

No. 649,908.

Patented May 22, 1900.

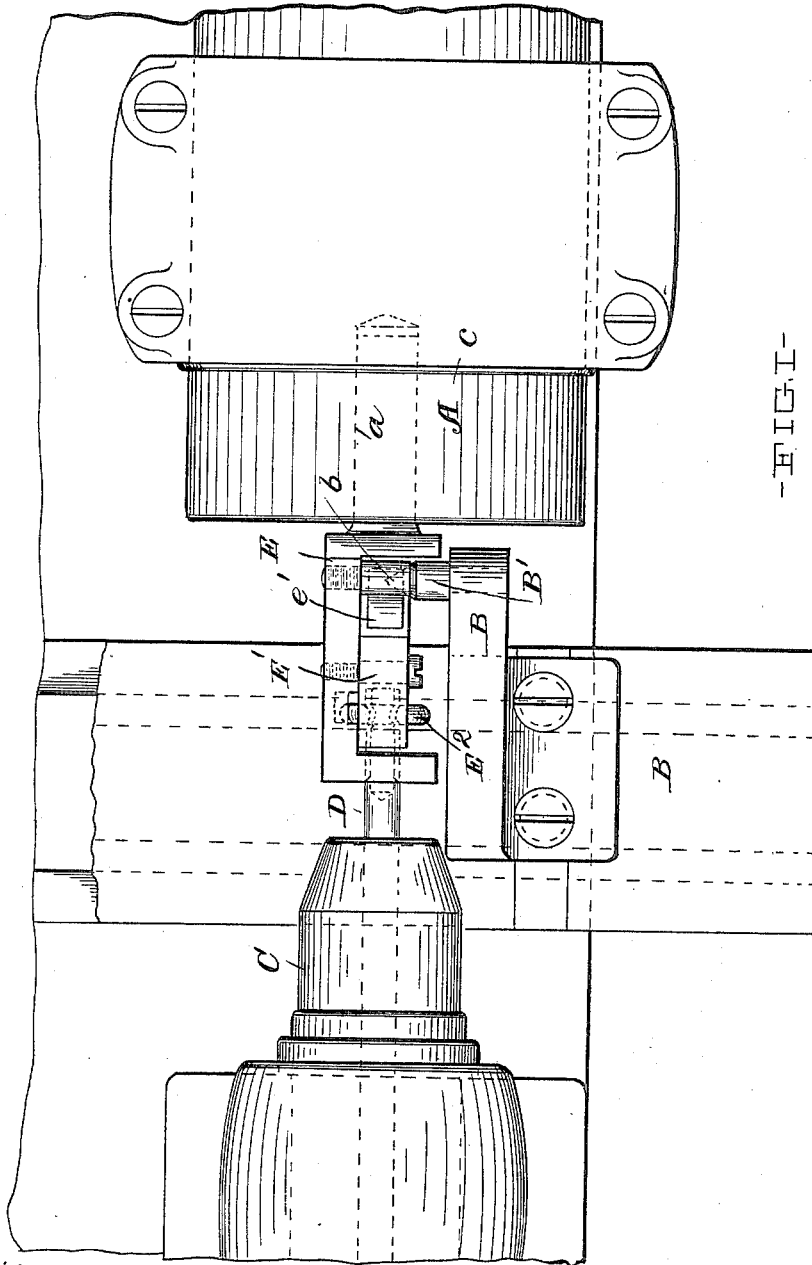
**J. P. BROPHY.**

**AUTOMATIC LATHE ATTACHMENT.**

(Application filed July 17, 1899.)

(No Model.)

2 Sheets—Sheet 1.



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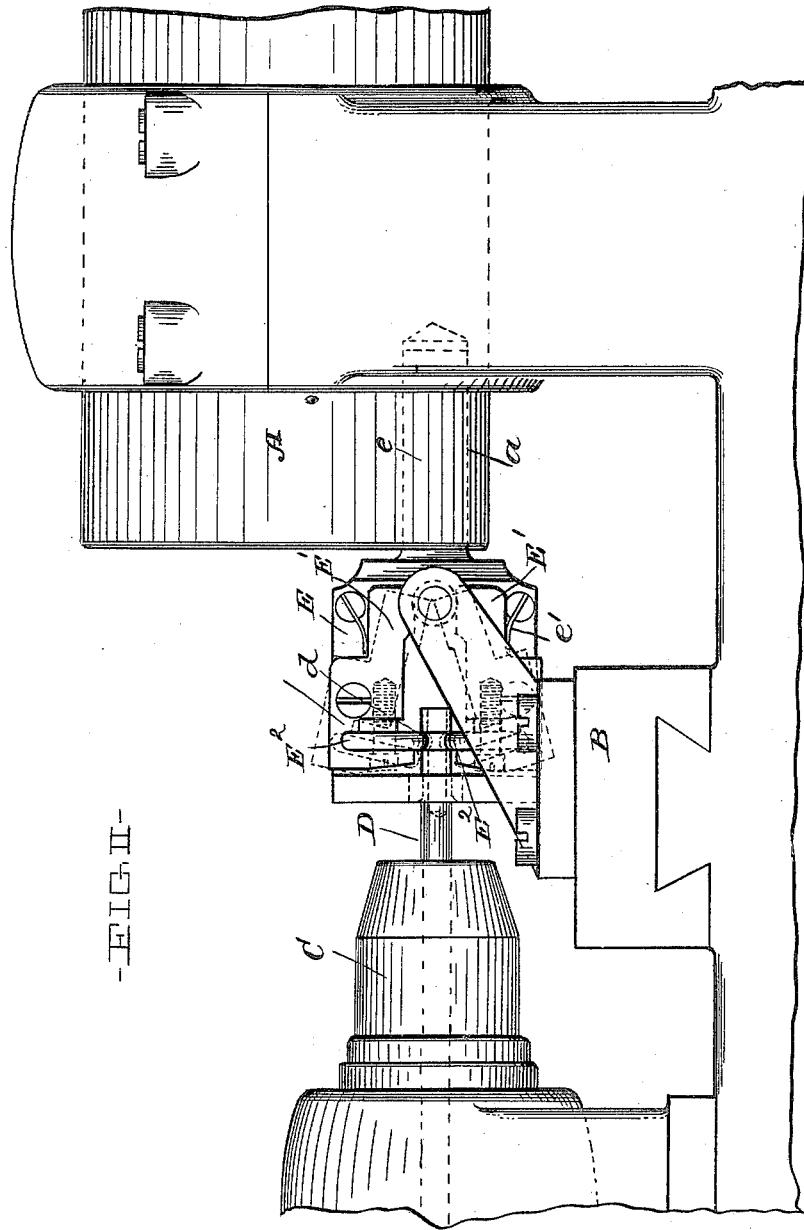
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AUTOMATIC LATHE ATTACHMENT.

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2 Sheets—Sheet 2.



Witnesses,

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Inventor,

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# UNITED STATES PATENT OFFICE.

JOHN P. BROPHY, OF CLEVELAND, OHIO, ASSIGNOR TO THE CLEVELAND MACHINE SCREW COMPANY, OF SAME PLACE.

## AUTOMATIC LATHE ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 649,908, dated May 22, 1900.

Application filed July 17, 1899. Serial No. 724,095. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN P. BROPHY, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Automatic Lathe Attachments, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle so as to distinguish it from other inventions.

My invention relates to attachments for automatic lathes for performing a special operation upon a metal blank, said operation consisting in the formation of a groove perpendicular to the axis of a hollow tube.

Said invention consists of means hereinafter fully described.

The annexed drawings and the following description set forth in detail certain mechanism embodying the invention, such disclosed means constituting but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings, Figure I represents a top plan of the turret, a portion of the cross-slide, and the end of the head-stock of an automatic lathe embodying my invention; and Fig. II represents a side elevation of the same.

The automatic lathe, portions of which are illustrated, comprises a turret A, which is periodically advanced, retracted, and rotated by any suitable mechanism, a cross-slide B, reciprocated by suitable means, and the head-stock C, embodying suitable gripping and blank-feeding mechanism.

It is required to form a groove *d* in a blank D, which has been previously bored by a tool (not shown) in the turret to form a hollow cylinder. To accomplish this object, I provide a frame E, having a shank *e*, which fits and may be secured in one of the tool-holding apertures *a* in the turret. Upon said frame are pivoted two arms E', in the outer end of each of which is journaled a roller E<sup>2</sup>, the axes of said rollers being slightly inclined to the axis of the head-stock and each being located the same distance from the center of the tool-holding aperture *a*, as shown in dotted lines, Fig. II. Two springs *e'* cause the piv-

oted arms to normally retract at their roller ends, the opposite or inner ends approaching each other, as shown in dotted lines, Fig. II.

Upon the cross-slide B is provided a stem B', having its inner end formed with a conical wedge *b*, adapted to enter between the inner ends of said arms and cause them to retract and the roller ends to approach each other.

In operating the device the driving, reciprocating, and rotating mechanism are so timed that the turret carries the frame to a position in its rotary movement in which the axis of the head-stock or blank passes midway between the two rollers. The frame is then advanced toward the blank by the subsequent advance of the turret until the two rollers assume the required position on each side of the rotating blank at the point at which the groove is to be formed. The cross-slide is then advanced, causing the wedge to actuate the arms to press the rollers upon the blank, indenting same to form the required groove, as shown in the drawings. The slide is then returned, releasing the arms and permitting the springs to cause the rollers to retract and release the blank. The turret thereupon retracts and withdraws the frame from the blank, which may thereupon be subjected to further operations.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the mechanism herein disclosed, provided the means covered by any one of the following claims be employed.

I therefore particularly point out and distinctly claim as my invention—

1. The combination of means for rotating a blank, two rollers mounted upon movable supports mounted upon a frame, means for advancing said frame toward and retracting it from the rotating means, and reciprocating means adapted to engage said roller-supports and operating in a direction transverse to that of the said frame for automatically causing said rollers to periodically approach each other, substantially as set forth.

2. The combination of means for rotating a blank, two rollers each mounted at the end of an arm pivoted upon a frame, means for advancing and retracting said frame toward

said rotating means, and a reciprocating cross-slide for intermittently engaging said arms to cause them to retract, whereby the ends carrying the rollers are periodically caused  
5 to approach, substantially as set forth.

3. The combination of means for rotating a blank, two rollers each mounted upon the end of an arm pivoted upon a frame, means  
10 for advancing said frame toward and retracting it from said rotating means, and a recip-

rocating cross-slide having a wedge secured thereto for engaging the ends of said arms to cause said rollers to approach, substantially as set forth.

Signed by me this 5th day of July, 1899.

J. P. BROPHY.

Attest:

D. T. DAVIES,  
A. E. MERKEL.