No. 654,756. Patented July 31, 1900.

J. G. OBERMIER.

LATHE FOR FORMING COLLARS UPON VEHICLE AXLES.

(Application filed Jan. 13, 1900.)

(No Model.)

Fig. 1.

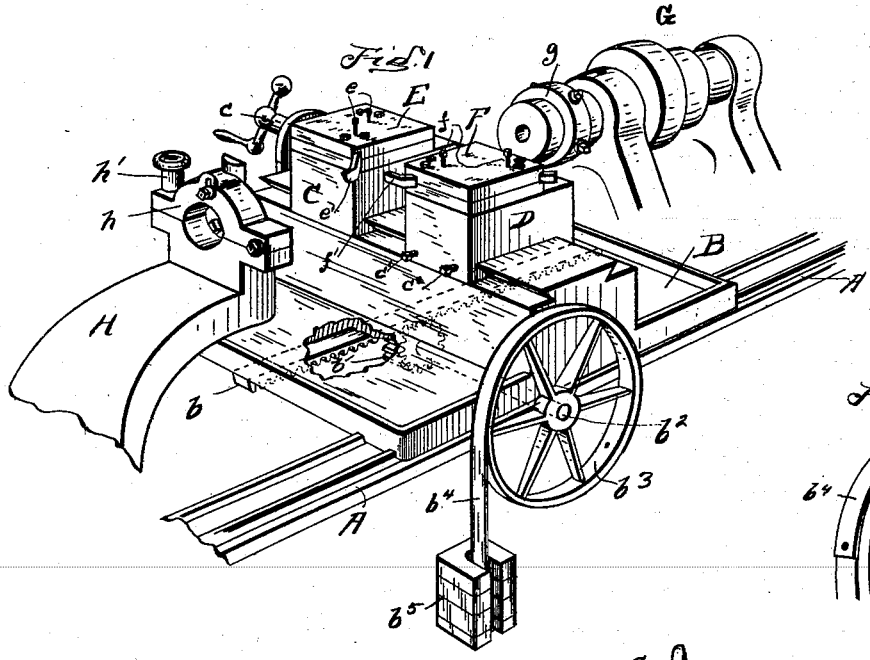


Fig. 5.

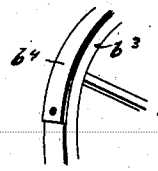


Fig. 4.

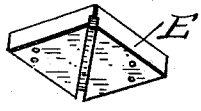


Fig. 2.

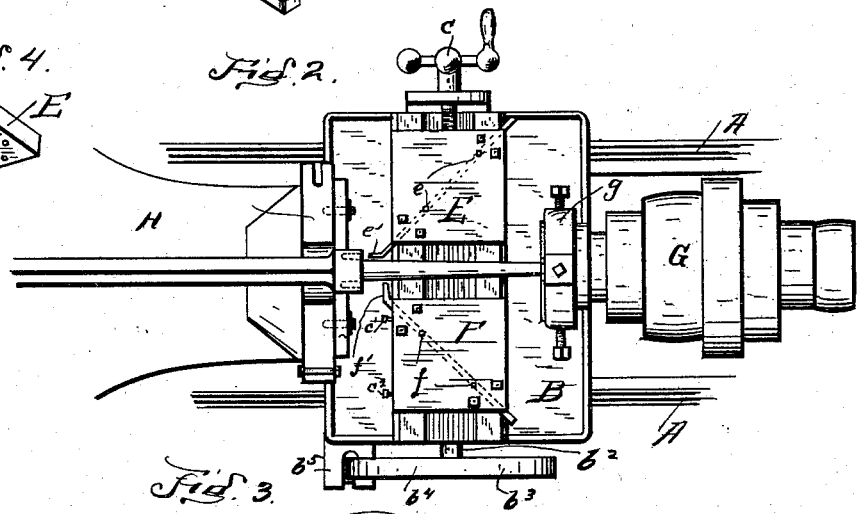
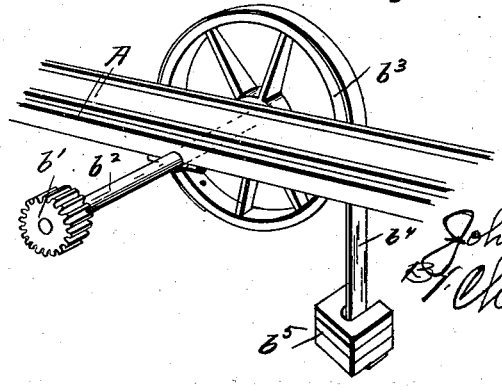


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN G. OBERMIER, OF CANTON, OHIO.

LATHE FOR FORMING COLLARS UPON VEHICLE-AXLES.

SPECIFICATION forming part of Letters Patent No. 654,756, dated July 31, 1900.

Application filed January 13, 1900. Serial No. 1,259. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. OBERMIER, a citizen of the United States, residing at Canton, in the county of Stark and State of Ohio, have invented new and useful Improvements in Lathes for Forming Collars upon Vehicle-Axles, of which the following is a specification.

My invention relates to improvements in lathes for forming projecting collars upon vehicle-axles; and it consists in providing a lathe with a clutch mounted upon a lathe-head to engage one end of the axle, a stationary rest to support the other end of the axle, a slide-rest mounted upon the ways of the lathe and carrying a tool-head and operated by means of a rack and pinion, and a weighted driving-wheel, as will be hereinafter more fully described and claimed.

In the accompanying drawings similar letters of reference refer to similar parts.

Figure 1 is a perspective view of the upper portion of a lathe, showing my invention. Fig. 2 is a top view of the same portion of the lathe. Fig. 3 is a detached perspective view of the weighted driving-wheel and pinion. Fig. 4 is a perspective view of the under side of the upper portion of the tool head or block. Fig. 5 is a perspective view of a section of the rim of the weighted driving-wheel.

A represents the ways of the lathe and may be of any of the well-known forms.

B represents the slide-rest, upon which are mounted the tool-rests C and D, one of which, C, has a lateral adjustment by means of the cross-feed c, which may be of any of the well-known forms. The tool-rest D is adapted to have a fixed adjustment upon the slide-rest by means of the thumb-bolts c' and c^2. The tool-heads E and F consist of two flat pieces of metal grooved to receive the tool to be used, and to hold the same against displacement I provide the thumb-bolts e and f, which pass through the upper plates and bear upon the tools. The tool heads or plates are held in engagement with each other and with the tool-rests by means of screw-threaded bolts passing through screw-threaded apertures in the tool heads and rests. To the under side of the slide-rest there is attached a rack b, extending its entire length and meshing with a pinion b', mounted on a shaft b^2, journaled in the ways and carrying upon its outer end a weighted drive-wheel b^3, to which there is attached a strap b^4, carrying the weights b^5.

G is the lathe-head, which may be of any of the well-known forms, upon the inner end of which is mounted a clutch g, adapted to grip the axle.

H is the inner supporting rack or bearing for the axle and may be made of any desired form which will permit of the revolving of the axle thereon; but I have shown it consisting of a forwardly-projecting bracket carrying a hinged plate h, mounted thereon and adapted to be locked in engagement therewith by means of the catch h'. The cutting-tool e' is formed so as to cut the annular groove in the axle, forming the projecting sleeve or sand-bar, while the tool f' is shaped so as to act either as a stop or to cut the outer projecting edges of the sleeve.

In operation the cutting-tool and stop having been mounted in the tool-head, the axle having been securely gripped by the clutch in the lathe-head, and the other end resting in the supporting-bracket, the machinery is started, when the weighted driving-wheel, rack, and pinion will gradually carry the tool forward and against the axle, and a revolving of the same will cause the tool to engage and cut the annular groove in the axle, and when the same shall have been cut to the desired depth the outer edge of the projecting sleeve will come in contact with the stop f' and the operation is completed and the axle removed from the machine.

It will be observed that by the employment of this device a large number of like machines can be operated by one employee, the machine is practically self-controlled, and the operation of turning or cutting is automatically stopped, thus preventing any injury to the piece operated upon by lack of attention from the operator.

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

The combination in a lathe, of a bed-plate with a revolving lathe-head mounted upon a stationary supporting-bracket, a longitudinally-adjustable slide-rest carrying laterally-adjustable tool-rests, and means for engaging

the tools therewith, a rack attached to the under side of the slide-rest, a pinion meshing therewith, mounted upon a shaft journaled in the ways and carrying a weighted drive-wheel, substantially as described and for the purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN G. OBERMIER.

Witnesses:
CHAS. R. MILLER,
CHAS. M. BALL.