(Model.)

L. R. DAVIS.

LATHE CHUCK.

No. 260,005. Patented June 27, 1882.

Fig 1.

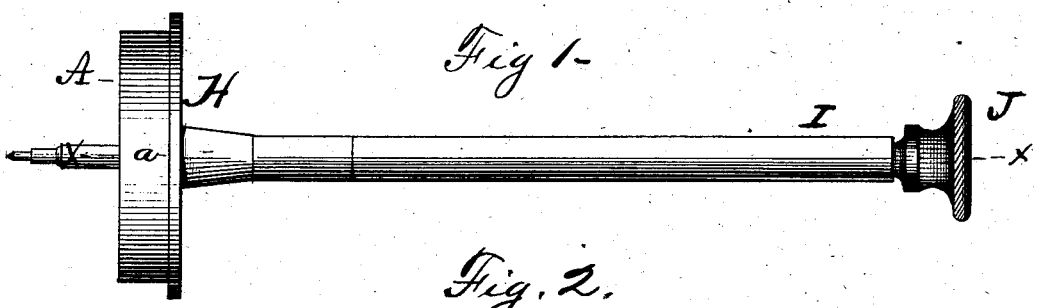


Fig. 2.

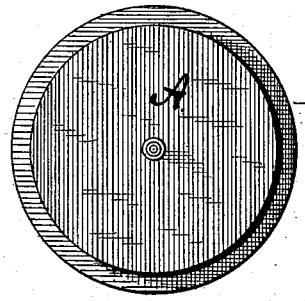


Fig 5.

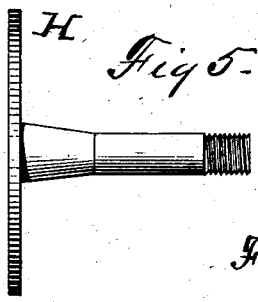


Fig 6.

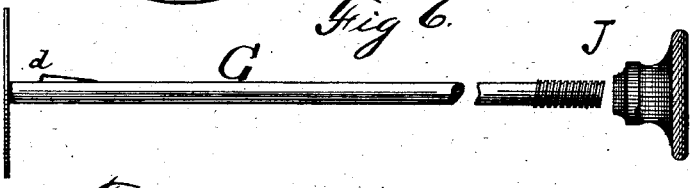


Fig. 3.

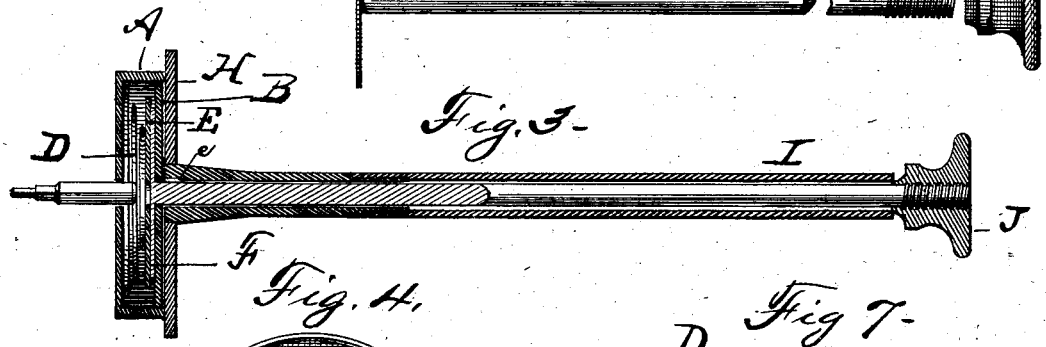


Fig. 4.

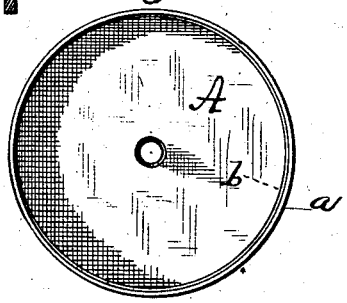
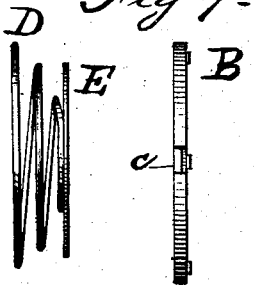


Fig 7.



L. R. Davis.
Inventor.

Witnesses:
Wm. G. Henderson.
H. C. Perrine.

By H. A. Abbot.
Attorney.

UNITED STATES PATENT OFFICE.

LORING R. DAVIS, OF ADRIAN, MICHIGAN, ASSIGNOR OF ONE-HALF TO SYLVESTER P. BABCOCK, OF SAME PLACE.

LATHE-CHUCK.

SPECIFICATION forming part of Letters Patent No. 260,005, dated June 27, 1882.

Application filed September 20, 1880. (Model.)

To all whom it may concern:

Be it known that I, LORING R. DAVIS, a citizen of the United States, residing at Adrian, in the county of Lenawee and State of Michigan, have invented certain new and useful Improvements in Lathe-Chucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification, in which—

Figure 1 is a side view of the lathe spindle and chuck; Fig. 2, an end view of the chuck; Fig. 3, a section of chuck and spindle through the line *x x* of Fig. 1; Fig. 4, a rear end view of the chuck-head, showing it chambered; Fig. 5, a side view of the chuck face-plate separated from the spindle; Fig. 6, detailed views of clamping-plate, its rod, and fastening-plate F; Fig. 7, detailed views of spring, steadying-plate, and back plate.

My invention relates to lathes designed more especially for jewelers' use or other fine work, although adapted for other turning-lathes; and it consists in the construction and combination of parts hereinafter described, and sought to be pointed out in the claims, whereby the article worked upon can be readily centered and the parts quickly clamped so as to hold it in position.

In the accompanying drawings, the letter A indicates the head of the chuck, which is chambered from the back, so as to leave a rim, *a*, on the inside of which is formed a seat, *b*, against which bears the back plate, B, the outside face of which is flush with the edge of rim *a*, or preferably below it, so that the edge of the rim will take the pressure against the face-plate hereinafter referred to. This plate B is prevented from turning and is held to its seat by means of screws passing into the plate near its edge, the heads of the screws being cut so as to leave square or sharp edges thereto, which fit against the inside of rim *a* or into notches that may be made therein.

Inside the chamber of the head A there is placed a conically-coiled or other spring, D, to the apex or top of which is secured a steadying plate or disk, E. A clamping-plate, F, of smaller diameter than the chamber of head A, fits between the spring D or its disk and the back plate, B, and to it there is secured one end of a tightening-rod, G, which passes through an opening, *c*, somewhat larger in diameter than the rod in the back plate, B, and then through a face-plate, H, which is of larger diameter than the head of the chuck, the said face-plate being secured fixedly to the end of the hollow spindle I. The end of the tightening-rod is threaded, so that a left-hand nut, J, may screw thereon and bear against the end of the spindle.

The rod G is provided near the back plate, B, with a feather, *d*, which fits into a groove, *e*, formed in the spindle I, so that the rod G will turn with the spindle at the same time that the head A turns with the spindle and face-plate by reason of the head being clamped to the face-plate by screwing down the nut J.

Any of the well-known clamping-jaws suitable for the purpose are secured to the face of the head A, so as to hold the work. The power of the spring D is such that it will press the clamping-plate F against the back plate, B, with sufficient force as by friction to hold the two plates together at any point to which the head A may be moved within the radius of the opening *c* in the back plate.

In operation, after the work-piece has been fixed between the clutch-jaws, the lathe is set in motion and the work centered by pressing against the head of the clutch or the work itself. The nut at the end of the rod is then screwed up, thereby drawing the head up against the face-plate H, and holding it by pressure tightly against that plate, and the work to its center to which it has been adjusted, as described.

If the spring D from any cause should not be able of itself to hold the head to any adjustment given to it after the work has been clamped in place, the nut J may be run partially up, so as to give a gentle pressure to the head and permit it to be moved by the workman.

This chuck can be cheaply manufactured. It is simple in construction and not easily put out of repair, and is very effective in operat-

ing, admitting of accurate and quick centering of the work.

Having described my invention, what I claim is—

1. In a lathe, the head A, inclosing a spring and provided with a back plate, B, fitting below the edge of rim *a*, in combination with a clamping-plate, F, located between the spring and back plate, and connected to a rod passed through a hollow spindle and operated on by a nut, substantially as set forth.

2. In a lathe, the head A, spring D, back plate, B, and face-plate H, in combination with threaded rod G, provided with plate F and feather *d*, spindle I, having groove *e*, and left-hand nut J, the several parts being arranged to operate as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

LORING R. DAVIS.

Witnesses:
ORSAMUS LAMB,
J. E. SCHNELL.