F. SHALLER.

Watchmaker's Lathe.

No. 57,775. Patented Sept. 4, 1866.

Fig: 1.

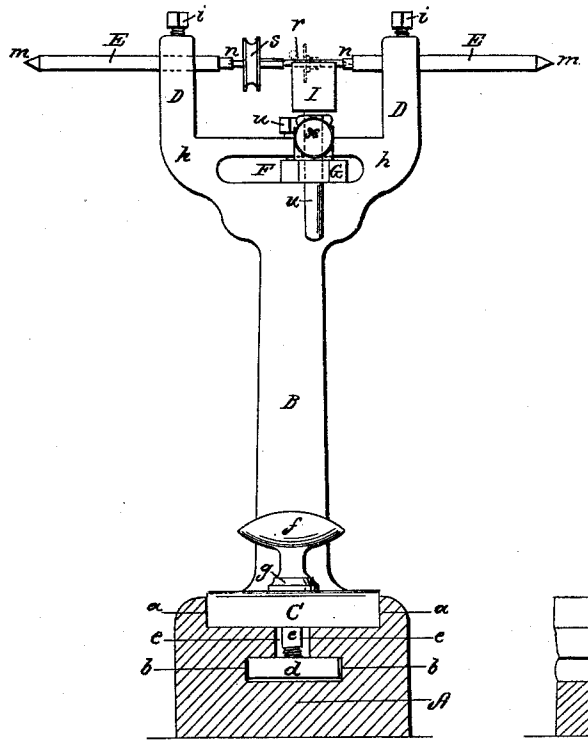
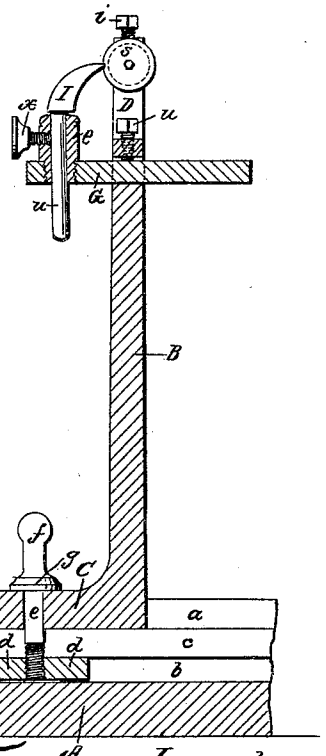


Fig: 2.



Witnesses:

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Attys.

UNITED STATES PATENT OFFICE.

FRIEDRICH SHALLER, OF HUDSON, NEW YORK.

IMPROVEMENT IN WATCH-MAKERS' LATHES.

Specification forming part of Letters Patent No. **57,775**, dated September 4, 1866.

To all whom it may concern:

Be it known that I, FRIEDRICH SHALLER, of Hudson, in the county of Columbia and State of New York, have invented a new and useful Improvement in Lathes for the Use of Watch-Makers and others; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of a lathe constructed according to my invention. Fig. 2 is a vertical transverse section of the same.

Similar letters of reference indicate corresponding parts in both figures.

This invention consists in a novel construction of a lathe, whereby it is rendered exceedingly simple and cheap in construction, and is especially adapted to watch-makers' use and other light work.

To enable others to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

A represents a horizontal bar, which may be of wood or other suitable material, and may be fixed upon a bench or other supporting-structure. B is the upright standard of the lathe, and is formed in one piece with the horizontal base C thereof, the said standard and base being made of iron, brass, or other suitable metal.

A broad shallow groove, *a*, is formed longitudinally in the upper side or surface of the bar A, and at or near the longitudinal center thereof is a horizontal slot, *b*, which runs parallel with the groove *a*, and communicates therewith by means of another longitudinal slot, *c*. The base of the lathe is placed in the groove *a*, and a nut, *d*, is placed in the slot *b*.

e is a screw, provided with a suitable head, *f*, by which it may be turned when necessary, and also with an annular shoulder, *g*, which rests upon the upper surface of the said base. This screw *e* passes downward through a suitable hole in the base C, and through the slot *c*, and is screwed into the nut *d*, so that by tightening the said screw the base C will be clamped between the bottom of the groove *a* and the shoulder *g* of the screw *e*, and thus be rigidly secured upon the bar A, while by unscrewing the screw *e* the lathe may be entirely removed therefrom, or be removed to any desired part of the groove *a*.

The upper part of the standard B is made broad or expanded, as shown at *h h* in Fig. 1, and from each side or end of this broad portion there projects upward a vertical arm, D.

E represents two cylindrical pins or short rods, the ends of which form the centers of the lathe. These pins or rods pass through suitable holes formed opposite each other in the arms D, and are firmly held in place by set-screws *i*. One end of each pin E is made sharp or conical, as shown at *m* in Fig. 1, to form a male center, while the other end thereof is recessed to form a female center, as indicated at *n* in the same figure.

r is a mandrel, the ends of which are fitted upon the centers formed by the innermost ends of the pin E, and upon which is secured a pulley, *s*, which, with the mandrel, is rotated by a belt from any appropriate shaft. The article to be turned is secured upon this mandrel *r* in any ordinary or suitable manner, as indicated by the small wheel shown in red lines in Fig. 1.

Extending transversely through the broad upper portion of the standard B is a horizontal slot, F. G is a horizontal bar, which is passed through the slot F, and held therein in any desired position by the set-screw *u*, the ends of which project downward into the said slot in contact with the upper side of the bar G, just mentioned. Screwed into the upper side of the front or forward end of this bar G is an upright tubular socket, *v*, working through the front side of which is a thumb-screw, *x*.

I is the rest, which may be of any suitable shape, and which is provided with a cylindrical downwardly-projecting stem, *w*, which passes through the aforesaid tubular socket *v* in such manner that it may be moved up and down therein, or turned around, to bring the rest I to any required angle with reference to the mandrel *r*, the said stem being firmly secured in the desired position by turning the thumb-screw *x* tightly against it, while by loosening the set-screw *v* the bar G may be turned to any desired angle in relation to the standard B, so that the rest I may be brought to any point along the length of the mandrel to correspond with the position of the work to be turned thereon.

The article to be turned being secured upon the mandrel *r*, and a rotary motion being given to the said mandrel by means of the pulley *s*, as hereinbefore set forth, the turning-tool is supported by the rest I, and held by the hand in contact with the article to be turned in the usual manner, the mandrel *r* being supported by and turning upon the dead-centers formed by the inner ends of the pins E, which may be reversed, according as it is desired to employ male or female centers.

What I claim as new, and desire to secure by Letters Patent, is—

The standard B, provided with the slot F, and formed in one piece with the base C and arms D, in combination with the pins E, bar G, and rest I, the whole being constructed and arranged substantially as herein set forth, for the purpose specified.

FRIEDRICH SHALLER.

Witnesses:
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