

(No Model.)

K. H. BARE.
WATCHMAKER'S ROLLER REMOVER.

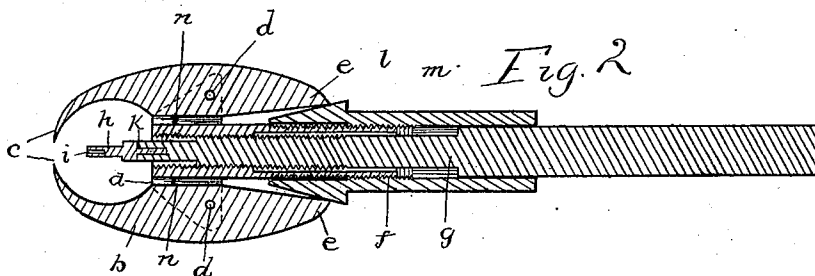
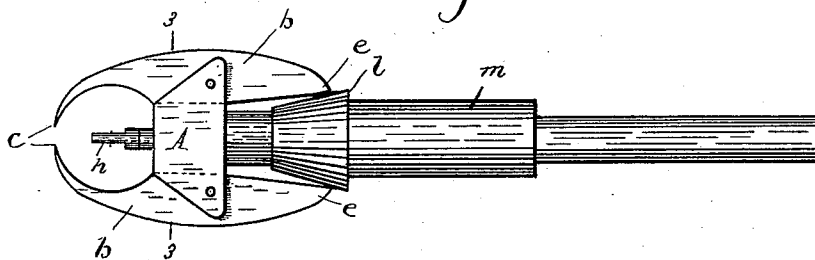
No. 560,461.

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Fig 3



Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE

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WATCHMAKER'S ROLLER-REMOVER.

SPECIFICATION forming part of Letters Patent No. 560,461, dated May 19, 1896.

Application filed January 24, 1896. Serial No. 576,647. (No model.)

To all whom it may concern:

Be it known that I, KENDIG H. BARE, a citizen of the United States, residing at Lancaster, in the county of Lancaster, State of Pennsylvania, have invented certain new and useful Improvements in Hand and Roller Removers; 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.

My invention relates to means for removing rollers or hands from a watch, in which operation it is necessary that the movement be longitudinal of the shaft, in order that the latter may not be injured.

In the drawings forming a part of the specification, and in which like symbols of reference indicate similar parts in the several views, Figure 1 is a plan view of my device, and Fig. 2 is a longitudinal section thereof. Fig. 3 is a section on line 3 3 of Fig. 1.

Referring now to the drawings, A is a block provided with lateral slots, in which are pivoted lever-jaws *b*, comprising grippers *c*, fulcrums *d*, and power extremities *e*. The central portion of the block A has a rearward tubular extremity *f*, whose opening extends through the block A and is threaded internally in the forward portion. Arranged within the said block and its extension is a screw-threaded stem *g*, engaging the threads thereof and adapted to be revolved and thus move longitudinally to bring its forward extremity into or out of proximity with the grippers *c* of the jaws *b*. The stem *g* is provided with a longitudinal perforation in its forward end, in which is seated a removable tip *h*, having also a longitudinal opening *i* in its forward end. This tip *h* is provided with a shoulder *k*, arranged to bear against the forward end of the stem *g*.

The rear portion of the extension *f* of the block A is externally threaded, and adapted to pass loosely over these threads is a frusto-conical collar *l*, having a rearward extension *m*, threaded internally to engage the external threads of the said extension *f*. This collar *l*, when the said threads are in engagement, is in engagement with the power extremities of the jaws *b*, in order that when moved forward it may exert outward pressure thereagainst. It will thus be seen that as the stem

g is turned inwardly it will carry the tip *h* into proximity to the grippers *c*, and also that as the collar *l* is moved forward through the medium of the extension *m* and its internal threads, which engage the adjacent threads of the extension *f*, it will engage the power ends of the lever-jaws *b* and move them outwardly, bringing the grippers *c* together to secure a gripping action.

The operation of my device is as follows: The jaws being expanded by retraction of the collar *l*, a tip *h* of proper form is placed the end of the stem *g*, when the latter is secured forward and is arranged with the shaft of the hands or roller entering the opening *i*. The stem is then adjusted when removing hands until the grippers come directly below the hands, when the collar *l* is turned forward and the grippers *c* thus brought beneath the hands. The tool being then raised the hands are removed.

Springs *n* are arranged in the slots of a block between the forward portions of the jaws and the block in order to hold the former normally expanded.

It will be readily understood that I may vary the construction herein shown and described without departing in any manner from the spirit of the invention.

Having now described my invention, what I claim is—

A device of the class described comprising a slotted block, jaws pivoted in said slot, an internally-threaded opening in the block, a stem arranged to move in said opening and in engagement with the threads thereof, a removable tip attached to the forward end of the stem and adapted to be brought into or out of proximity with the grippers of the jaws, a threaded extension of the block, a collar adapted to pass loosely over said thread, and a rearward internally-threaded extension in engagement with the threads of the block extension, whereby said collar may be revolved and moved forwardly to engage the jaws and close them.

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

KENDIG H. BARE.

Witnesses:

PHILIP REHM,
JNO. N. HETRICK.