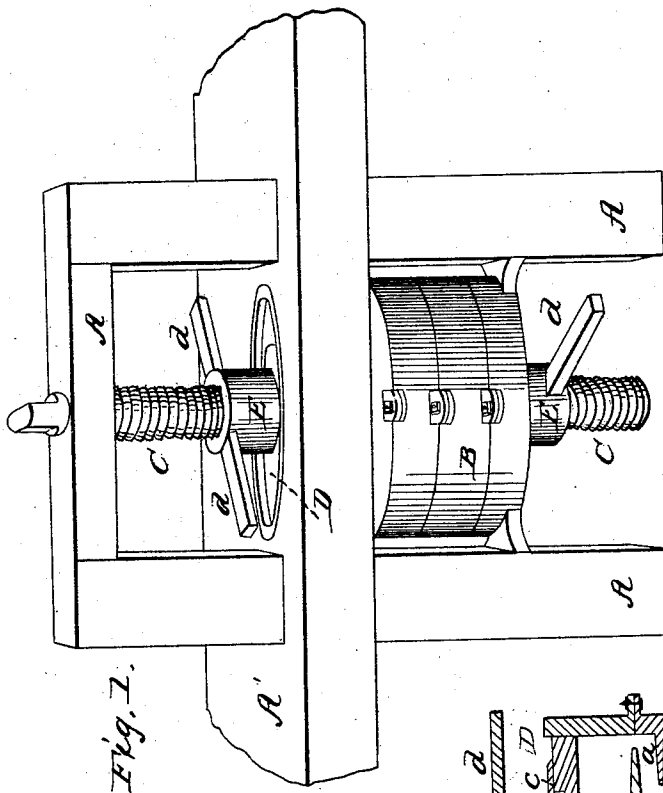


E. CARVER.
Rice Cleaner.

No. 940.

Patented Sept. 22, 1838.



UNITED STATES PATENT OFFICE.

ELEAZER CARVER, OF BRIDGEWATER, MASSACHUSETTS.

MACHINE FOR HULLING RICE, BARLEY, AND OTHER KINDS OF GRAIN.

Specification of Letters Patent No. 940, dated September 22, 1838.

To all whom it may concern:

Be it known that I, ELEAZER CARVER, of Bridgewater, in the county of Plymouth and State of Massachusetts, have invented
5 a new and useful Machine for the Purpose of Hulling Rice, Barley, or other Kinds of Grain Requiring that Process; and I do hereby declare that the following is a full and exact description thereof.

10 This machine depends for its useful effect upon the confining the grain in a chamber, which is best made cylindrical, in which it is subjected to pressure by forcing circular heads, or followers against it, while it is at
15 the same time agitated by causing a shaft with projecting arms to revolve within it, there being stationary arms projecting from the cylinder, between which, those upon the revolving shaft, pass.

20 Figure 1 in the accompanying drawing is a perspective view of the machine; Fig. 2, a section through the axis and cylinder; and Fig. 3, a transverse section.

A, A, is the frame of the machine, the
25 upper end of the cylinder B, standing flush with the platform A'. The cylinder B, may be cast in one piece, or put together by means of flanches, and bolts, as shown in the drawing; it should be left rough on the in-
30 side when it is designed for hulling grain having flattish sides; a, a, are the arms cast with it, and projecting inward toward the shaft.

C, is the shaft, carrying the arms b, b, b.
35 This shaft is made to revolve by any adequate power applied to it.

D, D, are two circular heads, or followers, which slide up and down freely with the cylinder; they revolve with the shaft, being
40 connected to it by means of a feather, sliding up and down in a groove made in the shaft for that purpose.

There is a screw on each end of the shaft, as shown in the drawing, and E, E, are nuts,
45 or collars tapped to fit the screws upon the shaft, and attached to the followers D, D, so as to swivel upon them, by means of the shoulders and plate at c, c. The arms d, d, are for the purpose of turning the collars

E, E, by hand or otherwise; f, is the lower
50 gudgeon and step of the shaft.

The rice, or other grain, to be hulled is put into the cylinder by raising the upper follower D, which is then pressed down upon it with any desired degree of force, and the
55 shaft is set in motion, the hulling will be thus effected in a very rapid and perfect manner, after it has proceeded for a short space of time the space occupied by the grain will be decreased, and one of the fol-
60 lowers may be forced down upon it. This may be done by hand or mechanically, in various ways. There may, for example, be a spring bar, or sliding frame attached to the machine, which may press against the
65 arms d, d, with a given degree of force, capable of being adjusted in ways well known to machinists; this will force the follower in when the pressure will bear to be increased, but will otherwise pass without moving it. 70

This machine, as above described is supposed to operate with the cylinders standing vertically, but it may be so varied as to operate horizontally. In this case provision
75 should be made for admitting the grain, on the upper, and discharging it from the lower side of the cylinder.

The pressure within the cylinder may be ascertained and regulated by inserting through its side, a tube into which the grain
80 may enter; there being within said tube a piston, or valve, duly loaded, like a safety valve. I do not, however, depend upon devices of this kind to sustain my claim to invention, as
85 these may be varied almost indefinitely.

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

The agitating of rice, or other grain to be hulled, by revolving and stationary arms, while the grain is subjected to a considerable
90 degree of pressure, in a cylindrical or other suitably formed vessel, in a manner substantially the same with that herein fully set forth.

ELEAZER CARVER.

Witnesses:

SOLOMON HAYWARD,
SAMUEL LEONARD, Jr.