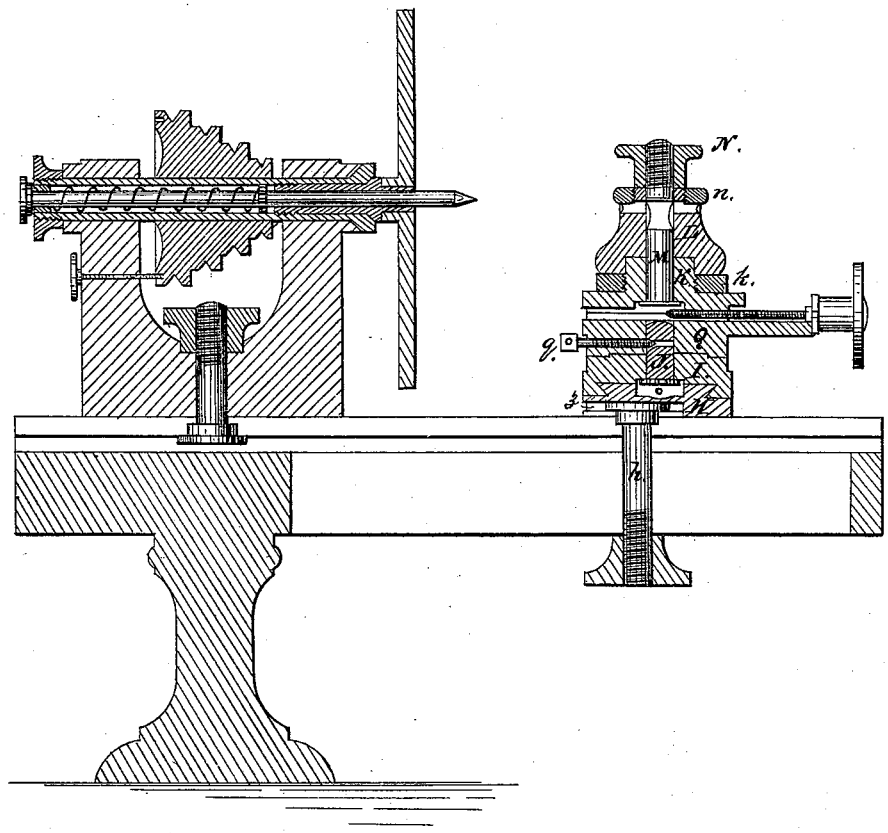
CALEB HOPKINS.

SLIDE-RESTS FOR WATCHMAKERS' LATHES.

No. 193,609. Patented July 31, 1877.



Witnesses:

John Dees

H B Ferguson

Inventor:

Caleb Hopkins

UNITED STATES PATENT OFFICE.

CALEB HOPKINS, OF WALTHAM, MASSACHUSETTS.

IMPROVEMENT IN SLIDE-RESTS FOR WATCH-MAKERS' LATHES.

Specification forming part of Letters Patent No. **193,609**, dated July 31, 1877; application filed February 8, 1877.

To all whom it may concern:

Be it known that I, CALEB HOPKINS, of Waltham, in the county of Middlesex, State of Massachusetts, have invented a Slide-Rest for Watch-Makers' and other Lathes, of which the following is a specification:

The object of my invention (a vertical section of which lengthwise of the lathe-shears, on which it is represented as placed, is shown in the accompanying drawing, its several parts being designated by the letters H, *h*, I, J, Q, *q*, K, *k*, L, M, N, and *n*, and all together constituting the slide-rest of a lathe) is, through improvements in the forms and in the combinations of its several parts, to render the slide-rest thus constructed more prompt and easy of adjustment, both as to height and to angle, and the tool-holder more rigid, and at the same time more perfectly controllable, than is the case in slide-rests of other constructions.

My invention may be described more in detail as follows:

H is the lowest or foundation piece of the slide-rest, and is so formed as to make it serve the double purpose of ways for the sliding piece I to move on, and the shoe for supporting the slide-rest on the shears of the lathe, the said shoe being formed directly on the under side of the piece H, and a T-groove, *z*, being cut in it from one side to a little past its center, into which the head of the bolt *h* enters, for fastening it down on the lathe-bed; or, by slight modification in form, it may be made to fasten on the lathe-shears in the same way as do other slide-rests.

J is a bolt that passes up through the parts I and Q, with its head on the under side of the piece I, and having a transverse hole through it a little above the line of junction of I and Q, into which the tapered end of a screw, *q*, is made to enter in such way that, by tightening the screw *q*, the bolt J is drawn upward, and the pieces I and Q, which form a turn-table at this point, are thereby forced tightly together, and thus held firmly to the position or angle to which they may have been set.

K, *k*, L, M, *n*, and N are the several parts that constitute the tool-post of my invention. The part L, which is the tool-holder proper, is chambered on its under side, and made to fit over the hub K on the top of the upper slide of the slide-rest, and is pierced through, near its top, with two transverse holes, one square and the other round, to adapt it for holding turning-tools made of either square or round steel; or one of these transverse holes may be omitted, when so preferred. Immediately above these transverse holes, and extending slightly into them, the piece L is reduced somewhat in diameter, a screw-thread cut in its periphery, and the screw-nut *n* fitted thereto, for fastening the tool used in its place. Underneath the piece L, on a screw cut at the base of the hub K, is placed the adjusting-nut *k*, for raising and lowering the tool-holder L. M is a bolt that passes up through the center of the parts, with its head underneath the hub K, and, with the aid of the screw-nut N at its top, serves to fasten the parts firmly together. The bolt M is also pierced transversely at the point coinciding therewith, but somewhat larger in diameter than the transverse holes through the piece L, to allow of the tool used passing freely and somewhat loosely through it.

By this arrangement of the parts of the tool-post the part for fastening the tool in its place, and those for setting to height and to angle, work quite independently of each other. Thus the nut N may be loosened and the piece L be raised or lowered, or turned round on the hub K, without loosening the tool; or, by loosening the nut *n*, the tool may be taken out or put into its place without moving the other parts.

I claim as my invention—

1. The combination of the base-plate H of the rest with the lathe-shears and the slide-rest proper, substantially as described.

2. The pierced bolt J, in combination with the pieces I and Q, and the cone-pointed screw *q*, substantially as and for the purposes hereinbefore set forth.

3. The combination of the piece L with the hub K, the adjusting-nut *k*, the bolt M, and the set-nut N, substantially as described, and for the purposes hereinbefore set forth.

4. The improved slide-rest hereinbefore described, being composed of the parts H I J K *k* L M N *n* Q *q*, together with the necessary working screws and cranks, in combination with the lathe-bed, substantially as described, and for the purposes set forth.

Witnesses: CALEB HOPKINS.

JOHN DEIS,

C. B. FERGUSON.