(No Model.)

J. WALKER.

BORING ATTACHMENT FOR LATHES.

No. 451,092. Patented Apr. 28, 1891.

Fig 1

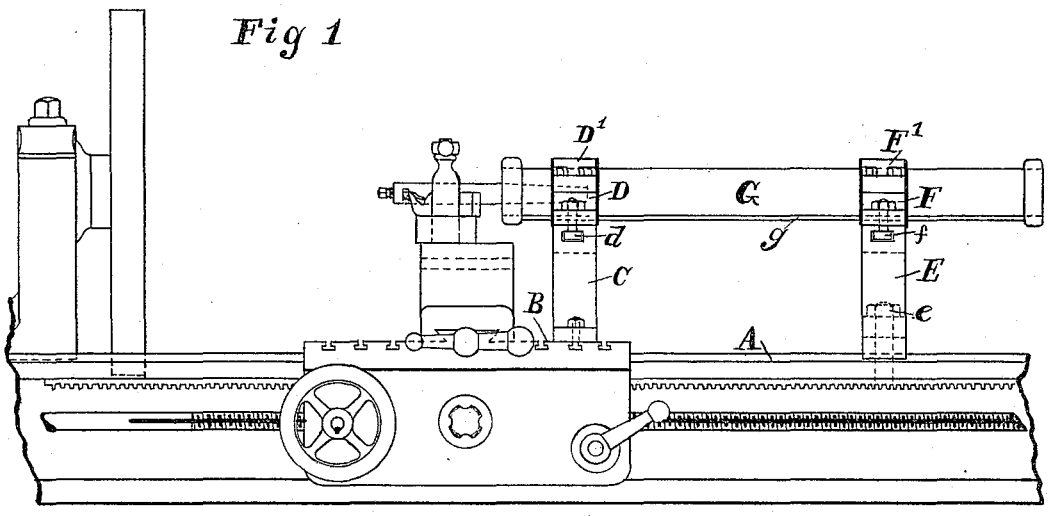


Fig 3.

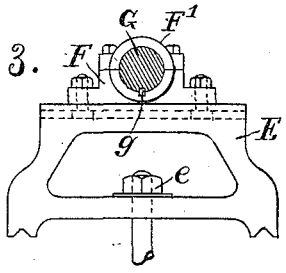
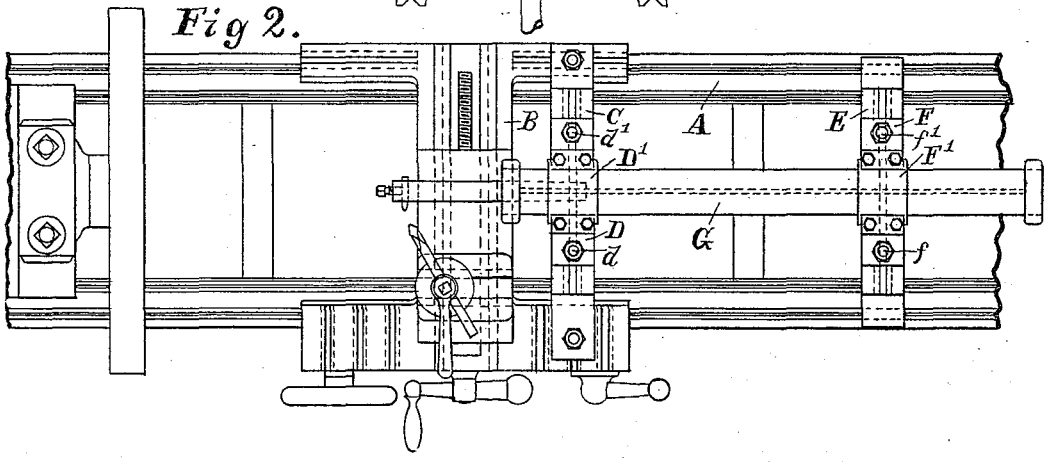


Fig 2.



WITNESSES.

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BORING ATTACHMENT FOR LATHES.

SPECIFICATION forming part of Letters Patent No. 451,092, dated April 28, 1891.

Application filed January 31, 1891. Serial No. 379,842. (No model.)

To all whom it may concern:

Be it known that I, JOHN WALKER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Boring Attachments for Lathes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of a part of the lathe, showing my attachment applied thereto. Fig. 2 is a top plan view of the same, and Fig. 3 is an end view of the boring-bar and its bearing on one of the standards.

My invention relates to the class of devices adapted to be attached to lathes for the purpose of adding to their capabilities and facilitating the proper performance of certain special work.

My invention is an attachment applicable to a lathe of any standard construction, whereby the lathe is adapted to be used as a horizontal boring-mill for boring and finishing pulley-hubs and other thick work.

Among the advantages attained by my invention are simplicity of construction, ease of connecting the attachment with a lathe, and especially the prevention of the springing of the boring-bar and consequent "chattering" of the tool or unevenness of the cut.

My invention consists of the combination of a standard adapted to be attached to the slide-rest, a standard adapted to be attached to the bed behind the slide-rest, each standard having a bearing for the boring-bar, with a boring-bar having a fixed longitudinal key, which lies in slots in the two bearings, and means for rigidly securing the boring-bar to the forward standard.

It also consists in the subordinate combination of parts hereinafter described, and pointed out in the claims.

Referring now to the drawings, A represents the bed, and B the slide-rest, of an ordinary lathe.

C represents a standard extending transversely of the bed and secured by bolts to the slide-rest behind the tool-holder. The upper surface of this standard is provided with T-grooves, and a pillow-block D, having tongues fitted to said grooves, is mounted on the top of said standard. The pillow-block may thus be moved transversely of the bed and then held in any desired position by the bolts *d d'*.

E represents a standard, which is grooved on its under side, whereby it is adapted to rest on the shears of the lathe behind the slide-rest. It is secured at any desired point by bolt *e*. Its upper surface is provided with transverse T-grooves, in which are fitted tongues on the under side of the pillow-block F, and this block is fastened at any desired point to the standard by the bolts *f f'*. This pillow-block and its cap F' form the bearings through which the boring-bar is adapted to slide freely.

G represents a boring-bar, which passes between the parts F F', above referred to, and lies in a bearing in the block D. The cap-plate D' is fastened in the block D by bolts, whereby said cap-plate is drawn down upon the bar, which is thus clamped firmly between it and the pillow-block. A fixed longitudinal key or feather *g* on the bar G fits into corresponding grooves in the pillow-blocks D and F, whereby the rotation of the bar is prevented, while its longitudinal movement in the bearings attached to the rear standard is unimpeded.

In boring a hub of a pulley, for example, it is strapped or bolted to the face-plate. The boring-tool is fastened to the boring-bar G directly or to a tapered mandrel, which may be secured in a tapered socket into the end of the boring-bar. The work rotates and the boring-bar is moved forward by the movement of the slide-rest. The rear standard remains stationary, but supports the rear end of the boring-bar, and this prevents almost entirely any springing of the bar and consequent chattering of the tool or unevenness in the cut. The location of the standard C behind the tool-holder of the slide-rest makes it possible to turn and finish the outside of the hub while its center is being bored out.

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

1. The combination of a standard adapted to be attached to a slide-rest of a lathe, a standard adapted to be attached to the bed behind the slide-rest, each standard having a bearing for the boring-bar, with a boring-bar having a fixed longitudinal key which lies in

slots in the two bearings, and means for rigidly fastening the boring-bar in its bearing on the forward standard, substantially as and for the purpose specified.

2. The combination of a standard adapted to be attached to the slide-rest of a lathe, a standard adapted to be attached to the bed behind the slide-rest, a pillow-block mounted on the top of each standard and slidable transversely of the bed, and bolts for securing said pillow-blocks at any desired point, with a boring-bar having a fixed longitudinal key which lies in slots in said pillow-blocks, and cap-plates and bolts adapted to clamp said boring-bar to the forward pillow-block and to hold it loosely in the rear block, substantially as and for the purpose specified.

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Witnesses:
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