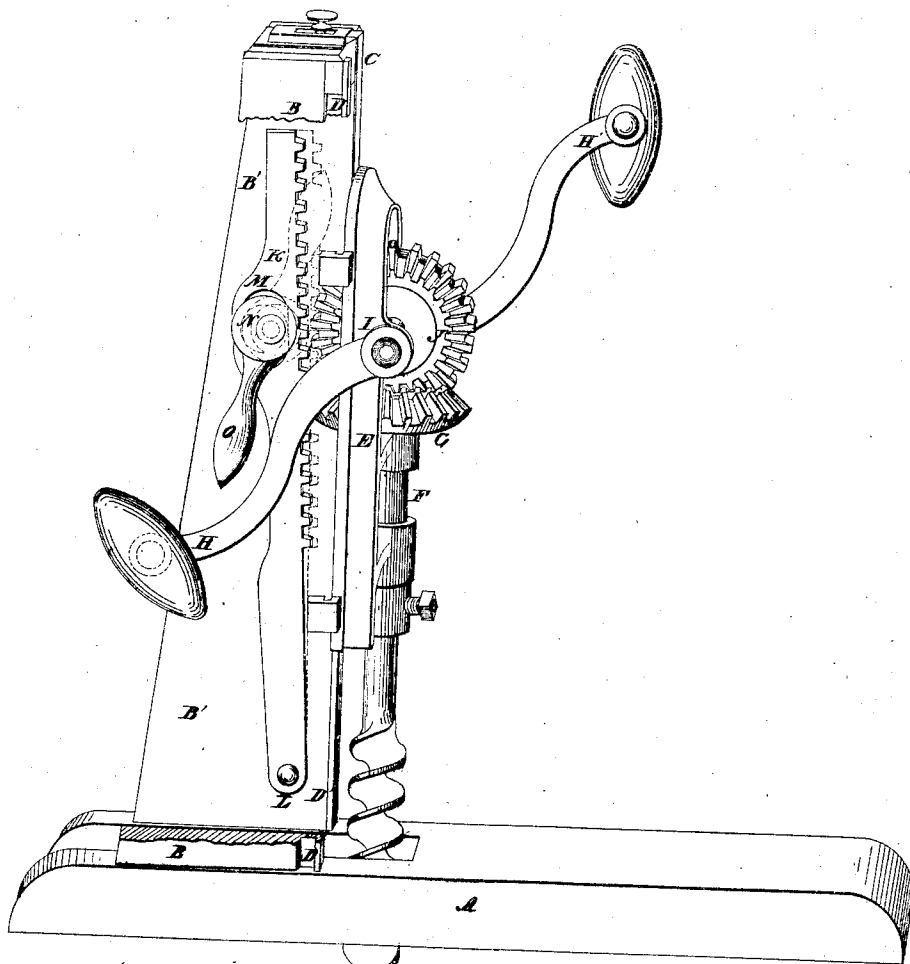


Stanley & Johnson,
Boring Wood,
N^o 49,933,
Patented Sept. 12, 1865.



Witnesses:
James H. Layman,
Wm. H. Layman.

Inventors:
E. Stanley,
J. Johnson,
By Hugh H. Hays,

UNITED STATES PATENT OFFICE.

DANIEL STANLEY AND GEO. JOHNSON, OF CINCINNATI, OHIO.

IMPROVEMENT IN BORING-MACHINES.

Specification forming part of Letters Patent No. 49,933, dated September 12, 1865.

To all whom it may concern:

Be it known that we, DANIEL STANLEY and GEORGE JOHNSON, both of Cincinnati, Hamilton county, Ohio, have invented a new and useful Carpenter's Boring-Machine; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

The following parts may be of the customary construction, to wit: the base A, standards B B', cap-piece C, guides D D', gate E, mandrel F, miter-pinion G, and operating-handles H H'. The handles H H' are mounted on a horizontal shaft, I, journaled in the gate, and carrying a miter-wheel, J, keyed fast to it and gearing in the miter-wheel or pinion G on the mandrel. In addition to these parts the customary boring-machine has a pinion capable of being slid along the shaft I, so as to be brought into or out of gear with the elevating-rack, and compelled to rotate with said shaft I by a feather or other projection thereupon.

In using the common machine the operator is required to move the pinion into and out of gear with the rack by both hands, one hand being required to work the shaft experimentally, while the other hand applies pressure sufficient to cause the pinion to slip into gear the instant that its teeth reach the spaces of the rack. This mode of gearing the pinion has proved troublesome and tedious, besides the inconvenience to the operator of soiling his hands at every gearing and ungearing. Another defect of this form is the liability of the pinion to slip into gear independently of the operator, and to thus interfere with the boring action.

We have obviated these inconveniences by dispensing entirely with the separate and sliding pinion and making the wheel J a compound bevel and spur wheel, while the rack K, instead of being attached immovably to the standard, is pivoted thereto at its lower end by means of a bolt, L, or its equivalent. The upper part of the rack contains a slot, M, to receive an eccentric, N, which, being turned forward or backward by means of a handle, O, throws the rack instantly into or out of gear with the pinion. The eccentric is so arranged as to slightly pass its dead center in the act of gearing, so that the action of the pinion tends to hold the rack in rather than to throw it out of gear. The cogs of the rack K and those on the periphery of the pinion J having their points or rounded portions presented toward each other in the act of gearing come at once into mesh, so that but one hand is necessary either to bring the instrument into condition for extracting the chips or to restore it to condition for boring.

We claim herein as new and of our invention—

The arrangement of the eccentric N O, pivoted rack K, compound spur and bevel wheel J, slide E, wheel G, and auger-shaft F, all constructed and operating substantially as specified.

In testimony of which invention we hereunto set our hands.

DANIEL STANLEY.
GEORGE JOHNSON.

Witnesses:

GEO. D. KNIGHT,
JAMES H. LAYMAN.