

E. M. QUERY.
GRINDING AND HULLING-MILL.

No. 173,558.

Patented Feb. 15, 1876.

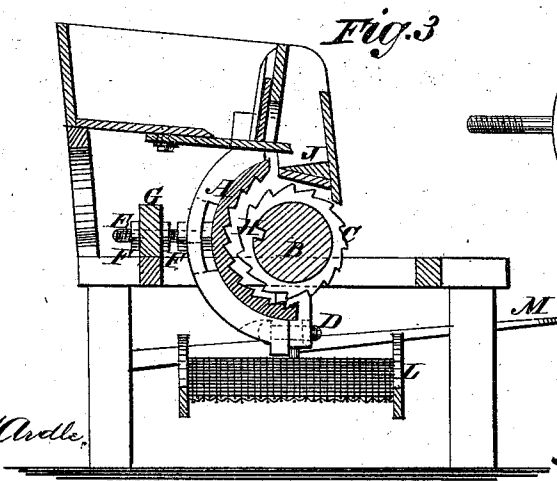
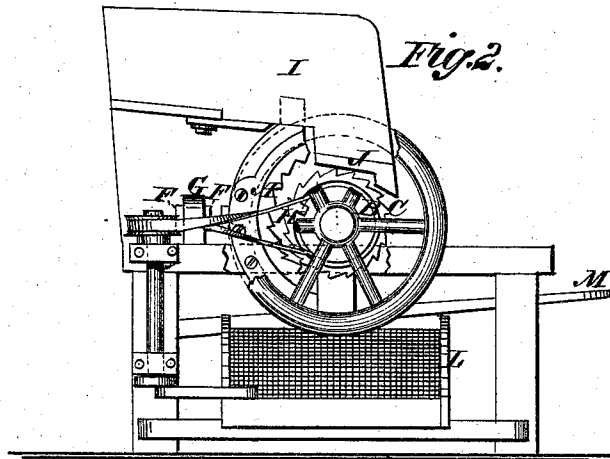
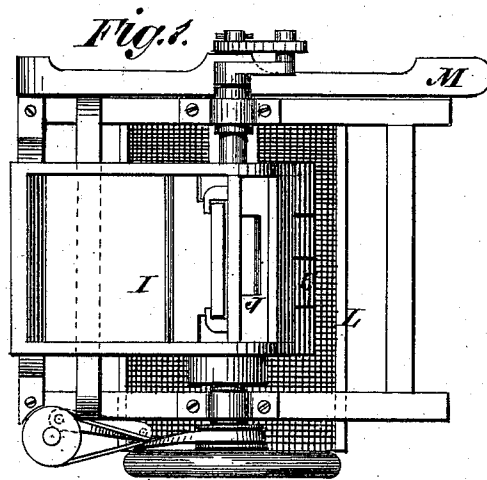
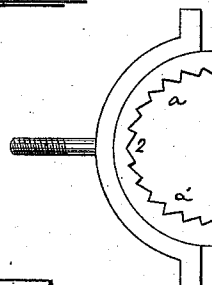


Fig. 4.



WITNESSES:
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UNITED STATES PATENT OFFICE.

ELAM MORRISON QUERY, OF HARRISBURG, NORTH CAROLINA.

IMPROVEMENT IN GRINDING AND HULLING MILLS.

Specification forming part of Letters Patent No. **173,558**, dated February 15, 1876; application filed October 2, 1875.

To all whom it may concern:

Be it known that I, ELAM M. QUERY, of Harrisburg, in the county of Cabarrus and State of North Carolina, have invented a new and Improved Grinding and Hulling Mill, of which the following is a specification:

The invention consists in constructing a grinding and hulling machine with reversible, and, therefore, self-sharpening, teeth on the cylinder and concave, as hereinafter described.

Figure 1 is a plan view of my improved mill. Fig. 2 is a side elevation, and Fig. 3 is a sectional elevation. Fig. 4 exhibits my reversible concave.

Similar letters of reference indicate corresponding parts.

A is the toothed concave; B, the cylinder; and C, the toothed rings on the cylinder.

The lower edge of the concave is bolted to the cross-bar D, and at the middle of the back it is connected by the bolts E and jam-nuts F with the bar G, toward and from which it is adjustable by the jam-nuts for varying the distance between it and the rings C as required for different kinds and conditions of grains.

The rings are cast with a key, H, and the cylinder is made with a corresponding groove to receive the key when the rings are put on, the rings being slipped on from one end, so

that they can be changed readily for applying rings with teeth of different kinds for different kinds of work, and to adapt the machine for grinding or hulling grain; also, for crushing vegetables, and, by the application of cutters, for cutting hay and straw.

I is the hopper; J, a kind of feed-shoe; L, a sieve or screen; and M, a foot-treadle, by which the machine may be worked by foot-power, if preferred; but in practice it will be worked by horse, steam, or other power.

The general operation that characterizes the above machine does not differ materially from that of other machines, but, by using the detachable rings on cylinder B, and causing the two sets of teeth *a a'* on the concave to be constructed of a corresponding form, each set being inclined from the point 1 to the medium point 2, I can reverse my teeth so as to make them self-sharpeners.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

A grinding and hulling machine having the cylinder and concave teeth reversible, as and for the purpose specified.

ELAM MORRISON QUERY.

Witnesses:

JAMES F. JOHNSON,
T. L. VAIL.