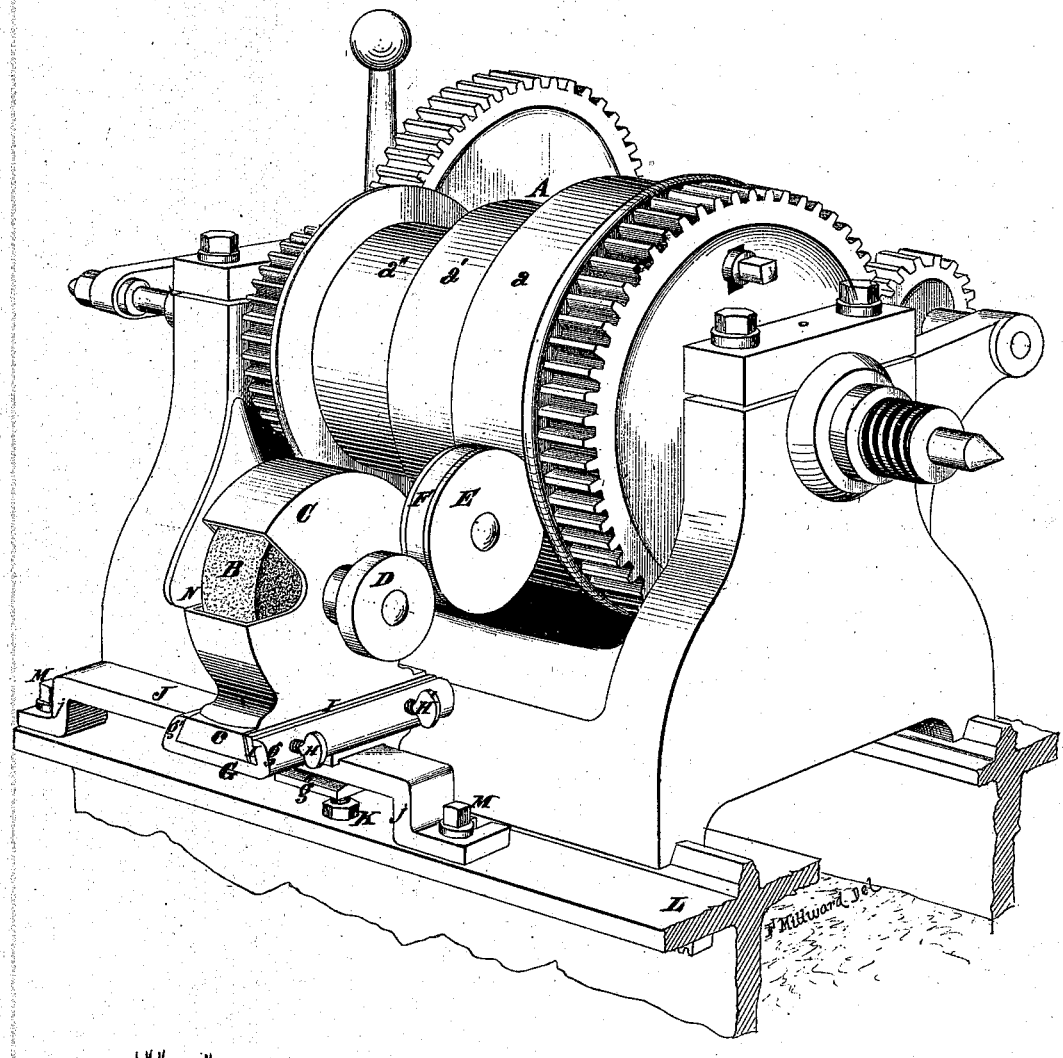
J. Shaughnessy,

Tool Grinder.

No. 103242. Patented May 17. 1870.



Attest.

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JAMES SHAUGHNESSY, OF CINCINNATI, OHIO.

Letters Patent No. 103,242, *dated May* 17, 1870.

IMPROVEMENT IN TOOL-GRINDING ATTACHMENT TO LATHES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, JAMES SHAUGHNESSY, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Tool-Grinding Attachment to Lathes; and I do hereby declare the following to be a sufficiently full, clear, and exact description thereof to enable one skilled in the art to which my invention appertains to make and use it, reference being had to the accompanying drawings making part of this specification.

Nature and Objects of the Invention.

My invention consists of an emery-wheel or grindstone of small diameter, journaled in a surrounding case, and fitted with driving friction-gearing and adjustable devices, the object of my invention being the production of a tool-grinding device which can be driven by either step on the cone-pulley of the lathe, and which will, when run at a high velocity, serve to shape the point of a lathe-tool or other instrument, and thus dispense in a great measure with the frequent and often long trips to the ordinary machinists' grindstone.

The accompanying drawing is a perspective view of my grinding device attached to an ordinary lathe.

General Description.

A is the cone-pulley of a lathe, having, in this case, three steps or changes, *a a' a''*.

B is a grinding-wheel, which may be of emery or grinding-stone. It is journaled in the surrounding case C, which is made sufficiently large to give room for the collection of scrapings from the wheel and water, if necessary. One side of the case is detachable, in order to provide for the removal of the dust or scrapings.

The wheel B is driven by the wheel D, which has a driving connection, by friction only, with the intermediate wheel E, which, in its turn, connects by friction with the cone of the lathe A.

The wheel E is grooved in its face, and fitted with a ring of leather or rubber, F, which is provided to increase the friction and prevent slipping. The wheel E is connected by suitable spindle to the case C.

The case C is formed with a dovetail slide, *c*, on the under side, which fits and slides in the dovetail ways *g g'* of the frame G. The direction of motion of the sliding case C is crosswise of the lathe, and it is held in any required position by means of the set-screws H H', which may either impinge directly upon the slide or upon the intermediate gib I.

The jaw *g''* of the frame G fits over the bar J, along which it is adapted to slide for adjustability. It is secured in any position by set-screw K.

It will be readily seen that, owing to the provision of the sliding devices described, the wheel E can be brought into frictional contact with either of the steps *a a' a''* of the cone A, in order to change the speed of the wheel B, or avoid conflict with the driving-belt of the lathe.

The bar J, which is formed with legs *j*, rests upon the "shear" L of the lathe, and is secured firmly by set-screw bolts M.

The case C is provided with a gap, N, for the accommodation of the tool to be ground.

It is well known that, in an ordinary machine-shop, a great amount of time is wasted by the shop-hands in running to and from the grindstone, to merely "touch up" the points of lathe-tools, and my invention is designed to remedy this difficulty, and furnish a very convenient and high-speed stone or wheel for all the grinding required by a lathe-hand, except, perhaps, "roughing off."

Claim.

I claim as new and of my invention—

The herein-described tool-grinding attachment to lathes, composed of wheel or stone B, sliding case C *c*, sliding frame G *g g' g''* H H', bar J, and driving friction-wheels D E, the whole being constructed and combined substantially in the manner and for the purpose specified.

In testimony of which invention I hereunto set my hand.

JAMES SHAUGHNESSY.

Witnesses:

FRANK MILLWARD,

HIRAM ROBBINS.