S. G. Twambley,

Watchmakers' Tool.

No. 41,966. Patented Mar. 15, 1864.

Fig: 1

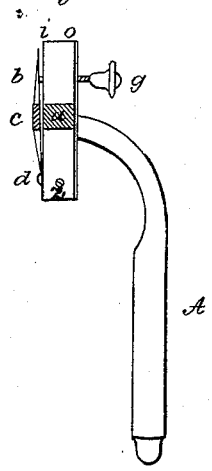


Fig: 2

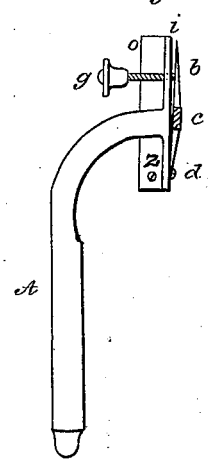
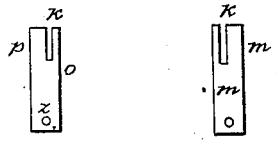


Fig: 3

Fig: 4.



Witnesses:

Charles A Shaw

Albert Perkins

Inventor:

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UNITED STATES PATENT OFFICE.

SAMUEL G. TWAMBLEY, OF BIDDEFORD, MAINE, ASSIGNOR TO CHARLES A. SHAW, OF SAME PLACE.

IMPROVED LATHE-REST FOR TRUING WATCH-WHEELS.

Specification forming part of Letters Patent No. **41,966**, dated March 15, 1864.

To all whom it may concern:

Be it known that I, SAMUEL G. TWAMBLEY, of Biddeford, in the county of York and State of Maine, have invented a new and useful Improvement in Machines for Truing Watch-Wheels; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, of which—

Figure 1 is a side view of my improved machine. Fig. 2 is a side view of my improved machine, showing the side opposite that shown in Fig. 1. Fig. 3 is a transverse sectional view taken through the adjusting-screw. Fig. 4 is a view showing the method of constructing the faces of the head-piece and their springs when three faces are used.

Corresponding letters refer to corresponding parts.

In watch making and repairing wheels are frequently found all parts of the periphery or circumference of which are not equally distant from the center. Such wheels are said to be "out of true," and while in that state the watch of which they form a part cannot be made to run correctly. The usual way of truing such wheels or bringing all parts equally distant from the center or axis is to fasten them into a lathe, and while they are revolving rapidly to turn them down by means of a file or stone held in the hands of the workman and steadied by the rest of the lathe. The difficulties attending this method renders it impossible to do good work by it, as is well known and understood by all practical watch-makers; but these difficulties are entirely overcome by my improvement and the most desirable and perfect results attained, as will be understood by the following explanation:

In Fig. 1, A is a staff or upright having a double-faced head-piece, *i o*, the faces standing at right angles to each other. On each of these faces is a flat steel spring, *a c*, attached by screws *d z* to the head-piece. Arranged in the top of the head-piece is the adjusting-screw *g*, which, when it is turned in, comes into contact with the back of the spring *a* or *c*, as the case may be, as shown at *b*. To the outer face of the spring *c*, I cement a piece of a fine file, and to the spring *a* a piece of fine oil-stone, by means of common lathe wax or cement.

The operation of my invention is as follows: The wheel to be "trued" is put into a lathe, into the rest-slide of which the staff A is fitted. The slide is then moved to such a position on the lathe as to bring the file on the spring *c* nearly into contact with the wheel. The screw *g* is then turned in so as to bring the file into contact with the wheel, which is then caused to revolve rapidly in the lathe, and is consequently turned off or trued, the file being fed up to the wheel during the operation by the screw *g* as far as required, the spring to which it is attached allowing it to yield or "give," so as not to injure the wheel, and still being sufficiently rigid to turn the wheel off perfectly. After a wheel has been cut down sufficiently by the file there is sometimes small fibers of brass or steel on the sides of the wheel which require to be "stoned down." For this purpose the slide of the lathe in which the staff A stands can be moved a little to one side and a little forward, so as to bring the stone on the spring *a* against the side of the wheel. In this way a wheel can be more rapidly and expeditiously trued than in any other manner. The same adjusting-screw, *g*, is used for both faces or springs.

I have used a stone and file together on the face or spring *c*, but prefer to have them on separate springs. I have also used three faces to the head-piece by placing one opposite the face *o*, and making the face *o* and the one opposite and their springs slotted, as shown in Fig. 4, so that when the screw *g* was used to adjust the spring on *o* it could pass through the slot *k* in the opposite face *m;* and when used to adjust the spring on *m* it could pass through the slot *k* in *o*, the slot *k* being opposite the blank part of the face opposite—that is to say, the slot *k* in *o* being opposite the blank *r* in *m*, and the slot *k* in *m* being opposite the blank *p* in *o* when both faces were in position on the staff A; but this mode of construction adds to the cost, and the stone on the spring *c*, or the file on the spring *c*, can be brought to bear readily upon either side or the periphery of a wheel by a change of the slide or turning the staff in the slide, and in

many other ways which will readily suggest themselves to any workman.

Having thus described my invention, I claim—

1. In combination with the staff A, a file or stone mounted on a spring made adjustable by a screw, substantially in the manner and for the purposes set forth and specified.

2. In one piece of mechanism, the combination of a file and stone, when mounted, substantially in the manner and for the purposes hereinbefore described.

SAMUEL G. TWAMBLEY.

Witnesses:

CHARLES A. SHAW,
ALBERT PERKINS.