

H. O'CONNOR.

Improvement in Mill-Stone Dress.

No. 132,514.

Patented Oct. 22, 1872.

Fig. 1.

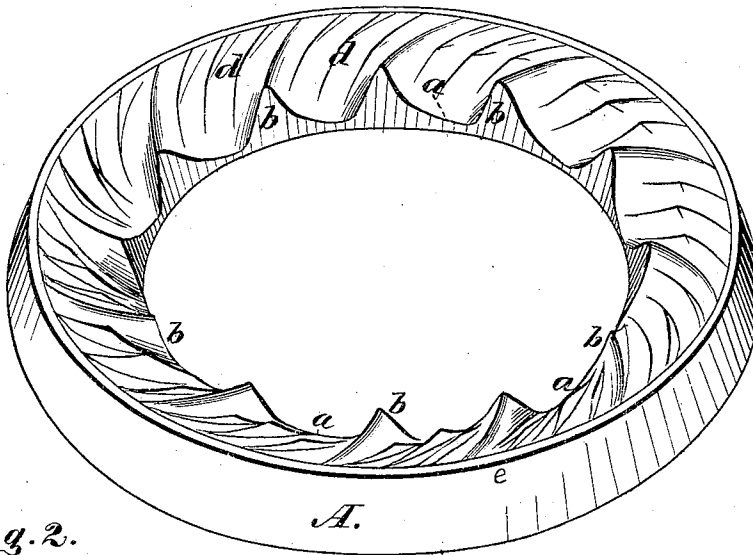
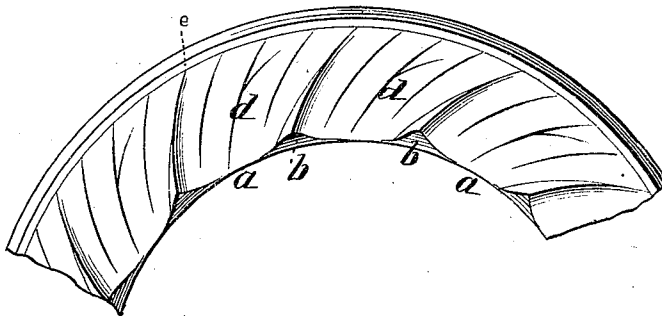


Fig. 2.



Fig. 3.



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UNITED STATES PATENT OFFICE.

HAINES O'CONNOR, OF MISHAWAKA, INDIANA.

IMPROVEMENT IN MILLSTONE-DRESS.

Specification forming part of Letters Patent No. **132,514**, dated October 22, 1872.

To all whom it may concern:

Be it known that I, HAINES O'CONNOR, of Mishawaka, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Grinding-Mills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which forms a part of this specification.

My invention relates to grinding-mills; and consists in an improvement in the grinding-rings, as hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a perspective view; Fig. 2 a vertical section of my improved grinding-ring; and Fig. 3 a is a plan view of a portion of the same.

A represents the ring provided with receivers *a a* at the inner periphery, sectional or dividing ridges *b b*, and gathering points or guides *d d* across the ring, and a very narrow smooth surface, *e*, at the periphery. The ridges and guides, as well as the grooves between them, are in curvilinear form, and run parallel to each other, and two of these rings are used against each other for grinding purposes.

Their action is as follows: The grain enters at the openings *a a*, and, by means of the draft given, crowds or is crowded into the guides *d d*, and gradually up the incline onto the surface *e*, when the meal is supposed to be fine enough for feeding purposes and is therefore immediately discharged. For fine grinding the smooth surface *e* would be somewhat increased.

It will be seen that the grinding begins as soon as the grain enters the guides *d d*, and

is gradual from this point to the periphery, a distance of about half an inch; and it will be especially noticed that I discharge the grain from the surface of said ring.

Heretofore the fineness of the work has depended on a set of fine drifts beyond the guides *d d*, and reaching through the periphery one-quarter of an inch in length, or more, from which the meal is discharged; but I dispense with these fine drifts entirely, leaving the narrow smooth surface *e* at or around the outer periphery.

In a grinding-ring there are three requisites to do rapid work with small power, namely, large receiving capacity, sufficient draft to move the grain rapidly, and short distance to be traveled. I am enabled, by dispensing with the fine drifts usually employed, to increase the diameter of the eye and lessen the surface of the ring, thereby increasing the proportion of the eye to that of the periphery, hence increasing the receiving capacity.

I am aware that detachable metallic grinding-rings having curvilinear dividing ridges and guides and receiving openings have before been used; I do not therefore claim such construction in this application; but

Having thus fully described my invention, what I do claim, and desire to secure by Letters Patent, is—

The combination of the metallic detachable grinding-rings having the unbroken smooth surface *e* with parallel curvilinear dividing ridges *b*, guides *d*, and feed-openings *a*, substantially as and for the purpose described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

HAINES O'CONNOR.

Witnesses:

JOSEPH BUCHHEIT,
WILLIAM BALDWIN.