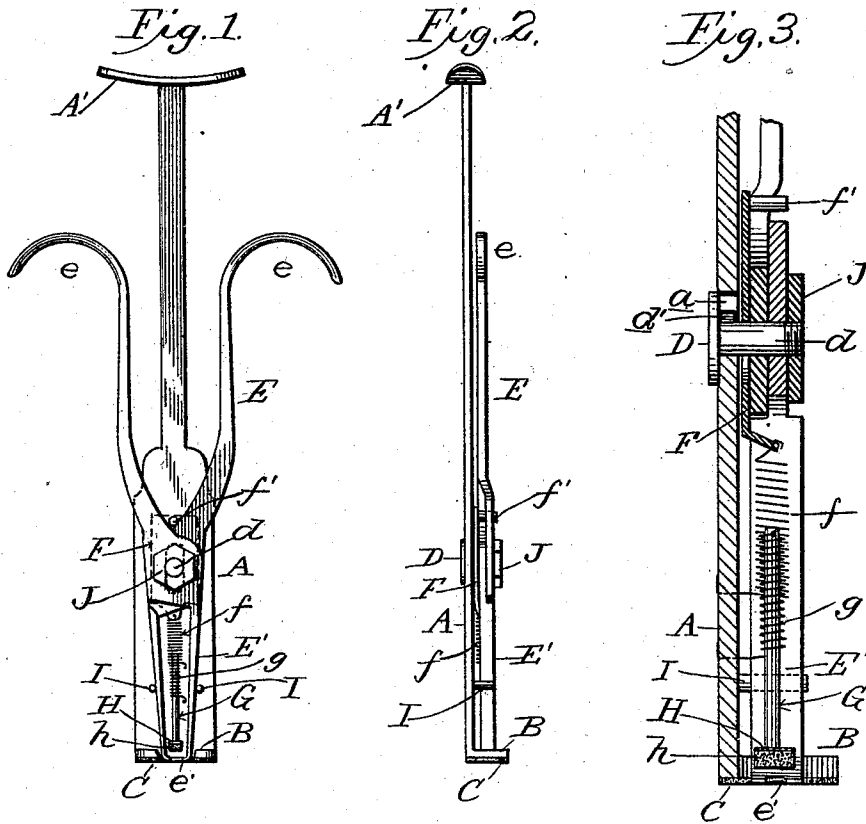


(No Model.)

T. F. CARR & H. M. FANNIN.
TOOL FOR REMOVING HANDS OF TIMEPIECES.

No. 535,092.

Patented Mar. 5, 1895.



WITNESSES

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UNITED STATES PATENT OFFICE.

THOMAS F. CARR AND HENRY M. FANNIN, OF EZEL, KENTUCKY.

TOOL FOR REMOVING HANDS OF TIMEPIECES.

SPECIFICATION forming part of Letters Patent No. 535,092, dated March 5, 1895.

Application filed June 15, 1894. Serial No. 514,666. (No model.)

To all whom it may concern:

Be it known that we, THOMAS F. CARR and HENRY M. FANNIN, citizens of the United States, residing at Ezel, in the county of Morgan and State of Kentucky, have invented certain new and useful Improvements in Tools for Removing the Hands from Watches; and we 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.

This invention relates to an improvement in tools for removing the hands from watches, and it consists in the construction and arrangement of parts hereinafter described and definitely pointed out in the claims.

The object of the invention is the provision of an improved tool, designed for the purpose above indicated and with which the hands of the watch may be quickly and positively removed without endangering the parts of the watch mechanism or injuring the dial. This object is attained by the construction illustrated in the accompanying drawings, wherein—

Figure 1 is an elevation of the tool. Fig. 2 is a side view, and Fig. 3 is a longitudinal vertical section.

In the drawings A represents the standard having the feet B on its lower end, the inner edges of which are separated and sloped or beveled. On the under face of the feet portion is secured a soft pad or cushion C adapted to rest on the dial and prevent scratching or marring thereof.

The standard A has an elongated slot *a* therein, through which a pin *d* of a sliding block D passes, the block being located on the rear face of the standard. To prevent the pin *d* from rotating a short squared shoulder *d'* is secured on the block, the same closely fitting and working in the slot *a*.

E represents a pair of pliers, the ends of the handles of which are curved outwardly at an angle as at *e*. The arms of these pliers are pivotally secured on the pin *d* of the sliding block D, while the jaws E' project downwardly and occupy a space between the feet B. The lower ends of the jaws E' are flanged inwardly and have circular seats *e'* formed therein so that the flanges or teeth of the jaws

may be fitted around the collars of the hands. To normally hold the jaws in a position with their lower ends between the feet B a sliding plate F is employed. This plate is located between the pliers and the standard and has an elongated opening therein, through which the pin *d* passes. To the lower edge of this plate F is secured a spiral spring *f*, the outer end of which is fixedly secured to the standard. On the upper edge of the plate F is a post *f'* which normally abuts against the plier arms in the crotch thereof and, by the tendency of the spring and the independent movement of the plate F by virtue of the elongated slot therein, this post will serve to spread the jaws apart and normally hold them in such position, that is to say, the spring *f* will draw the post *f'* against the arms after the jaws have assumed their lowermost position, and by the continued movement of the plate F the jaws will be opened.

In tools of this nature it has been found difficult to prevent the hands from separating or springing out from the jaws. To overcome this defect a self-acting plunger G is placed between the jaws, its upper end working in the spring *f* and has sleeved thereon a spiral spring *g*, the upper end being fixedly secured to the plunger, while the lower end is fixedly secured to the standard, the tendency of the spring being to force the plunger down. On the lower end of the plunger is a head H having on its under face a pad or cushion *h*. This head is of a width to fit between the lower ends of the jaws when the same are forced together and is adapted to rest on the upper face of the hands, the manner of arranging the plunger and connecting it to the standard being such that the same will have a reciprocating movement.

I I represent guide posts located on the standard, adjacent to and with which the jaws engage, to guide the jaws into the space between the feet.

J is the lock nut on the pin *d*.

On the upper end of the standard is a thumb rest A'.

In operation the standard is placed on the dial, the feet resting on opposite sides of the hands, the flanges on the jaws being on opposite sides and below the hands. The thumb of the operator is placed on the rest A' and

a finger below each of the curved portions of the handles. The operator then presses the handles together and thereupon draws the pliers upward, removing the hands from the post, at which time the head of the plunger G engages the upper face of the hands and thereby retains them between the jaws and prevents them from flying out. The operator then releases the pressure on the pliers and the parts assume their normal position.

It is evident that many minor changes can be made in the construction and arrangement of parts and substituted for those herein shown and described without in the least departing from the nature and principle of the invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a tool for removing watch hands, the combination with a standard, of a pair of pliers slidably secured thereon, and means for normally forcing the pliers down and spreading the jaws apart, substantially as described.

2. In a tool for removing watch hands, the combination with a standard having feet on its lower end, a pair of pliers slidably secured on the standard having jaws engaging between the feet, and a spring for normally holding the jaws in a lowered position, substantially as described.

3. In a tool for removing watch hands, the combination with a standard, having a rest

on its upper end and feet on its lower end of a pair of pliers slidably secured on the standard, means for normally holding the jaws of the pliers between the feet, and curved ends on the handles of the pliers, substantially as described.

4. In a tool for removing watch hands, the combination with a standard having an elongated slot therein, a sliding block and pin on the block passing through the slot, a pair of pliers pivoted on the pin, an independently sliding plate between the pliers and standard, a spring connected to the plate, and a post on the plate engaging the arms of the pliers at the crotch thereof, substantially as described.

5. In a tool for removing watch hands, the combination with a standard, of a pair of pliers slidably secured thereon, and a spring actuated plunger located between the jaws of the pliers, substantially as described.

6. In a tool for removing watch hands, the combination with a standard, of a pair of pliers slidably secured thereon, a reciprocating plunger between the jaws of the pliers, and a spring connection between the plunger and the standard, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

THOMAS F. CARR.
HENRY M. FANNIN.

Witnesses:

ASA B. PIERATT,
J. M. PIERATT.