E. H. PERRY.

Clicks for Ratchet Wheels.

No. 169,190. Patented Oct. 26, 1875.

Fig. 1

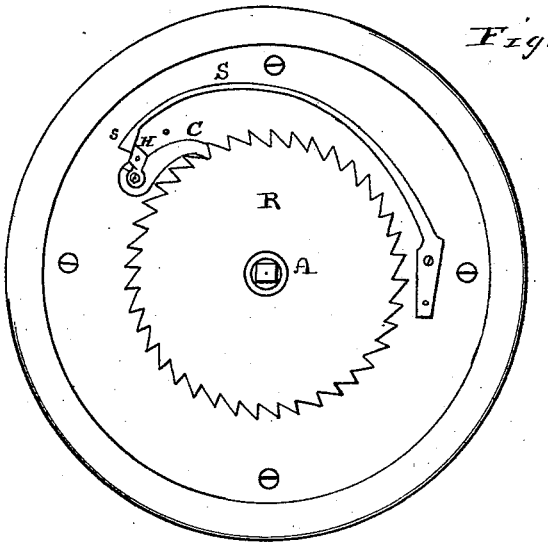
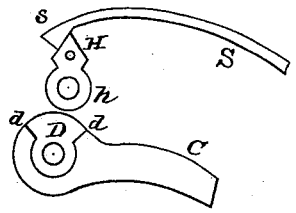


Fig. 2.



WITNESSES.

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EDWIN H. PERRY, OF LANCASTER, PENNSYLVANIA.

IMPROVEMENT IN CLICKS FOR RATCHET-WHEELS.

Specification forming part of Letters Patent No. **169,190**, dated October 26, 1875; application filed July 7, 1875.

To all whom it may concern:

Be it known that I, EDWIN H. PERRY, of the city of Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Clicks for Ratchet-Wheels, of which the following is a specification:

The nature of this improvement consists in providing a shifting-piece, set in a chamber reamed out, surrounding the pivot of a click. Said chamber has an open section with radial shoulders, against which the spring is made, so as to shift the pressure of the shifting-piece in such a manner as to hold the click down in one position, and to throw it out of contact with the ratchet-teeth in a reversed position, operated by means of a small peg in the angular head of the shifting-piece, thereby making it easy to disengage the click and hold it off, while the mainspring of a watch, or the like, is let down, and obviates the old practice of holding the spring off with a stick or tool held between the teeth, so liable to slip and scratch or injure fine watches.

The accompanying drawing shows the construction and application of this invention. The letters of reference and a brief description will enable those skilled in the art to make and use the same.

Figure 1 shows the combination of the click, spring, and ratchet; Fig. 2, detached views of the chambered click, shifting-piece, and spring-bearing enlarged.

The shifting-piece can be held directly on the face of the click and limited and operated by pins inserted, instead of the shoulders *d* and chamber D; but such will not be so effective or neat in appearance. An ordinary click or detent, C, has a circular chamber drilled out around the pivot-opening. The upper portion D is cut out, so as to form radial shoulders *d d*. This chamber is sufficiently deep to receive the shifting-piece, which has an annular base, *h*, and is turned on the pivot within the chamber by means of a pin inserted into the projecting angular head H, so as to be rotated by a slight movement and made to bear on one or the other shoulder, having sufficient play to allow the angular head H, or its apex and sides, to shift the bearing side on the angular head *s* of the spring S. Thus, when the inner side of the spring-head *s* bears against the outer or left side of the shifting-head H, the pressure in that direction, acting on the right-hand shoulder *d* of the chamber D, bears the end of the click C down to engage with the ratchet-teeth in the wheel R in the ordinary manner. A reverse action is produced on the click by throwing or turning the shifting-head over to bear against the opposite shoulder *d* or left-hand side. This movement will cause the shifting also of the spring-head *s*, so as to produce its pressure against the inner or right-side angle of the shifting-head H. The pressure or force, be it a mainspring or suspended weight, will still retain the click in its notch; but a slight winding or raising action will cause the click to become relieved, when the action of the spring S will throw it up and hold it out of gear with the ratchet-teeth, and allow the watch, or the like, to be let down gently by the counter action of the key, or its equivalent. To restore the click or detent to perform its normal functions it is only necessary to shift the inner shoulder of the shifting-piece against the right-hand shoulder *d* of the chamber, which movement again reverses the bearing of the spring S also.

The use of this device is self-evident, and its value, especially in the better class of watches, as well as its convenience in all cases, must commend it. The awkward use of a stick or tool held in the mouth, for holding the spring and click out, while one hand is engaged in holding the watch, the other in letting down with the key—a common practice, as all know who repair watches, usually wound up when brought for the purpose; and as they must be let down in the first place, this device not only supplies a convenient shifter, but also obviates the danger of injuring the works should the stick or tool slip, as often happens in the old method.

I am aware that in the patent No. 159,124, dated January 26, 1875, a pawl is used, having a pivot near the center and a projection upon which the head of a spring has its bearings, so that it can be shifted to hold the one end in or out of contact with the ratchet used

in combination with a loose pulley, to be put in or out of gear with a revolving shaft, a device and arrangement I do not claim.

What I claim is—

In combination with a click or pawl and ratchet-wheel an independent plate, *h*, provided with a projecting head, H, and pin for giving it a slight rotary motion on the pivot that holds the pawl C, so as to shift the head *s* of the spring S from one side of said head H to the other, arranged as shown, for the purpose specified.

EDWIN H. PERRY.

Witnesses:

WM. B. WILEY,

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