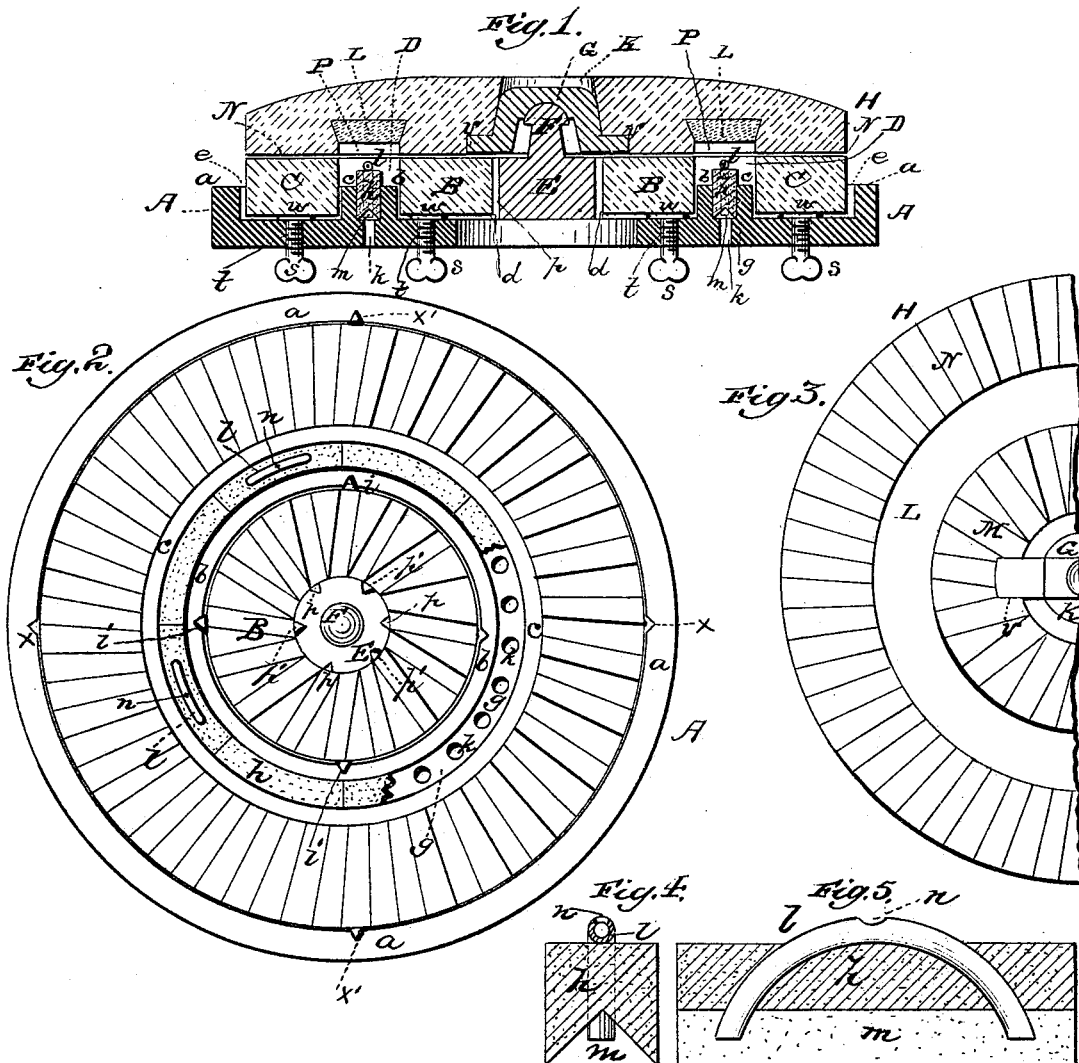


(No Model.)

J. P. LANCASTER.
GRINDING MILL.

No. 266,845.

Patented Oct. 31, 1882



WITNESSES
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UNITED STATES PATENT OFFICE.

JOHN P. LANCASTER, OF GOSHEN, INDIANA.

GRINDING-MILL.

SPECIFICATION forming part of Letters Patent No. 266,845, dated October 31, 1882.

Application filed June 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. LANCASTER, a citizen of the United States, and a resident of Goshen, in the county of Elkhart and State of Indiana, have invented a new and valuable Improvement in Grinding-Mills; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 is a central vertical sectional view of my improved grinding-mill. Fig. 2 is a plan view of the lower stone, with a portion broken away to show the perforations in the base. Fig. 3 is a bottom view of a section of the upper stone, and Figs. 4 and 5 are detail views.

This invention has relation to grinding-mills; and it consists in the construction and novel arrangement of parts, as will be hereinafter fully described, and pointed out in the claims appended.

In the accompanying drawings, the letter A designates the bed-plate of metal, having an outer rim, *a*, and concentric therewith an inner rib, *b*, and an intermediate rib, *c*, of the same material. The inner rib, *b*, forms the wall of a circular recess, *d*, in which the inner lower stone, B, is seated. Between the rim *a* and the intermediate rib, *c*, is the outer circular recess, *e*, in which the outer circular lower stone, C, is seated. Between the outer stone, C, and the inner stone, B, is a chamber, D, in which the grain is ventilated and moisture evaporated therefrom. Between the ribs *b* and *c* is formed a recess or seat, *g*, for the porous filling *h*, which extends a short distance above the tops of the rims *b* and *c*, and in the bottom of the recess *g* are the perforations *k* in the bed-plate, which communicate with a channel or passage, *m*, in or under the porous filling *h*, for ventilating purposes. Through the porous filling *h* extend arched tubes *l* in such a manner that their open ends communicate with the air-passage *m*, and openings *n* are provided in their upper portions, which project above the filling and in the chamber D, so that air is introduced freely into this chamber. In this way the air acts not only upon the ground material, but also upon the porous filling.

E represents the center bearing-block, having a rounded pivot, F, on which the driver G of the running-stone bears. This block is arranged so that it projects through the eye of the inner stone, B. The block E is provided with vertical tapering bearings *p*, for the reception of wedges *p'*, which, being introduced between said bearings *p* and the wall of the eye of the inner stone, rigidly secure the lower stone to the bearing E. Similar wedges in bearings *i* in the inner wall of the inner rib, *b*, of the bed-plate serve to fix the vertical adjustment of the inner stone. The vertical adjustment or leveling of this stone is effected by means of set-screws *s*, which are arranged in threaded bearings *t* in the bottom of the bed-plate, and, projecting upward, serve as bearings, in which the stone, protected by wear-plates *w*, rests. By means of similar set-screws, *s*, passing through the bottom of the bed-plate A, the outer lower stone, C, is vertically adjusted or brought into level position. This stone is secured in position after adjustment by means of the wedges *x'* and the vertical seats *x* therefor, which are formed in the inner wall of the outer rim, *a*.

H designates the upper or running stone, having the upwardly-tapering eye K, in the lower portion of which are formed the offset-recesses for the ends of the driver G, whereby this stone is supported on the pivot F. M represents the inner circular dressed portion of this stone, and N the outer circular dressed portion thereof. These portions are of similar dress, and are equal in area of surface, respectively, to the inner lower stone, B, and the outer lower stone, C, and they are designed to work truly on these lower stones. Between the inner dressed portion, M, and the outer dressed portion, N, of the runner is a circular recess, P, equal in width to the distance between the inner and outer lower stones, and designed to be partially filled with porous material L. This recess is located, when the runner is in position, exactly over the chamber D, between the lower stones, and forms a covering or top therefor. The porous material employed with these stones is plaster-of-paris or other absorbent of moisture. The dressed faces of the upper stone are similar to those of the lower stone, but are reversed in regard to their angular position when

the runner is in working position, so that the cutting-edges of the dress intersect in their action.

5 Having described this invention, what I claim, and desire to secure by Letters Patent, is—

10 1. In a grinding and reducing mill, the bed-plate having the outer rim, *a*, the inner concentric rib, *b*, the intermediate concentric, *c*, and the perforations *k* through the bottom of said plate into the recess formed between the inner and intermediate ribs, substantially as specified.

15 2. In a grinding and reducing mill, the combination, with a bed-plate having perforations *k*, of an inner circular stone, *B*, an outer circular stone, *C*, a ventilating chamber or recess between the two stones, a porous filling in the recess, and air-tubes *l* extending through said

filling to said air-chamber under the same, which communicates with the perforations of the bed-plate, substantially as specified. 20

3. In a grinding and reducing mill, the combination, with outer and inner concentric lower stones having dressed faces, a ventilating-chamber, and porous filling, of a running-stone having inner and outer dressed faces and an intermediate circular porous filling covering the ventilating-chamber between the lower stones, substantially as specified. 25

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses. 30

JOHN P. LANCASTER.

Witnesses:

HARDING JAMES,
ISRAEL D. WOLFE.