H. W. PITTS.

Corn Grinder.

No. 1,670. Patented July 1, 1840.

Fig: 1.

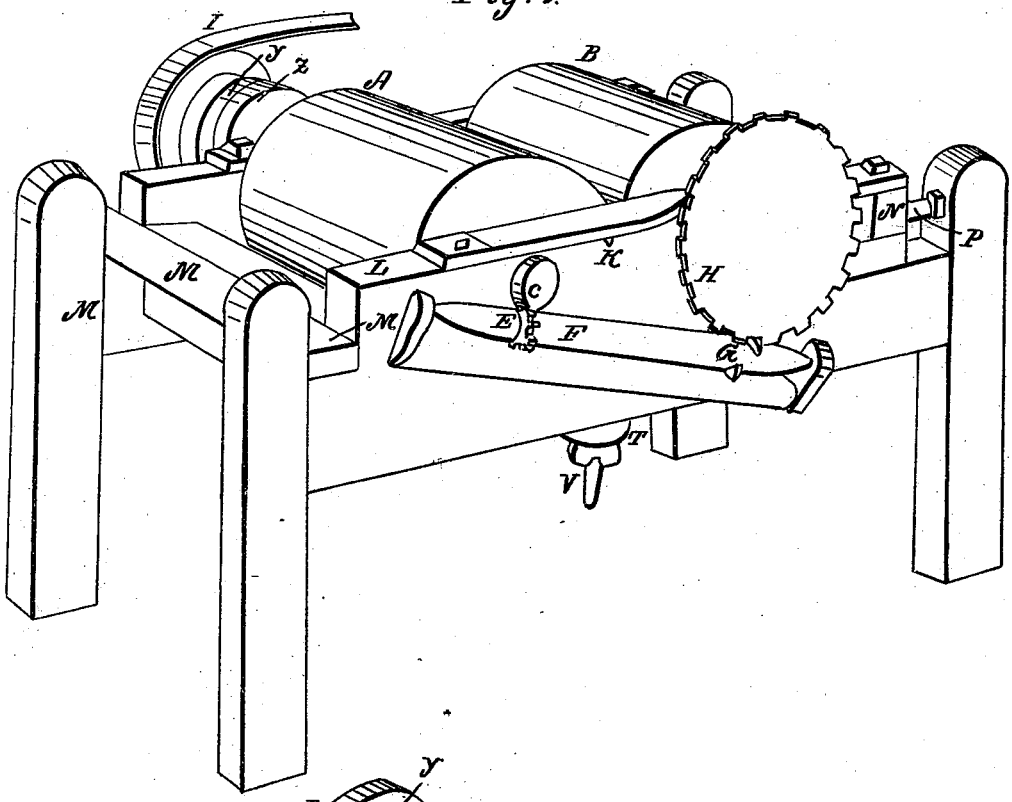
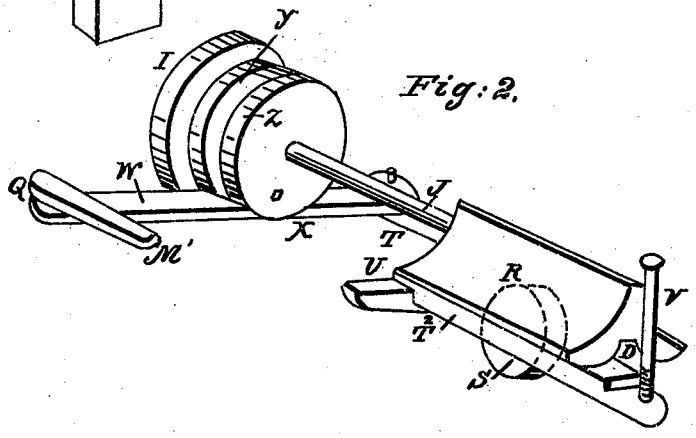


Fig: 2.



UNITED STATES PATENT OFFICE.

HARVEY W. PITTS, OF WILSONVILLE, ALABAMA.

CYLINDER-MILL FOR GRINDING CORN AND OTHER GRAIN.

Specification of Letters Patent No. 1,670, dated July 1, 1840.

To all whom it may concern:

Be it known that I, HARVEY W. PITTS, of Wilsonville, Shelby county, State of Alabama, have invented a new and useful machine for grinding corn and other grain by means of parallel rollers turning toward each other, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a perspective view of the machine. Fig. 2 is a perspective view of the double concave and the apparatus for vibrating it.

Similar letters refer to similar parts in the figures.

This machine consists of two parallel stone cylinders A, B, Fig. 1, turning toward each other at different velocities by means of a worm C on the axle of the fast moving cylinders A to which the driving power is applied, working into a small pinion E on an inclined revolving shaft F on which there is a spiral screw G which works into a large cog wheel H on the axle of the slow moving cylinder B, between which cylinders the grain is admitted through a hopper placed above them. The driving power being applied to the axle of the fast moving cylinder A by band and pulley I, the axles of the cylinders turning in sliding boxes placed in long openings K in the side pieces of an iron rectangular frame L secured on the top of a suitable frame of wood M of convenient size and strength to contain and support the parts before described. In order to set the slow moving cylinder nearer to the fast cylinder its axle is placed in sliding boxes N which move in the before mentioned opening by means of horizontal set screw P passing through the ends of the metallic frame and pressing against the aforesaid sliding boxes.

The gearing may be varied to suit the views of the constructor—for instance, instead of the worm on the axle of the fast moving cylinder a spur pinion may be substituted therefor working into a small cog wheel on the inclined axle. The fast cylinder acts as the grinder—the slow one as the feeder against which the grinding is performed.

For increasing the grinding surface a double concave R Fig. 2 is placed under the cylinders resting on the periphery of a roller S placed in a groove D made on the under side of the concave whose axle turns in a bridge tree T^2 attached by one of its ends to the under side of one of the side rails of the frame by a loose joint Q, while its other end is raised or lowered by a screw rod V passing through the other side rail of the frame in order to bring the concave nearer to or farther from the cylinders if required.

To prevent the meal from clogging on the surfaces of the rollers and to cause them to grind much better said double concave is made to receive a vibratory motion on said roller in the following manner: To one end of the concave there is attached by a short connecting rod T′ the end of a horizontal bar W placed lengthwise of the frame and at the side thereof whose other end is attached to a cross girth M′ of the frame by a loose joint Q on which it moves. From this bar there rises a pin X (represented by dotted lines) which enters a zig zag groove Y made on the periphery of a roller Z fixed on one end of the axle J, of the fast cylinder A projecting beyond the side of the frame so that as the cylinder A performs one revolution the concave R receives two movements back and forth.

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

The double vibrating concave in combination with the fast and slow moving cylinders for grinding grain as herein set forth.

H. W. PITTS.

Witnesses:

E. MAHER,

DAVID THOMAS.