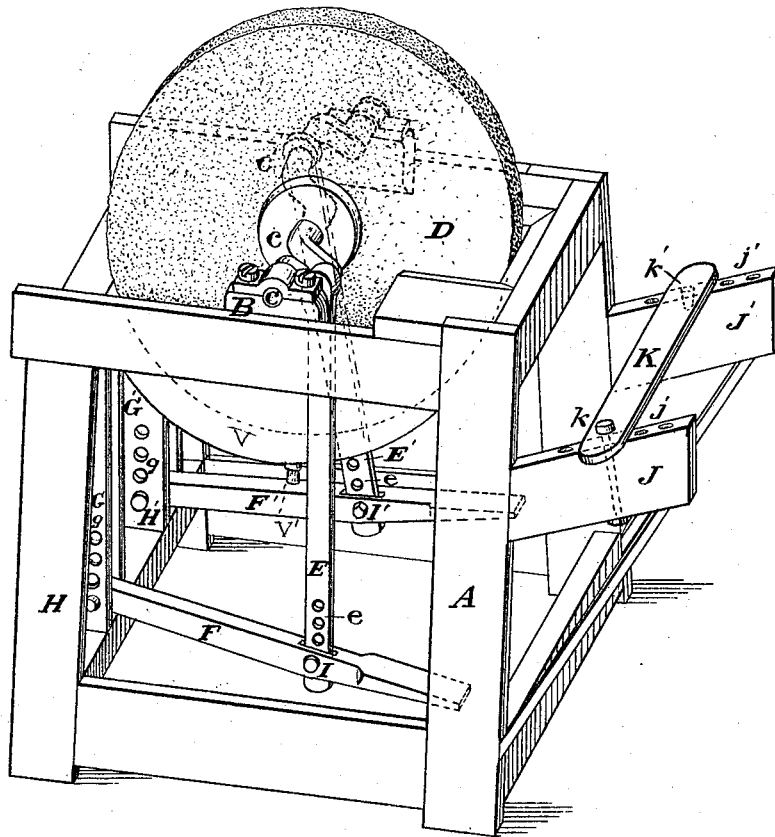


B. KOTTMANN.

GRINDSTONE.

No. 185,244.

Patented Dec. 12, 1876.



Attest
L. Knight
Walter Knight

Bernard Kottmann
By Knight Bros
Atty's.

UNITED STATES PATENT OFFICE.

BERNARD KOTTMANN, OF CINCINNATI, OHIO.

IMPROVEMENT IN GRINDSTONES.

Specification forming part of Letters Patent No. **185,244**, dated December 1st, 1876; application filed November 22, 1876.

To all whom it may concern:

Be it known that I, BERNARD KOTTMANN, of Cincinnati, Hamilton county, Ohio, have invented a new and useful Improvement in Grindstones, of which the following is a specification:

The object of my improvements is to enable a grindstone to be conveniently and easily driven by a person using the stone.

A may represent a suitable stand or frame, having journal-bearings B for double-crank shaft C of stone D. Rods or pitmen E E' extend from the cranks *e e'* to treadles F F', fulcrumed in cheeks G G'. The fulcrum-pins H H' and connecting-pins I I' are made to occupy orifices *g* and *e*, and may be shifted higher or lower in the series to suit the operator. J J are brackets, which project from the front of the frame A, in the manner represented, and which have a series of orifices, *j j'*, to receive the pins or bolts *k k'* from the under side of a shiftable seat, K. This seat may be moved

forward or backward to suit the user, or may be swung entirely clear, so as to permit the operator to stand to his work, if desired. V is the usual water-trough, having a plugged outlet, V'.

I claim as new and of my invention—

1. The combination, with a grindstone, of the treadles F F', adjustable vertically in the bolt-holes *g* and *e* in cheeks G, and the pitmen E E', connecting said treadles with cranks *e e'* of double-crank shaft C.

2. The combination, with a grindstone adapted to be driven by the user, of the shiftable and separable seat K, pins *k k'*, and perforated brackets J J'.

In testimony of which invention I hereunto set my hand.

BERNARD KOTTMANN.

Attest:

GEO. H. KNIGHT,
WALTER KNIGHT.