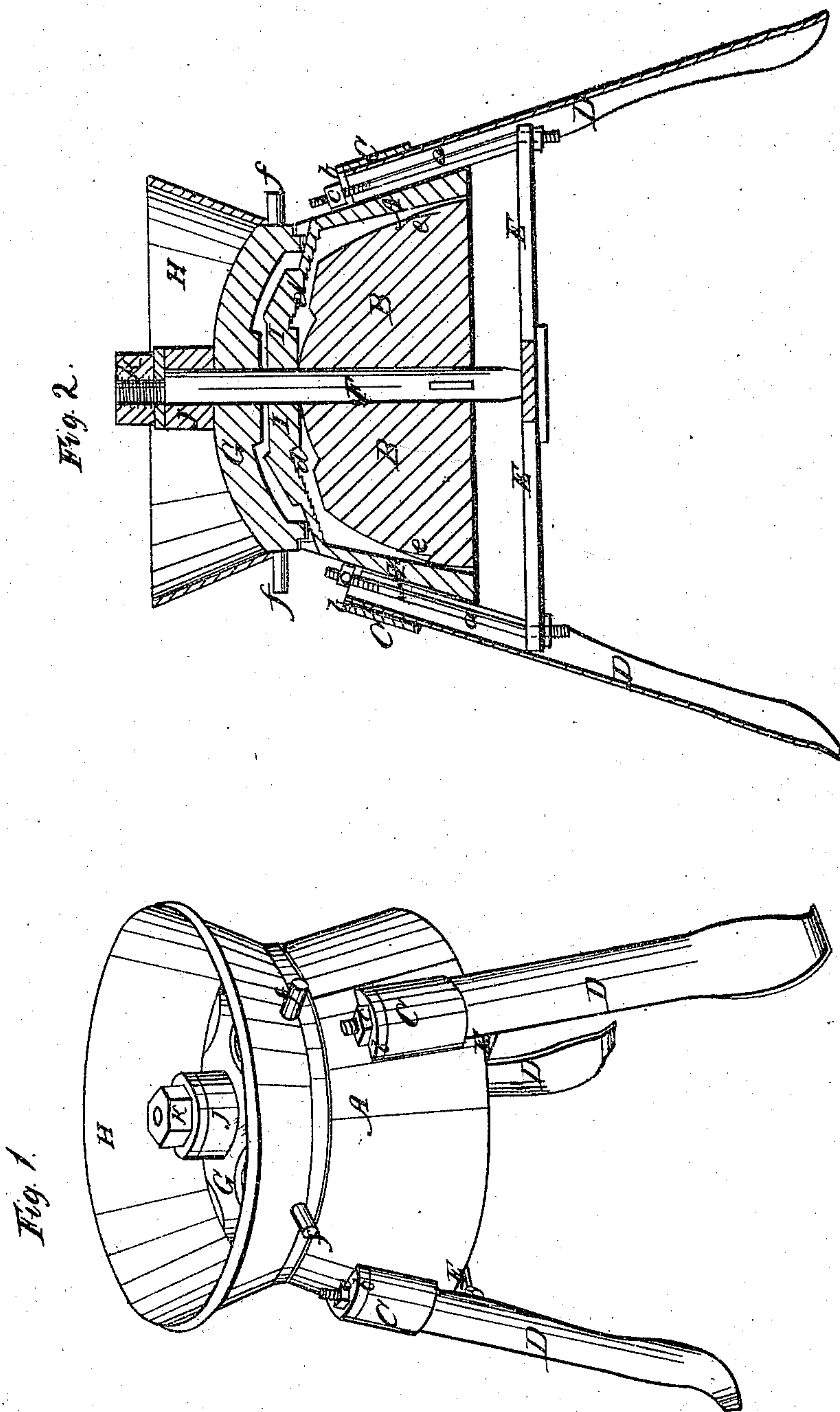


L. SCOTT.  
PORTABLE GRINDING MILL.

No. 10,931.

Patented May 16, 1854.





# UNITED STATES PATENT OFFICE.

LYMAN SCOTT, OF ST. LOUIS, MISSOURI.

## PORTABLE GRINDING-MILL.

Specification forming part of Letters Patent No. 10,931, dated May 16, 1854; Reissued July 10, 1855, No. 316.

*To all whom it may concern:*

Be it known that I, LYMAN SCOTT, of the city and county of St. Louis and State of Missouri, have invented certain new and useful Improvements in Portable Mills for Grinding Grain, etc.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, in which—

Figure 1 represents a perspective view of the mill, and Fig. 2 represents a vertical section through the same.

The nature of my invention consists in spreading the points where the fine grinding is done by the alternate shallow and deep sections on the bur, for the purpose of preventing a surfeiting or clogging of the grain at any one point; also, in the method of supporting the shell and adjusting the bur therein.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A, represents the shell, and B, the bur, which are of a conical form. On the outside of the shell are cast the sockets C, into which the hollow or grooved legs D, D, D, are firmly secured by wedges or otherwise, and which support the entire mill. A bridge tree E, is placed underneath the shell, and is made adjustable by the screw rods *a, a*, which pass through the arms of the bridge tree, thence up through the hollow or grooved legs D, and have a nut *c*, which is run down and rests on a cap or plate *b* placed over the sockets C. The arms of the bridge tree fit into the grooves of the legs and are guided therein, while the bridge tree is raised or lowered by the screw rods *a*, to adjust the bur in the shell. In a step in the bridge-tree E, the shaft or spindle F of the bur rests and rotates, and near the top of said spindle is placed a driver G, which is attached to and runs with the bur B. The hopper H, is set on top of this runner, and its motion aids in loosening and shaking or working down the material toward the grinding surfaces. Between the driver G, and the bur B, is placed a bridge tree I, which supports the upper part of the spindle F. The bridge tree I, is fixed to the shell and is stationary, while the driver above it and the bur below it have a rotary motion.

The corn, either on or off the cob, or other material is thrown into the hopper H, in bulk. It is caught between the driver and bridge tree and broken up or reduced. Thence it falls upon the top of the bur, which is provided with sharp edged furrows, working against other similar furrows *d*, on the underside of the bridge tree I, where it is still further reduced, and thence passes down between the bur and the shell, where the operation is completed.

In mills with conical burs and shell, as heretofore constructed, there is a point or line where the fine meal is first made. This line extends in a plane all around the bur, or at a uniform distance below the top of the bur. The difficulty, in practice, with such an arrangement is that the material surfeits or clogs at that line, it being first checked there by the proximity of the bur and shell. To avoid this evil, I make on the bur alternate sections of deep and shallow grooves, breaking the general outline of the bur (as seen at *e, e*, Fig. 2) and thus cause the meal making point to be scattered over more of the surface of the bur, and entirely prevent the evil incident to machines otherwise constructed.

The mill may be driven by levers or arms attached to the projections *f, f*, which are secured to the driver, or the projections may be removed and the mill run by a belt passing around the driver.

I thus construct a very cheap and effective portable mill, which carries its supporting, adjusting, and driving parts with it, and may be worked wherever it is set down, without adding thing to it except the power to drive it, which may be by horses, water, or any other power.

J, is a washer, and K, a nut on top of the spindle, the washer running with the spindle on which it fits by a feather and groove. By these the bur may be raised or lowered to make the permanent adjustment of the bur to the shell, so as to grind very fine or coarse, even to the shelling of the grains from the cobs if desired.

Having thus fully described the nature of my invention, what I claim therein as new and desire to secure by Letters Patent is,

1. I claim the alternate deep and shallow sections of furrows, upon the main grinding surface of the bur, for the purpose of distributing the material over said surface, and



preventing a surfeit or clogging upon any one point of said grinding surface, substantially as described.

2. I also claim the method of supporting  
5 the shell, and adjusting the bur therein, by means of the lower bridge-tree, grooved legs, sockets, and adjusting screw rods, when

said legs serve the double purpose of supports to the shell, and guides to the bridge tree, substantially as described.

LYMAN SCOTT.

Witnesses:

A. B. STOUGHTON,

SAML. GRUBB.

[FIRST PRINTED 1913.]