

B. WORMELLE.
Watch-Winding Device.

No. 216,814.

Patented June 24, 1879.

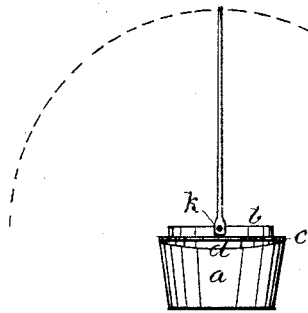


Fig. 1

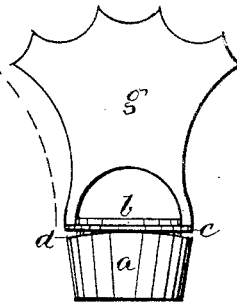


Fig. 2

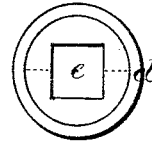


Fig. 3.

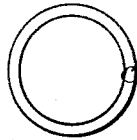


Fig. 4

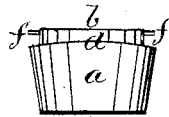


Fig. 5



Fig. 6

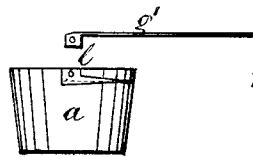


Fig. 7.

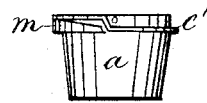


Fig. 8.

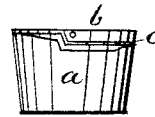


Fig. 9

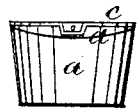


Fig. 10

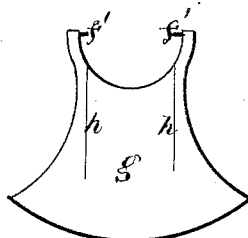


Fig. 11



Fig. 12



Fig. 13

Witnesses,
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Atty

UNITED STATES PATENT OFFICE.

BENJAMIN WORMELLE, OF BRIGHTON, MASSACHUSETTS.

IMPROVEMENT IN WATCH-WINDING DEVICES.

Specification forming part of Letters Patent No. **216,814**, dated June 24, 1879; application filed June 28, 1878.

To all whom it may concern:

Be it known that I, BENJAMIN WORMELLE, of Brighton, in the county of Suffolk and State of Massachusetts, have invented an Improved Watch-Winding Device, of which the following is a specification.

My invention relates to that class of watch-winding devices which are designed to be applied to watches already manufactured or in use, and which are made detachable, so as to admit of their being used also for setting the hands.

The object of the invention is to produce a device which shall be strong and durable, easily applied, and economical in construction, and which shall obviate the necessity of the cutting out of the cap of the watch in applying.

Referring to the drawings, Figure 1 represents my invention, on an enlarged scale, in elevation. Fig. 2 is a side view of the same. Fig. 3 is a top view of the pipe, showing the shoulder and central square opening. Fig. 4 is the circular spring. Figs. 5 to 13 represent modifications of details of my invention.

a in the several figures represents the pipe of the watch-winder, provided with a square opening through the center longitudinally, and fitting the square of the watch-arbor. The upper portion of the pipe *a* is formed with a shoulder, *d*, extending entirely around, and a projecting head, *b*, to opposite sides of which is attached, by means of a pin, *k*, the thumb-piece *g*. Upon the shoulder *d*, and surrounding the projecting portion *b*, is fitted a circular spring, *c*, consisting of a thin strip of metal.

The shoulder *d*, instead of being level all around, is curved downward on opposite sides below the points of connection of the thumb-piece *g* with the pipe *a*, so as to allow the spring *c* to yield to the pressure of the hinged edges of the thumb-piece as the latter is turned up or down, and also to hold the thumb-piece in position when opened or closed, which result is effected by the spring bearing against the square ends of the jointed portion of the thumb-piece.

The thumb-piece *g*, it will be seen, can be turned down at either side of the pipe.

The shoulder *d* may pass entirely around the pipe or only partially around; but in any case a socket or recess should be left for the attachment of the thumb-piece in such a manner that it will not interfere with the cap of the watch.

Fig. 7 represents a pipe in which the spring passes only half-way around, the ends being fitted in sockets *l*, one on each side, and to which is adapted the thumb-piece *g'*. The spring may also be arranged in sections around the pipe, the ends of the same bearing against the hinged portion of the thumb-piece with sufficient force to hold the latter in an open or a closed position.

The thumb-piece may be hinged to the pipe by boring holes in both pipe and thumb-piece and inserting pins therein; or it may be attached to the same by means of trunnions *f, f'*, forming a part of the pipe, as shown in Fig. 5; or projections *f' f'* may be formed on the inner ends of the thumb-piece, as shown in Fig. 11, and fitting in corresponding holes in the pipe. In either case the thumb-piece is to be sprung on, which is effected by means of the slits *h h* (one or more) in the thumb-piece, as seen in Fig. 11.

When trunnions are used a semicircular spring may be applied to the pipe, or a cut circular spring may be used.

In Fig. 6 are shown two lips, *i i*, projecting from the pipe *a* near its upper portion, for supporting the spring *c*, instead of the shoulder *d*, as in Figs. 1 and 2.

Fig. 8 shows a form of spring adapted to a pipe having a flange extending partially around the pipe, made as described in Patent No. 204,274, already granted to me, the spring on the pipe opposite the flange resting on a lip under the flange of the thumb-piece.

Fig. 13 represents the spring resting in a socket upon the top of the pipe with a flange extending wholly around the pipe.

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

1. The pipe *a*, constructed with the shoul-

der *d*, extending wholly or partially around the pipe, in combination with the hinged or pivoted thumb-piece *g*, substantially as and for the purpose set forth.

2. The shoulder *d*, formed with a depression on each side to admit of the yielding of the spring *c*, as described.

3. The combination, with the shoulder *d*, constructed as described, of the spring *c*, substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

BENJAMIN WORMELLE.

Witnesses:

J. H. ADAMS,
L. H. LATIMER.