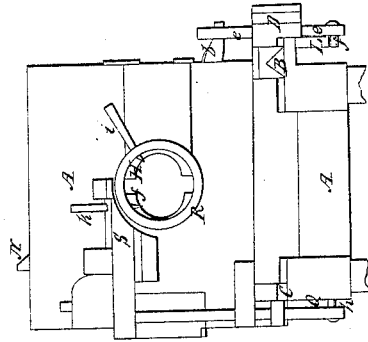


*A. N. Wilcox,  
Gage Lathe.*

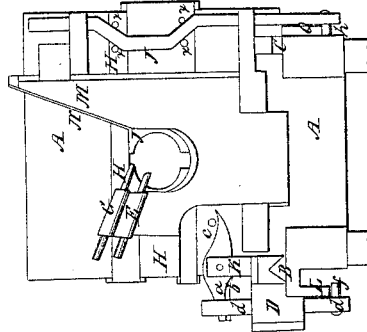
*Patented Jan. 5, 1858.*

*N<sup>o</sup> 19,056.*

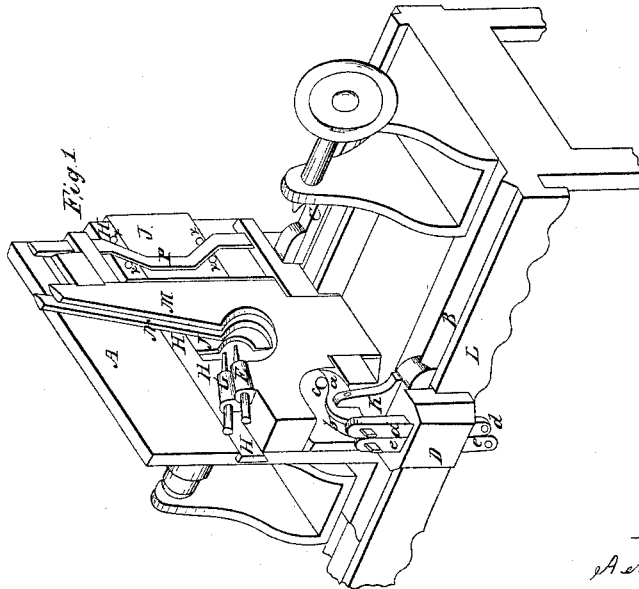
*Fig. 3*



*Fig. 2*



*Fig. 1*



*Witnesses.*

*M. Miller*

*Paul March DeWitt*

*Inventor*

*A. N. Wilcox*

# UNITED STATES PATENT OFFICE.

A. N. WILCOX, OF WATERVLIET, NEW YORK.

## LATHE FOR TURNING WOOD.

Specification of Letters Patent No. 19,056, dated January 5, 1858.

*To all whom it may concern:*

Be it known that I, AMANDER N. WILCOX, of Watervliet, Albany county, State of New York, have invented a new and Improved  
5 Self-Acting-Cutter Apparatus for Turning-Lathes; and I declare the following specification, with the drawings hereto attached as part of the same, to be a full and perfect description thereof.

10 Figure 1 represents in perspective a lathe with my apparatus attached; Fig. 2 a view of the apparatus from the right hand end of the lathe; Fig. 3 a view of the same from the left hand end of the lathe.

15 Similar letters in the different figures denote the same parts of the apparatus.

The lathe with its frame, pulleys, adjusting heads, &c., are in the well known form and need no description further than as  
20 shown in the drawings.

My improvement is connected with the slide-rest and apparatus operating the cutters, and the rest jaws attached thereto, and has reference to the method of applying the  
25 cutters to the article being turned, and to a method of maintaining throughout nearly the entire length of that article a support near the point operated on by the cutters.

A is the slide-rest moving upon guides B and C. It has attached to its edge the block  
30 D by which a feed screw (not shown in the drawings but arranged in the usual manner for lathes,) moves it, the rest, back and forth. The rest supports along its right  
35 hand face two slides, being flat pieces M and N lying one over the other and supporting the cutter stocks and cutters E, G. These slides move vertically, and have through them an opening for the passage of the article to be turned. Lying behind are two  
40 other slides H and J meeting each other, which when closed meet over the central point or axis of the lathe, each having a semi-circular opening in its edge, which together  
45 form a circle of the size of the largest diameter intended for the turned part of the article operated on.

The slides M and N are operated by two levers *a* and *b* which are supported at centers upon an upright K, their inner ends  
50 lying under studs *c* affixed to the slides, their outer ends being attached to upright rods *d* and *e* which pass down through block D having from their lower ends projecting  
55 pins *f* which pass under the pattern L, said

pattern being attached in the usual manner to the lower front edge of the lathe. The weight of the slides keeps the pins *f* up to the uppermost recess or lines of the pattern, the lowest edges of the pattern pressing  
60 down the levers *d* and *e* and raising the slides.

The slides H and J are operated by rod P, lying along the face of the rest, parts of which are bent so as to lie angularly  
65 along its surface and across H and J, the upper angles across H running in the opposite direction to the lower one across J, the angle being the same in both cases. In the face of the slides small pins *x*, *x*, embrace  
70 the rod P, so that as it moves up and down, its inclined edges shove the slides simultaneously and equally one to the right hand, the other to the left hand. The rod P is operated by a pin *h*, near its bottom which  
75 traverses a slotted guide or pattern Q, lying along the back of the lathe properly shaped to give due motion to the slides. Upon the other or left side of the slide rest (see Fig. 3) is attached a ring R which projects out a  
80 little from its surface; its open diameter being large enough to pass the largest part, when finished, of the article to be turned, in the case of bed posts and similar work, the square parts. To the ring is affixed the  
85 cutter *i* to cut down the rough material to this size.

Against the face of the rest is a horizontal slide S carrying the cutter *k* whose work it is to cut the material down from the square  
90 to the size of the largest diameter for the turned article, so as to fit the opening in the slides H, J, when closed upon each other, thus forming a support for the material near the point operated on by the cutters E and  
95 G during the whole process of turning. This slide S is operated by the guide Q through the rod T, which being constructed like rod P and operating in a similar manner throws the slide with its cutter *k* to and from the  
100 work.

The knives or cutters E and G are placed so as to cut the material from the top progressing downward in a line parallel with a  
105 diameter of the circle of turning, and a short distance in front of it, the cutters working a little below the tangent to the circle. Cutter E is set to cut a little deeper than G. By the movement of the rest from right to left G precedes E along the pat-  
110

tern L and cuts the material down to the proper form leaving E with a light chip to finish the work smoothly.

If requisite for more perfect work more than two slides and cutters can be employed.

The operation of the machine is thus: The material to be turned, say a stick for a bed-post being placed between the heads and the rest A placed at the right hand extremity of the stick, and the machine set in motion—first the cutter *i* trims off the rough corners of the stick to the edges of the square; next the cutter *k* pares down the wood to the largest diameter of the ornamental part of the post, and so as to fit within the slides H, J when closed; next the cutter G guided by the pattern L cuts out the ornamental form designed by the pattern, cutter E following close behind and finishing the work; next just before that part of the stick intended for the square part of the post arrives at the cutters E, G, the pattern raises them above its range; next the supporting slides H, J, operated by the guide Q open and pass the stick, the cutter *k* being then withdrawn by Q. As soon as the square has passed, the

pattern and guide bring back the rest H—J and cutters to their appropriate work to finish the remaining ornamental part of the post.

I do not claim the employment or use of slides carrying cutters and operated by patterns or guides acting in combination with springs, but I claim—

1. The use of cutter slides M, and N, moving vertically and acting by their own weight in combination with the levers *a*, *b*, rods *d*, *e*, and pattern guide L, constructed and arranged to operate the cutters E, and G, as described.

2. I further claim the combination of the cutter slides and cutters arranged and operated as described, with the slides H and J and their operating mechanism, so as to support the article being turned close to the cutters, excepting when the square parts of the article need passage through the said slides, substantially as described.

A. N. WILCOX.

Witnesses:

W. C. MILLER,  
RICHD. VARICK DE WITT.