No. 855,858. PATENTED JUNE 4, 1907.

O. LARSON.

TAIL STOCK FOR WOOD TURNING LATHES.

APPLICATION FILED MAR. 12, 1907.

Fig. 2.

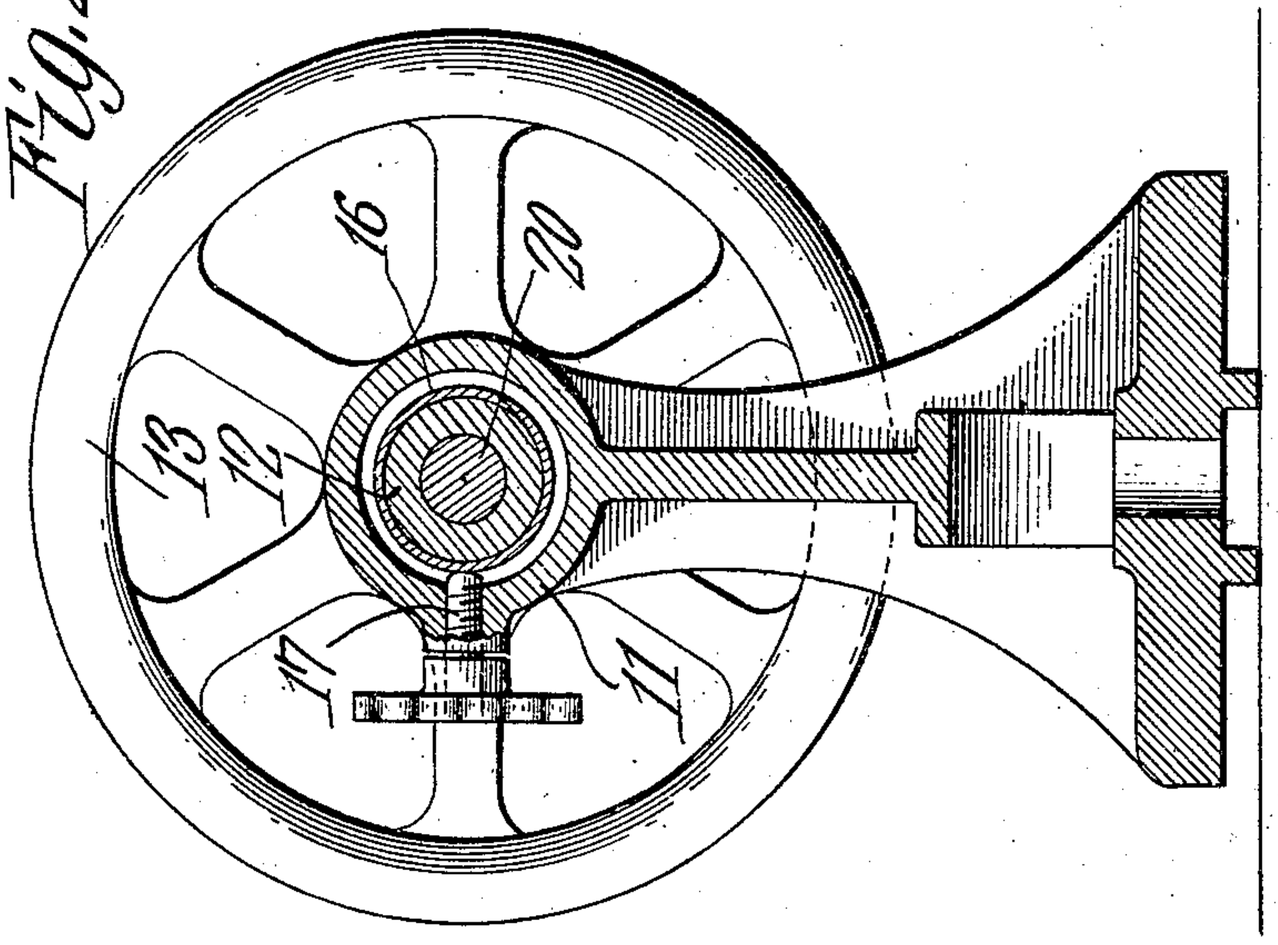

Fig. 3.

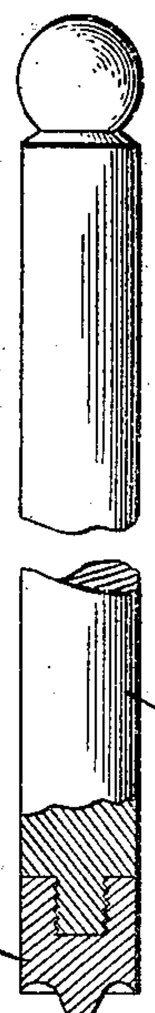

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

OLOF LARSON, OF PORTLAND, OREGON.

TAIL-STOCK FOR WOOD-TURNING LATHES.

No. 855,858. Specification of Letters Patent. Patented June 4, 1907.

Application filed March 12, 1907. Serial No. 361,943.

To all whom it may concern:

Be it known that I, OLOF LARSON, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Tail-Stock for Wood-Turning Lathes, of which the following is a specification.

This invention relates to lathes, and has for its principal object to provide a novel form of tail stock adapted more especially for use in connection with wood turning and boring lathes.

The principal object of the invention is to provide a novel form of tail stock capable of use for heavy work, and of such construction as to permit the boring of center holes during the turning operation, or before or after turning.

A further object of the invention is to provide a hollow tail stock of such construction as to form a firm support for the wood or other material being turned, the tail stock permitting the introduction of a centering device and the subsequent use of a twist drill or other boring tool.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts, hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size and minor details of construction may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings:—Figure 1 is a sectional elevation of a tail stock constructed in accordance with the invention. Fig. 2 is a transverse sectional view of the same on the line 2—2 of Fig. 1. Fig. 3 is a detail view, partly in section, of the centering device.

Similar numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawing.

The tail stock frame 10 is usually formed of cast metal, and is provided with an upper sleeve 11, that is provided with an internal thread at one end for the reception of the threaded portion of a sleeve 12 which may be adjusted by a hand wheel 13, that is keyed or otherwise secured to said sleeve. The opposite end of the portion 11 is bored out for the reception of a split clamping ring 16 which forms a bearing for the sleeve 11, and which also serves as a means for locking said sleeve from movement, the clamping sleeve or ring being forced to locking position by a handled locking screw 17 adapted to a threaded opening in a boss 18 projecting from the tail stock. The split clamping ring serves as a means for protecting the threaded portion of the sleeve 12 from injury when the locking screw 17 is turned, and also affords a bearing in order to prevent undue wear of the sleeve. That end of the ring opposite the adjusting handle 13 is provided with an annular groove forming a pair of concentrically disposed sharp edges which bite into the material being turned and support the same without unduly retarding the rotative movement.

The sleeve 12 is hollow for its entire length in order to permit the ready introduction of a centering device. The center 18 is provided with a sharpened point 19 which may be forced into the end of the wood in order to form a guide for the introduction of the twist drill or other boring tool when the latter is subsequently passed through the sleeve. This center 19 is preferably formed of steel and is provided with a threaded socket for the reception of the reduced threaded end of a handled rod 20 that is formed of wood or other relatively light material for convenience in use. When introduced into place, the center may be locked by means of a set screw 22 in order to afford an additional support for the wood.

After the supporting sleeve 11 has been moved to place against the material being turned, the center 18 may be introduced through the handled end of the sleeve and forced inward, making a slight depression in the end of the wood at the axial line thereof, and this depression will form a guide for the twist drill when the latter is introduced through the sleeve after the removal of the center.

It is found in practice that openings may be bored at the exact center of the work and twist drills of any size up to the full internal diameter of the hollow sleeve may be employed.

I claim:—

1. A tail stock having a stand or base provided with an internally threaded opening, a threaded sleeve arranged therein, the work engaging end of the sleeve being concaved to present sharp engaging surfaces, said sleeve being hollow its entire length to permit the

introduction of a centering or boring tool, a friction holding sleeve encircling the tail stock sleeve, and a clamping screw engaging said holding sleeve.

2. In a tail stock, a base or stand having an internally threaded opening, a tail stock sleeve arranged therein and having a transversely concaved work engaging end, the sleeve being hollow for its entire length to permit the introduction of a centering or boring tool, a split sleeve embracing the tail stock sleeve, and a clamping screw for engaging said split sleeve.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OLOF LARSON.

Witnesses:
W. J. LYONS,
PAUL BRINKMAN.