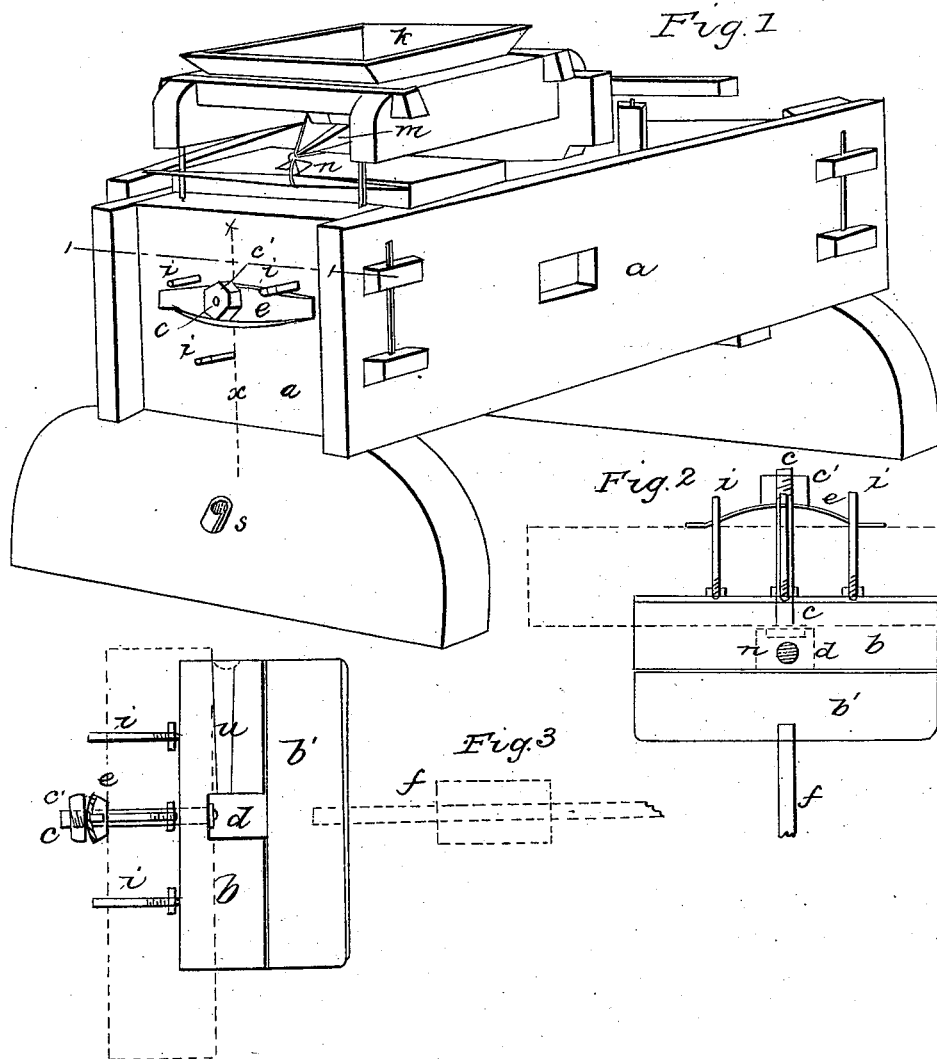


Z. GRIFFIN.  
Grinding Mill.

No. 5 829.

Patented Oct. 3, 1848.



# UNITED STATES PATENT OFFICE.

ZACHARIAH GRIFFIN, OF MONTGOMERY, ALABAMA.

## MILL FOR GRINDING.

Specification of Letters Patent No. 5,829, dated October 3, 1848.

*To all whom it may concern:*

Be it known that I, ZACHARIAH GRIFFIN, of Montgomery, in the county of Montgomery and State of Alabama, have invented certain new and useful Improvements in Mills for Grinding Grain and other Substances, of which the following is a full, clear, and exact description, reference being had to the annexed drawings of the same, making part of this specification, in which—

Figure 1 is a perspective view, showing the several parts in connection, Fig. 2 is a horizontal section through the line 11 of Fig. 1, and Fig. 3 is a vertical longitudinal section taken through the line *x x* of Fig. 1.

The same letters indicate the same parts in all the figures.

Heretofore it has been found very difficult to adjust the stationary or bed-stones of corn mills in consequence of their excessive brittleness because of which they will not sustain for any length of time a rigid strain of even one quarter of their ultimate strength without breaking, in consequence as it is supposed of the tremor or jar produced by the motion of the machinery, which combined with the strain separates the crystals of which the stone is composed by degrees gradually producing a fracture and at length breaking the stone in two or more pieces. With the view of obviating this difficulty, I instituted a series of experiments which have resulted in the discovery that a mill stone may be subjected to an amount of strain approximating very closely to its ultimate strength without danger of breaking provided such strain be elastic, and by applying the discovery I have been enabled to adjust the bed-stone of my mill with the utmost accuracy and firmness, so as to make it coincide with the runner.

The accompanying drawings represent a horizontal mill in which the stones are placed with their faces in a vertical position, the bed-stone *b* Figs. 2 and 3 being secured to the end timber of the frame by a screw-bolt *c* the head of which is inserted into a cavity *d* in the center of the face of the stone, its shank passing through the stone, the end timbers, and the middle

of the semi-elliptic steel spring *e*, in which position it is held by the nut *c'*.

The turning stone or runner *b* is mounted upon the end of the spindle or shaft *f* which rests on suitable bearings formed in the frame, and the stones are caused to run closer or more open as may be required, by a set screw at the outer end of the shaft *f*, the frame work and the shaft are inclined slightly so that the gravity of the running stone may prevent it from pressing against the bed-stone.

Preparatory to adjusting the stones the faces of both must be dressed so as to form a true plane, the bed-stone is then secured in its place by the bolt *c* and the runner *b* is put in position and forced by the set-screw at the outer end of its spindle as near to the bed stone as it can approach without contact, the set-screws *i i i* are then turned against the bed-stone until it is adjusted into the same plane with the runner and when once adjusted is not liable to move, and will rarely require to be touched until the face of the stones require dressing.

The grain to be ground is placed in the hopper *h* whence it runs down into the shoe *m* and through the tube *n* into the eye of the stone, and is converted into meal by passing between the stones in the usual way, the meal being discharged from the spout *s* into any suitable receptacle placed to receive it.

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

The combination of the spring *e* screwbolt *c* and set screws *i i i* with the bed stone *b* substantially as herein described, for the purpose of adjusting the same in a firm but not rigid manner whereby its breaking from the pressure of the set screws necessary to its adjustment is prevented.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

Z. GRIFFIN.

Witnesses:

J. M. THAYER,  
P. H. WATSON.