

(Model.)

J. O. HAAS.

LATHE.

Patented Sept. 8, 1885.

No. 325,832.

Fig. 3.

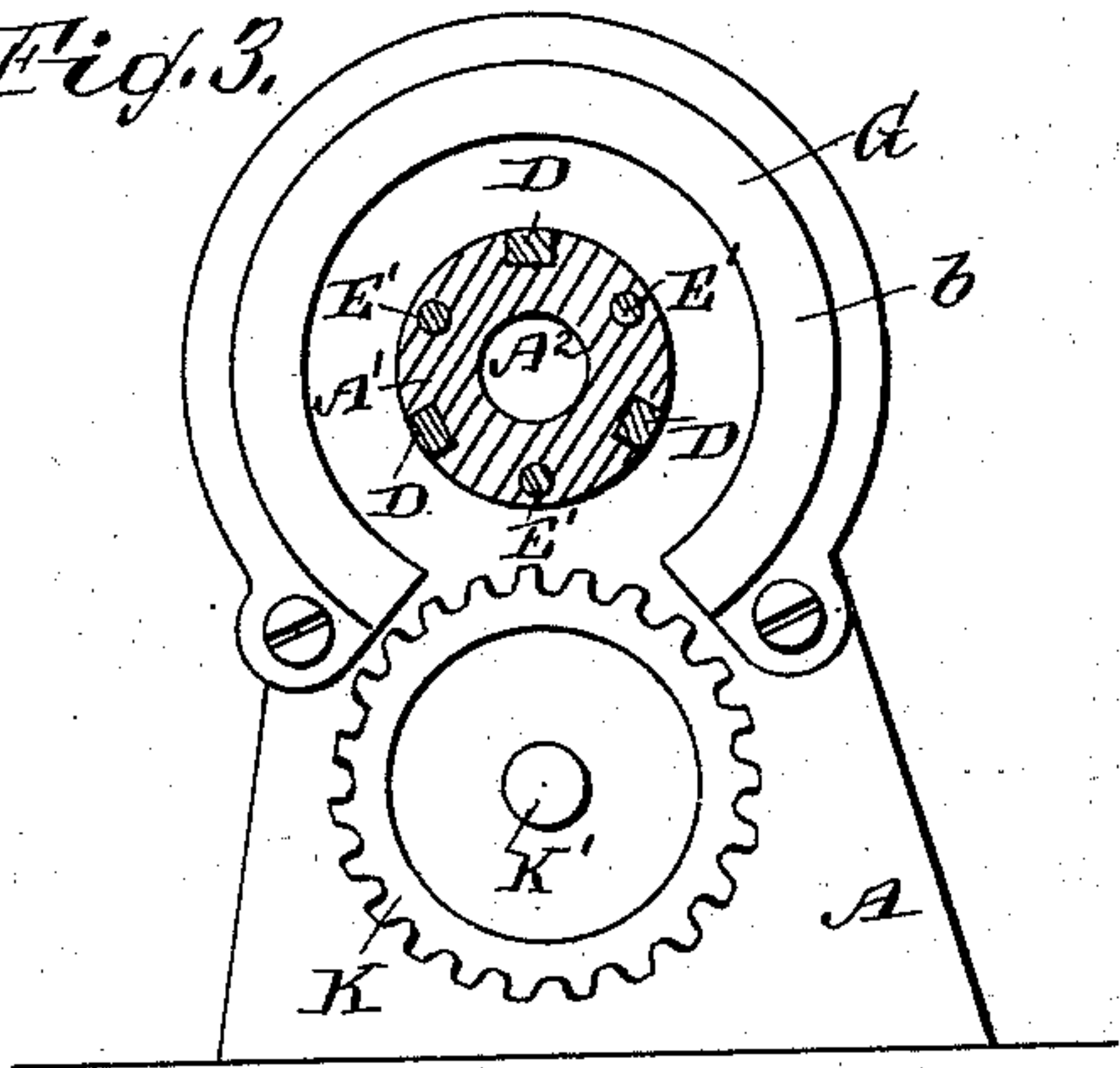


Fig. 1.

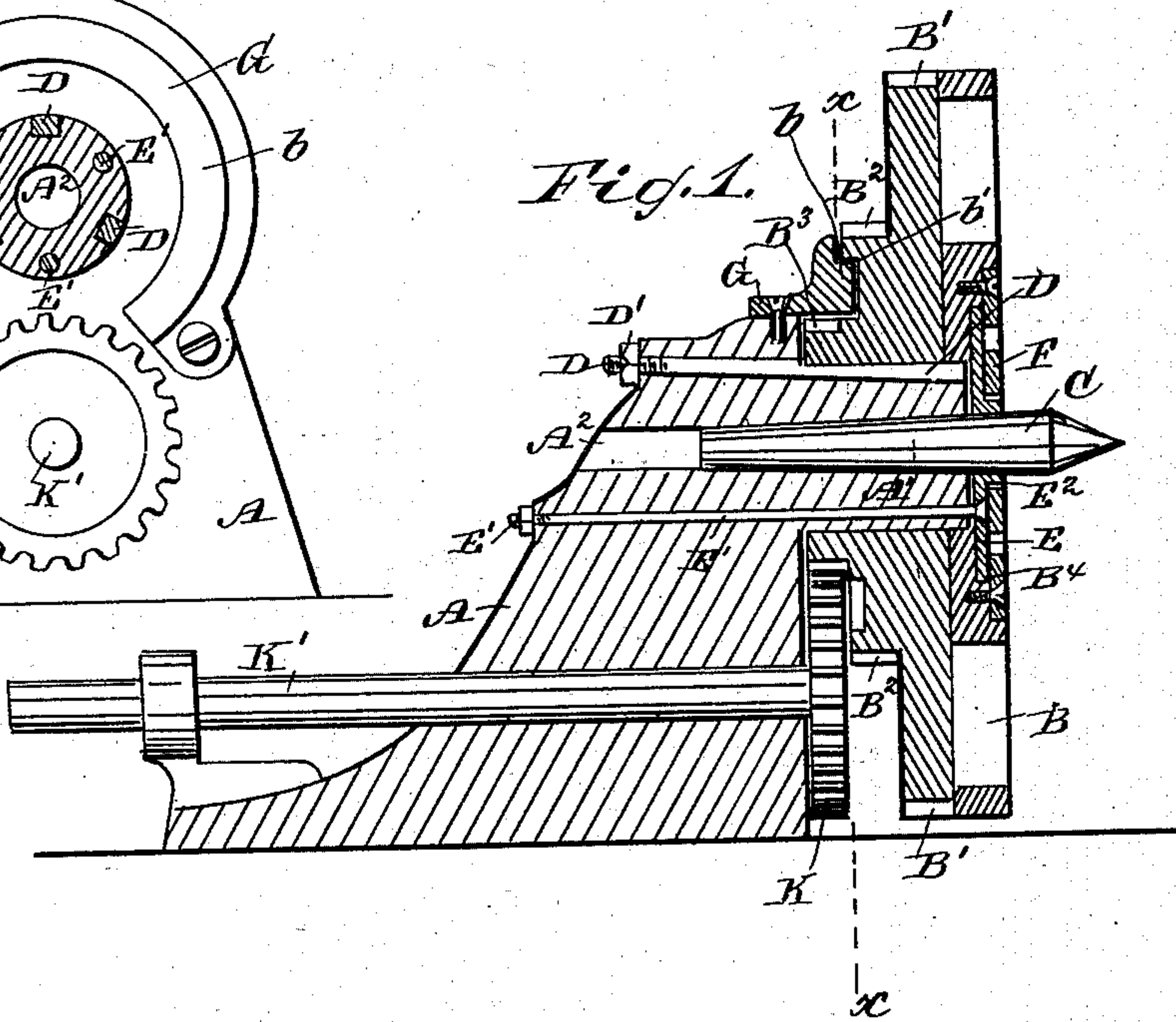
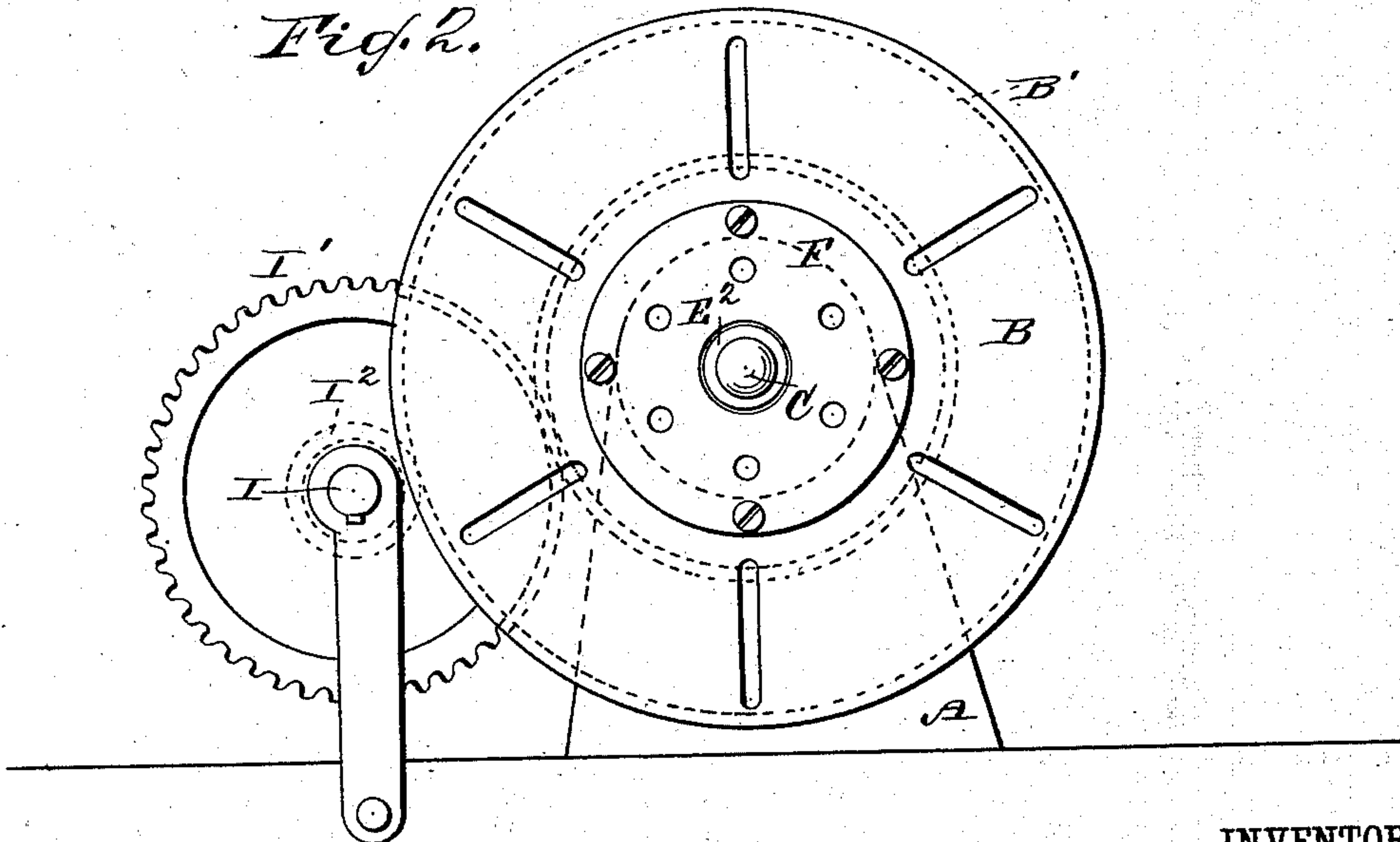


Fig. 2.



WITNESSES :

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LATHE.

SPECIFICATION forming part of Letters Patent No. 325,832, dated September 8, 1885

Application filed June 23, 1885. (Model.)

To all whom it may concern:

Be it known that I, JACKSON ORLANDO HAAS, of Hepler, in the county of Schuylkill and State of Pennsylvania, have invented certain
5 new and useful Improvements in Lathes, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved lathe, which has two dead-center plugs, between which the work is suspended.
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The invention consists in the construction and arrangement of parts, as will be hereinafter fully described and claimed.

15 The invention also consists in various parts and details, hereinafter more fully set forth and described.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.
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Figure 1 is a longitudinal vertical section through the head-stock of a lathe, showing my improvements. Fig. 2 is a front face view of the same; and Fig. 3 is a vertical cross section on the lines $x x$ of Fig. 1, with the face-plate removed.
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Heretofore lathes were provided with one dead-center in the form of the pointed center plug attached to the tail-stock, and with a pointed center plug placed in either the face-plate or the spindle of the head-stock and turning with the same, whereby the weight of the work suspended between the two pointed center plugs caused the face-plate or the spindle to run out of center, so that when the work was changed around between the two pointed center plugs it would be invariably found to be eccentric at the turned portion near the dead-center in the tail-stock.
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My improvement obviates this difficulty by providing the lathe with two stationary center plugs, so that the face plate or spindle of the lathe is not affected by the weight of the work placed between the two stationary pointed center plugs.
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The head A is mounted on the lathe-frame in the usual manner, and is provided with the projection A', on which rotates the face-plate B and its gear-wheels B', B², and B³, of which B' and B² impart different speeds to the face-
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plate and B³ meshes into the gear-wheel K, keyed on the shaft K', which is connected by any suitable gearing with the screw or feed-rod of the lathe.

The projection or hub A' of the head-stock is provided in its center with the longitudinal conically-shaped aperture A², in which is placed the pointed center plug, C, forming the dead-center in the head-stock A. The pointed center plug in the tail-stock is of usual construction, and is not represented in the drawings.
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The projection A' is also provided with three or more wedge-shaped bolts, D, which take up the wear of the face-plate B, turning loosely on the projection A', by screwing up the nuts D' on the outer ends of the bolts D.
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To the inner end of the projection A' is secured the disk E by bolts and nuts E'. The disk E rests in a recess, B⁴, in the face-plate B, which recess B⁴ and the disk E are covered up by the plate F, secured to the front of the face-plate B.
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The face-plate B and the plate F are provided with the usual slots to receive the lathe-dogs and the bolts for fastening the work to the face-plate B.
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The disk E is also provided with a small hub, E², which projects through a corresponding aperture in the plate F, and is flush with the face-plate B.
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To the head-stock A is secured the cover G, which fits partly around the gear-wheel B³, attached to the face-plate B, and has an annular ridge, b, fitting in an annular groove, b', in the back of gear-wheel B². The cover G thus forms a back bearing for the gear-wheel B², and thereby prevents the face-plate from wobbling and also protects the gear-wheel B³ from dust.
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Motion is imparted to the face-plate B by either the gear-wheels B' or B², meshing in respective gear-wheels I' I² on shaft I, which derives its motion in the usual manner from the counter-shaft. By shifting shaft I longitudinally its gear-wheels are engaged as required to change the speed of the face-plate.
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Back gearing can be applied from the shaft I by proper and suitable devices.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—
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1. The combination, with the head-stock A, having the longitudinally-apertured hub A', of the plug C, the head B, journaled on the said hub and having the gears B' B² B³, of
5 varying diameters, on its periphery, the shaft K', the gear K thereon meshing with the gear B³, and the shifting gears I' I², adapted to mesh with the gears B' B², substantially as set forth.
2. In a lathe, the head-stock A, provided
10 with the projection or hub A', having the aperture A², the bolts D, the nuts D', the disk E, provided with the hub E², and the pointed center plug, C, in combination with the face-plate B, provided with the gear-wheels B', B², and B³, and the plate F, substantially as shown 15 and described.
3. In a lathe, the combination, with the hub A, having projection A', and the face-plate B, of the plate E, the cover G, and the bolts E', substantially as shown and described.

JACKSON ORLANDO HAAS.

Witnesses:

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