

Grist Mill.

No. 7,844.

Patented Dec. 17, 1850.

FIG. 1.

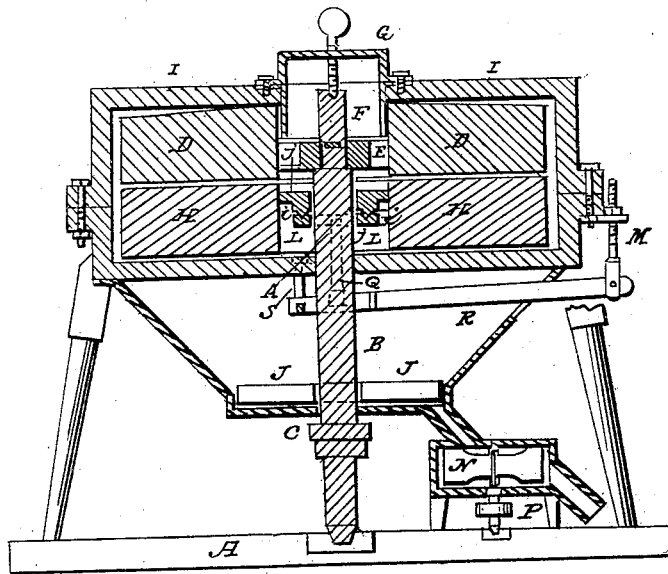


FIG. 3

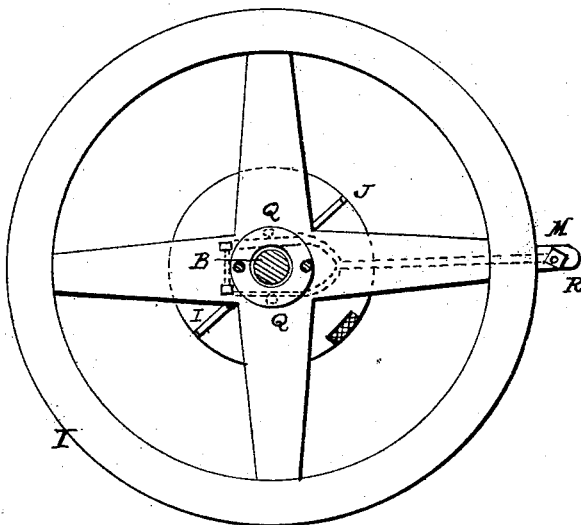
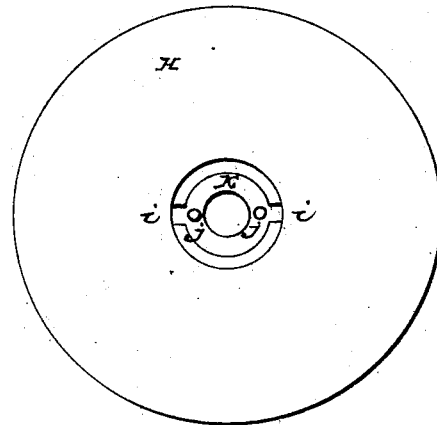


FIG. 2.



UNITED STATES PATENT OFFICE.

JOHN ROGERS, JR., OF JACKSON, MICHIGAN.

MILL FOR GRINDING.

Specification of Letters Patent No. 7,844, dated December 17, 1850.

To all whom it may concern:

Be it known that I, JOHN ROGERS, JR., of the town and county of Jackson and State of Michigan, have invented a new and useful Improvement in Grist-Mills, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1, is a vertical section of the part of a grist mill showing my improvements. Fig. 2 is a plan of the bed stone inverted, showing the upper plate of the universal joint. Fig. 3 is a plan showing the bottom of the case in which the stones are arranged and lower plate of the universal joint, by which the bed stone is sustained.

Where the same letters occur in the several figures they indicate like parts.

The main body of this grist mill being made like other mills in use renders it unnecessary to give a particular description of the same.

My improvement relates to the manner of supporting the bed stone by a universal joint upon a lever raised and lowered by a screw for raising or lowering the bed stone, the universal joint rendering the bed stone self adjustive in relation to the runner. Also to the formation of an annular space between the stones and runner in combination with a funnel shaped space beneath the bed for the free discharge of the meal and increase of draft. Likewise in the arrangement of a fan and fan case in connection with the inclined spout leading from the bottom of the funnel shaped portion of the case for promoting a downward draft through the machine for keeping the meal cool, preventing it from sweating or clogging, and for promoting a free discharge of the meal as fast as it is ground.

A is a sill, or bed piece, containing the step or bearing, the spindle.

B is the spindle.

C is a pulley on the spindle around which a band is passed leading to the driving power.

D is the runner fixed to the spindle and turning with it.

E is the driver affixed to the spindle and runner causing the runner to turn with the spindle.

F is a key for keying the runner fast to the spindle.

G is a plate secured permanently to the top of the case or frame, said plate containing the upper bearing of the spindle.

H is the bed stone. The spindle runs through the bed stone.

I is the case surrounding the stones.

J is a scraper fixed to and turning with the spindle for scraping the meal toward the discharging spout.

The parts above named are made in the usual manner. K is a circular ring fixed securely in the center of the bed stone having two arms *i i* on its edge, and two projections *j j* on its under side, the one diametrically opposite to the other, its inner diameter being greater than the diameter of the spindle so that it shall not touch the spindle when the bed stone wabbles from any cause.

L is a circular ring of the same size as the one just mentioned, or nearly of the same size, and placed beneath the same, the projections aforesaid of ring K resting upon its upper surface. This ring L is balanced upon the points of two vertical rods Q attached to the adjustive lever R at right angles to the aforesaid projections on the upper ring, which brings the center weight of the bed stone upon the lever, whose fulcrum S which is at the end of the lever, is sustained by two hangers S² attached to the frame or otherwise or by any convenient means. These parallel circular plates K L, supporting points *i i* and *j j* and lever R and screw M form the universal joint by which the bed stone H is sustained and becomes self adjustive.

M is a vertical screw for raising and lowering the long end of the lever and holding it at any required position.

Heretofore the runner has been balanced upon the spindle and raised and lowered by elevating or depressing the bridge-tree, which has been found in practice objectionable. Raising and lowering the bed stone and making itself adjustable is preferable.

N is the revolving fan caused to turn at considerable speed for driving the air and meal from the base and lower portion of the discharging spout and thereby creating a partial vacuum in the fan case and spout, to which the air rushes from above—being obliged to pass through the eye of the runner and between it and the bed stone and down through the annular and funnel shaped

spaces to the inclined discharging spout and thence to the fan case—the cases and spouts being entirely air tight and having but the two openings—one for the entrance of the
5 air and the other for its discharge.

P is a pulley on the shaft of the fan around which a band passes to the driving power.

10 Having thus described the nature of my invention and improvement and shown the manner in which it operates. I do not claim simply hanging the bed stone H so that it can be raised and lowered and caused to retain its grinding surface parallel with
15 the grinding surface of the runner whether

that turns horizontally or slightly inclined, this having been done. But

What I do claim, is—

Hanging the bed stone (when the shaft or spindle to which the runner is attached 20 passes through the same) by means of the before described universal joint, in combination with the lever and screw as aforesaid.

In testimony whereof I have hereunto signed my name before two subscribing wit- 25 nesses.

JOHN ROGERS, JR.

Witnesses:

WM. P. ELLIOT,

ARTHUR C. WATKINS.