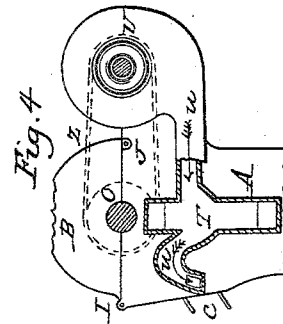
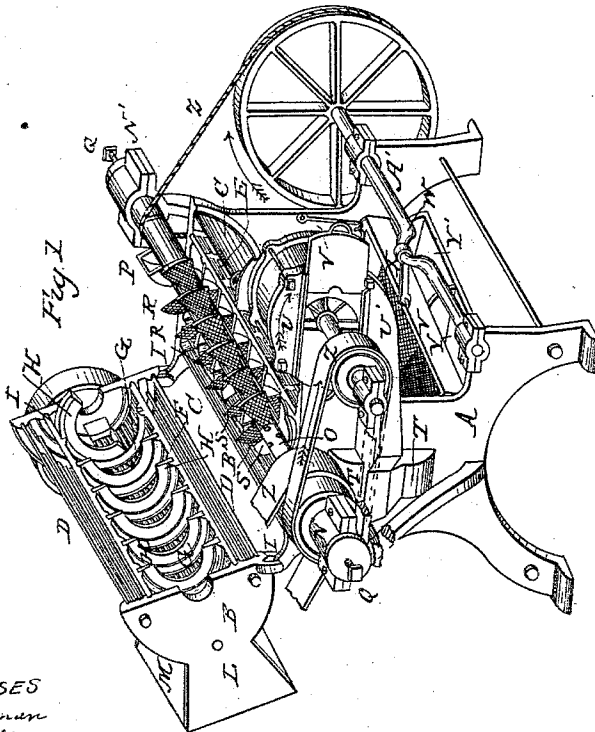
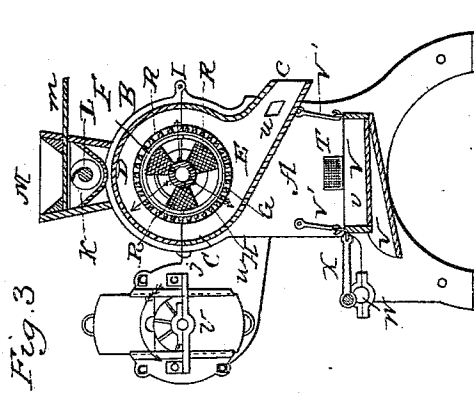
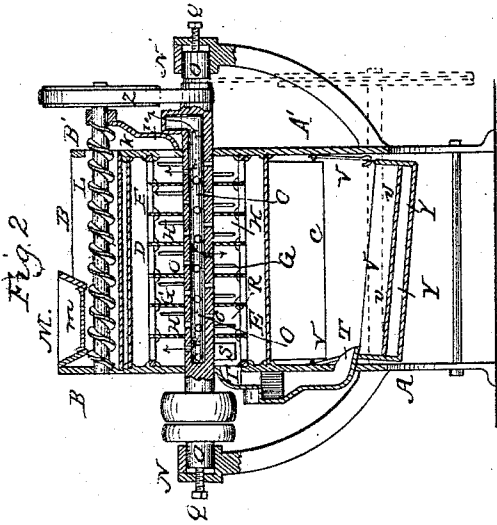


W. WRIGHT.
Hominy Mill.

No. 84,723.

Patented Dec. 8, 1868.



WITNESSES
Jas. H. Layman
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United States Patent Office.

WARREN WRIGHT, OF ST. LOUIS, MISSOURI.

Letters Patent No. 84,723, dated December 8, 1868.

IMPROVED HOMINY AND SMUT-MILL.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, WARREN WRIGHT, of St. Louis city and county, in the State of Missouri, have invented a new and useful Hominy and Smut-Mill; and I hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My invention relates principally to a peculiarly-formed scouring and separating-case, containing an adjustable and hollow blowing and scouring-shaft, the said case and shaft, together with their herein-described appurtenances, being susceptible of adaptation to the various uses of the machine, such as smutting, scouring, hulling, cracking, &c., the smut and other light offal being expelled from the machine as fast as they are separated from the grain.

Figure 1 is a perspective view of a machine embodying my improvements, the case being thrown open.

Figure 2 is an axial section of said machine in its closed condition.

Figures 3 and 4 are respectively a transverse section, and an end elevation thereof.

A A' are the two vertical end-plates of the machine.

B B' are plates in continuation thereof, but disconnected therefrom.

The plates A A', B B' support between them two semi-cylinders C and D, which, when closed together, as in figs 2, 3, and 4, constitute a horizontal cylindrical shell, C D.

These semi-cylinders have two adjacent edges connected by a hinge, I, and their opposite edges by pins J, or other suitable fastening.

The semi-cylinder C has a spout *c* for the escape of the smuts or other offal.

The semi-cylinder D is surmounted by a trough, K, which receives grain from a hopper, M, having one or more regulating-slides *m*, which grain is conducted by a spiral conveyer, L, and through a spout, *k*, into the scouring-cylinder E F, composed of two perforated semi-cylinders E and F, attached to the plates A A', B B', inside of and concentric with the cylinder C D.

The above-described separable cylinders C D and E F, with their end-plates A A', B B', are known collectively as "the double case" in the subsequent description.

The concavity of the scouring-cylinder E F is provided with dovetailed sockets G, for the reception of semi-annular partitions H, capable of ready insertion or removal when the case is open, by being thrust or drawn in direction of the dotted line *x-x*.

Journalled in bearings N N', outside of the double case, and passing axially through it, is a hollow shaft, O, closed at the ends, with the exception of a cup or scoop, P, near one end for gathering the air. That portion of the shaft O within the case has numerous orifices, *o*, to deliver air into the case, and thus drive the smut and other small refuse through the inter-

stices of the scouring-cylinder immediately upon their separation from the grain.

Q Q' are set-screws by which the hollow shaft O is adjusted longitudinally in the case.

Projecting radially from the shaft O, in close proximity to the partitions H, are roughened blades R, the said blades being adapted for either cracking or hulling, or merely scouring the grain, according to their distance from the partitions H, which distance is regulated by the set-screws Q Q'.

The shaft O is also armed in the plane of the partitions H with wedge-formed wings S, whose receiving-sides are on the plane of rotation, and whose delivering-sides are oblique thereto.

These blades S operate in conjunction with said partitions as cut-offs, both to prevent a retrograde motion of the grain, and to crowd it forward from one compartment to another until it reaches the delivering-end of the case, whence it is, by one or more spiral blades S', forced into a spout, T, which conveys off the now hulled, scoured, or cracked grain into a suitable bin or other receptacle.

In order to rid the escaping grain of all offal not previously removed, the discharging-spout is traversed transversely by a blast from a fan, U, whose pipe, *u*, entering the discharge-spout T, assumes on the other side of said spout the form of an upturned crook, *u'*, which, while delivering the offal into the spout *c*, enables the lighter grains or grits, which have been carried partially forward, to fall back and be delivered with the balance of the grain.

The spout T discharges on to a sloping screen, V, suspended by arms V', and vibrated laterally by crank W and pitman X.

The screen V may have two or more grades of meshes *vv'*, and as many chutes Y Y', so as to discharge different grades of grain or hominy from its upper and lower portions.

Suitable belting, Z, maintains the proper relative motions of the parts.

My mill may be adapted for either smutting or scouring or hulling or cracking grain, first, by end-adjustment of the scouring and blowing-shaft O, so as to bring the abrading-surfaces of the blades R into greater or less proximity to the partitions H, whereby said, surfaces are made more or less rapid and effective; second, by removal or insertion of one or more of the partitions H, so as to increase or diminish the number of abrading-surfaces, and, at the same time, to retard or expedite the passage of grain through the case. In addition to these adjustments, the operator will, of course, give such opening to the hopper, and such speed to the scouring and separating-mechanism as may be required by the nature of the work in hand.

I claim herein as new, and of my invention—

1. The "double case," consisting of the divided end-plates A B, A' B', the divided cylindrical shell C D, and

the divided perforated scouring-cylinder E F within and concentric with said shell C D, all said parts being arranged to operate substantially as herein described, for the purposes set forth.

2. In combination with the partitions H, the wedge-formed wings or cut-offs S, arranged upon a rotating shaft, in the manner set forth.

3. The longitudinally-adjustable scouring and blowing-shaft O, constructed with the air-gathering cup or scoop P, and air-discharges o, and armed with roughened blades R, wedge-formed wings or cut-offs S, and spiral discharge-blades S', in combination with a hori-

zontal partitioned and perforated cylinder, substantially as herein described, for the purposes specified.

4 The combined arrangement, with the descending grain-discharge spout T, of the laterally-traversing and upturned blast-passage U u u', substantially as described, for the purpose specified.

In testimony of which invention, I hereunto set my hand.

WARREN WRIGHT.

Witnesses:

GEO. H. KNIGHT,
H. G. WEBBER.