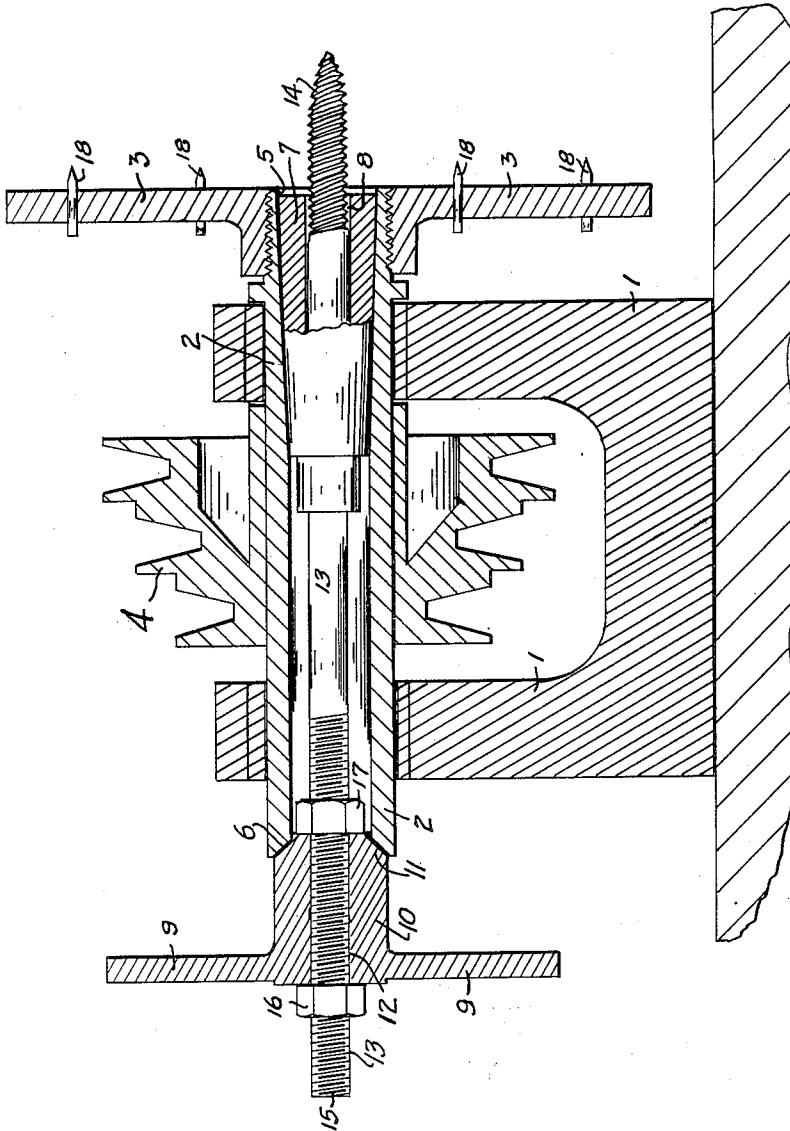


June 12, 1951

A. W. McNICKLE
WOOD LATHE CENTERING DEVICE

2,556,595

Filed April 1, 1947



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2,556,595

WOOD LATHE CENTERING DEVICE

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Application April 1, 1947, Serial No. 738,574

1 Claim. (Cl. 142—53)

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This invention relates to lathes and especially to those lathes which are adapted to turn wooden articles.

The objects of my invention are, first, to provide a means of securing the article to be turned to the face plate of the lathe; second, to provide a device to adjust the exposed length of the centering screw whereby it is thus secured, so as not to penetrate into the material to be turned a too great distance; third, means to assure the accurate centering of the said screw; fourth, to eliminate the necessity of providing a multiplicity of face plates with wooden blocks attached, each having a different length of center screw extending therefrom; to provide a firmer backing for the work being turned than can be provided when a relatively soft cushion effect of a wooden block is provided between the work and the face plate, thus eliminating chatter; and to provide an inexpensive device which is easy to make, quick and easy to adjust, and effective in practice.

I attain these and other objects by the devices, mechanisms and arrangements illustrated in the accompanying drawing, in which a vertical section of a lathe head, showing my centering device, is shown.

It is the usual practice in wood-turning shops to provide a very large number of face plates, each provided with a properly centered wooden block, each having a different length of screw extending therefrom at its center, to accommodate the different types of work to be turned in the lathe. This necessitates changing the face plate and block for each change in the job in hand, thus requiring a considerable outlay in money and loss of time in effecting the change. This objection is eliminated by the following described device which is always properly centered and in which the exposed length of the screw for securing the work to the face plate is quickly and easily adjusted to any desired position, and which has the further advantage in that it brings the work firmly and tightly against the face plate instead of against an intervening block of wood, thus eliminating the chatter which is so objectionable to good work and so difficult to avoid when a wood block is used.

Referring now to the drawing, it will be seen that the lathe head 1, is provided with the usual hollow shaft 2, suitably mounted in bearings, and screw-threaded at its end to receive the usual face plate 3. The shaft 2 is, of course, driven by a belt engaging the usual wheel 4. The front end of the opening in the shaft 2 is tapered at 5, and the rear end thereof is beveled at 6.

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A tapered centering plug 7 is inserted in the tapered end 5 of the shaft, and this plug is provided with an axial hole 8 therethrough.

A wheel 9 is provided with a boss 10 extending therefrom and said boss is provided with a beveled edge 11 concentric with the wheel 9 and adapted to fit the beveled end 6 of the shaft 2. An axial hole 12 extends through the wheel 9 and the boss 10, and is of the same diameter as the hole 8 in the plug 7.

A rod 13 fits snugly in the two holes 8 and 12. The front end of the rod 13 is screw-threaded with a wood-type thread 14, adapted to enter the piece of wood to be turned and to clamp it tightly against the face plate 3. The rear end of the rod 13 is also screw-threaded at 15 with the normal metal thread, and passes freely through the hole 12 in the wheel 9. A pair of nuts 16 and 17 are screwed on the threaded part 15 and clamp the inner and outer ends of the boss 10 between them, thus limiting the extent that the screw 14 may extend beyond the face plate 3.

Pins 18 may extend through the face plate 3 at various points to enter the wood being turned.

The work to be turned in the lathe is first provided with a center hole into which the screw 14 is screwed. The wheel 9, with the rod 13 clamped thereto by the nuts 16 and 17, is turned, the beveled surfaces 6 and 11 preventing the forward movement of the rod 13 in the shaft 2 and the screw 14 thereon drawing the work rearward against the face plate 3 (and the pins 18) which is fixedly secured to the end of the shaft 2. Thus the work is secured to the shaft and turns therewith. While the work is thus secured the rod 13 cannot move rearward because the work is held against the face plate 3, which is immovable on the shaft 2, by the screw 14.

My improved device is used in the following manner. When it is desired to change the extent that the fastening screw 14 projects beyond the face plate 3, to suit the conditions of the next work to be mounted in the lathe, the rod 13 is pulled rearward entirely out of the lathe head 1; then the nuts 16 and 17 are adjusted on the rod 13 to move the position of the boss 10 on the rod; then the rod 13 is returned into the hollow shaft 2, and will then protrude beyond the face plate 3 the new adjusted length.

Thus it will be seen that I have provided a centering device which will tightly secure the work to the face plate; which can be adjusted in the extent that the attaching screw may penetrate into the work; and which is accurately coaxial with the shaft.

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It is, of course, understood that changes in the details of my improved centering device may be made without departing from the spirit of my invention as outlined in the appended claim.

What I claim and desire to secure by Letters Patent, is:

In a wood lathe, the combination of a hollow rotating drive shaft, having a rearward tapered axial hole in the front end thereof; a face plate mounted on the front end thereof; a rearward tapered plug fitting in said tapered hole, and having an axial hole therein; a rod, screw-threaded at each end and extending through said last hole, and beyond the face plate; the rear end of said hollow shaft being beveled; and a boss adjustably mounted on said rod by clamping between nuts on the rear end screw threads of said rod, and having its forward surface beveled to fit the bevel of the shaft, thereby adjusting the extent that the front end screw threads

project beyond the face plate and centering said rod on said shaft.

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