G. SELSER.

Grinding Mill.

No. 23,431. Patented March 29, 1859.

Fig. 1.

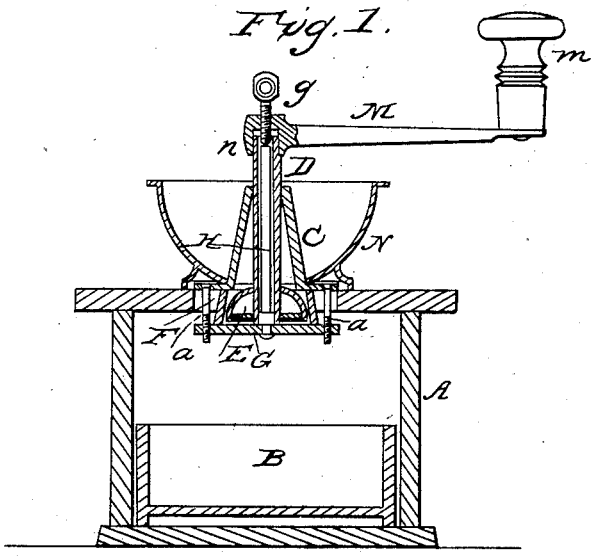


Fig. 3.

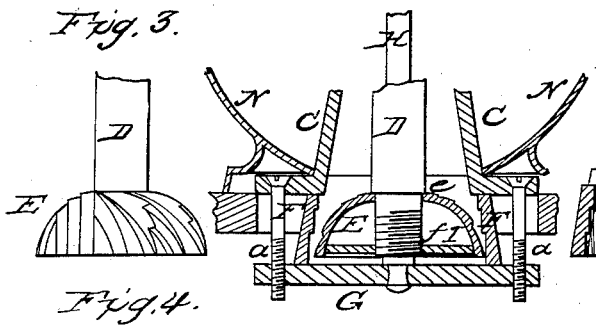


Fig. 5.

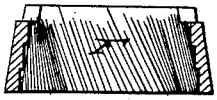


Fig. 4.

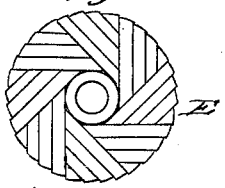
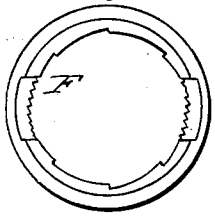


Fig. 6.



Witnesses:
Henry Howson
Horace Lee.

Inventor:
George Selser

UNITED STATES PATENT OFFICE.

GEORGE SELSER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND J. COOK AND W. COOK, OF SAME PLACE.

IMPROVEMENT IN GRINDING-MILLS.

Specification forming part of Letters Patent No. **23,431**, dated March 29, 1859.

To all whom it may concern:

Be it known that I, GEORGE SELSER, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Grinding-Mills; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention consists in a peculiar mode, described hereinafter, of securing the hollow steel burr of a grinding-mill to the spindle, so that the said burr may be readily removed and replaced; and my invention further consists in devices, fully explained hereinafter, whereby the distance of the burr from the shell may be regulated at pleasure.

In order to enable others to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawings, which form a part of this specification, Figure 1 is a sectional elevation of my improvement as applied to a coffee-mill; Fig. 2, an enlarged sectional view of the grinding part of the mill; Fig. 3, a detached view of the burr; Fig. 4, a plan view of the same; Fig. 5, a detached sectional view of the shell; Fig. 6, a plan view of the same.

Similar letters refer to similar parts throughout the several views.

A is a box containing a drawer for receiving the ground materials. To the top of the box is secured a stand C, in the upper end of which turns the hollow spindle D, the burr E being secured to the lower end of this spindle, in the manner described hereinafter. F is the shell of the mill, secured between the under side of the stand C and the cross-bar G by means of screws *a a*, the lower end of the rod H, which passes through the interior of the hollow spindle, being secured to this cross-bar. The burr and shell are made of hardened steel by a process unnecessary to describe here, as being foreign to the present application. In order to attach the hardened steel burr to the spindle, a shoulder is formed at *e*, near the lower end of the spindle D, and a screw is formed at the extreme end. A plate I is fitted snugly to the interior of the steel burr, and into the plate is screwed the end of the hollow spindle until the shoulder *e* bears tight against the top of the burr, when the latter will be as firmly secured to the spindle as though it formed a part thereof.

M is the arm for turning the burr, having at one end the usual handle *m* and at the opposite end a hub *n*, which is screwed tight into the top of the hollow spindle D. The top of the hub *n* of the arm is closed, with the exception of an opening for admitting the thumb-screw *q*, the point of which bears upon the end of the rod H in the interior of the hollow spindle D, so that on turning the thumb-screw in one direction the hollow spindle with its steel burr will be raised and the teeth of the latter brought nearer to those of the shell, and on turning the screw in the opposite direction the spindle and burr will be lowered, thus allowing the mill to be readily regulated to grind the material either coarse or fine.

N is a cup for containing the material to be ground, the latter passing through an opening in the bottom of the cup into the space between the shell and the burr.

It will be seen that both the shell and burr may be readily detached from their fastenings when their teeth are worn or broken, and that they may be as readily replaced by new ones.

I claim and desire to secure by Letters Patent—

Attaching the hollow steel burr to the spindle D by screwing or otherwise securing the end of the latter to a plate I, which is fitted snugly to the inside of the burr, a shoulder *e* on the spindle bearing on the top of the burr, as herein set forth.

I testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE SELSER.

Witnesses:

HENRY HOWSON,

HORACE SEE.