H. F. SHAW.

Screw-Threading Machine.

No. 83,554. Patented Oct. 27, 1868.

Fig: 1

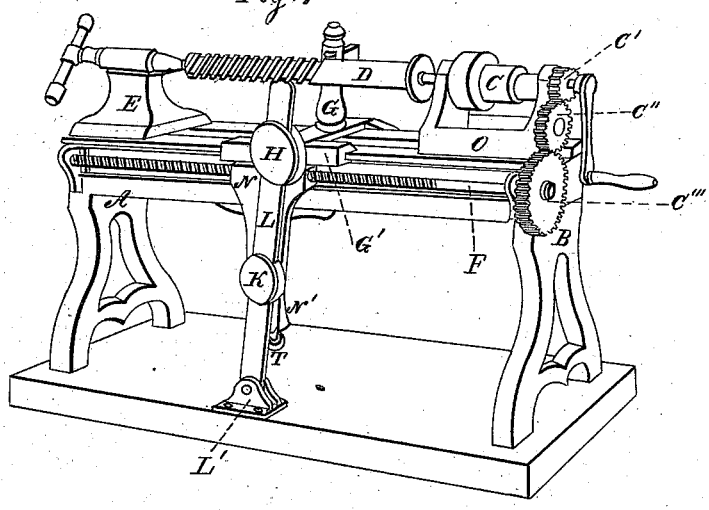
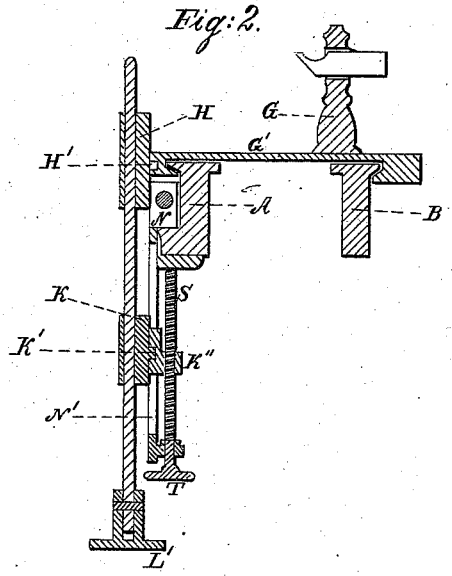


Fig: 2.



Witnesses:

Frank G. Parker.

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HENRY F. SHAW, OF WEST ROXBURY, MASSACHUSETTS.

Letters Patent No. 83,554, *dated October* 27, 1868.

IMPROVED SCREW-CUTTING LATHE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY F. SHAW, of West Roxbury, in the county of Norfolk, and State of Massachusetts, have invented certain new and useful Improvements in Screw-Cutting Lathes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

To enable others skilled in the art to make and use my invention, I will proceed to describe its nature, construction, and operation.

The nature of my invention consists in connecting, with the tool-carriage of a screw-cutting lathe, a lever, which is operated by a nut running on the actuating-screw of the lathe, the lever being so arranged, in combination with the nut of the actuating-screw, that its length may be changed at will, thus regulating the relative speed of the tool-carriage, and consequently the pitch of the screw being cut.

Drawings.

Figure 1 is a perspective view of an ordinary screw-cutting-lathe, with my improvement attached.

Figure 2 is a cross vertical section of the same.

In the drawings, A B represents the frame of the lathe, having attached the head-block O, cone-pulley C, tail-stock E, and tool-carriage G G′, all made in the ordinary manner.

C′, fig. 1, is a small spur-gear attached to the mandrel of the cone C, which, operating through the gears C′ C″ C‴, revolves the actuating-screw F.

L is a lever pivoted to a stationary foot-piece, L′. This lever passes freely through sockets made in the buttons K and H. The button K is pivoted to the screw-nut K″, as shown in fig. 2, and is so arranged, in combination with the slot made in the plate N′ and the screw S, fig. 2, that it may be moved up and down on the lever L. Now, as K is lowered, that is, brought nearer the fulcrum L′, its lateral motion will cause increased motion of the upper end of its lever, L, and as the lever L passes through the button H, attached to the tool-carriage G G′, the tool-carriage will be moved with greater or less comparative rapidity, in proportion to the distance that K is from the fulcrum L′. The upper plate, N N′, forms a screw-nut or nuts, through which the actuating-screw passes.

As the button K is moved by the screw S T, it may be adjusted to any point on the lever L; consequently the motion of the tool-carriage G′ G may bear any desired relation to the motion of the nut N. In other words, a screw of any pitch may be cut by my improved lathe, while with screw-cutting lathes, as ordinarily arranged, only screws with a small variety of pitches can be cut.

Having thus described all that is necessary to make clear my invention, I will now disclaim as new any of the specific parts of the device hereinbefore described, and state that,

What I claim is—

The arrangement, substantially as described, of the lever L, pivoted at L′, the nut N having a slotted shank, N′, thereon, the adjustable connecting-button K, carriage G′, provided with the swivelled and slotted disk H, and the screw F, or their equivalents, for the purpose described.

HENRY F. SHAW.

Witnesses:

FRANK G. PARKER,

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