(Model.)

W. H. BLAISDELL.

IMPLEMENT FOR REMOVING BROKEN SCREWS FROM WATCH MOVEMENTS.

No. 246,062. Patented Aug. 23, 1881.

Fig 1

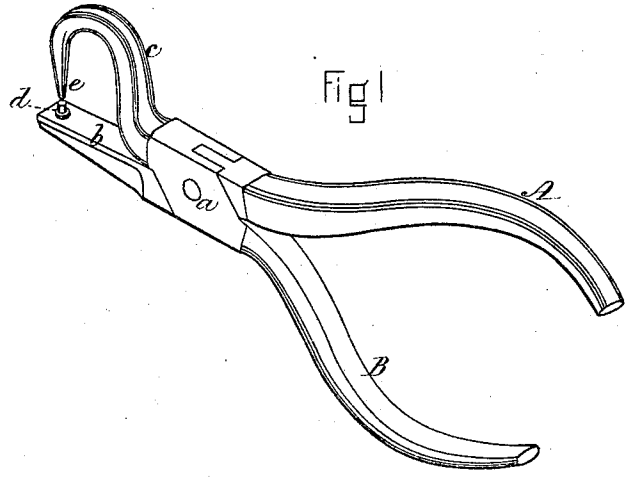


Fig 2

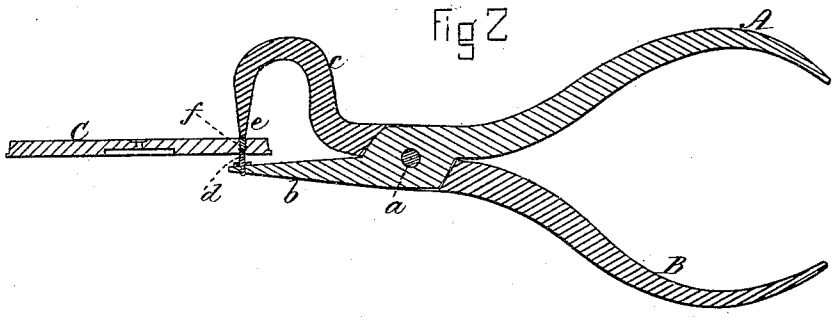
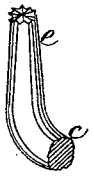


Fig 3



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM H. BLAISDELL, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND MARK A. BLAISDELL, OF SAME PLACE.

IMPLEMENT FOR REMOVING BROKEN SCREWS FROM WATCH-MOVEMENTS.

SPECIFICATION forming part of Letters Patent No. 246,062, dated August 23, 1881.

Application filed February 25, 1881. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BLAISDELL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented an Improved Implement for Removing Broken Screws from Watch-Movements, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved implement. Fig. 2 is a longitudinal section through the implement, illustrating the manner in which it is used in removing a broken screw from a watch-plate; Fig. 3, detail (enlarged) in perspective.

Watch-makers often experience considerable difficulty in removing from watch-movements screws the heads of which have been accidentally broken off flush with the plates, which prevents the ends of the screws from being taken hold of by ordinary pliers or other griping devices.

To remove a screw from which the head has been thus broken off, it has been customary to attempt to turn it by means of a graver or other sharp-pointed implement, and in case of failure it then became necessary to drill or punch out the screw. The drilling operation is, however, slow and tedious, while the punching out of the screw destroys the thread in the plate and enlarges the hole, necessitating the cutting of a new thread and the employment of a new screw of larger size, while the plate is liable to be marred or injured in these operations, these methods often consuming much valuable time, and being a constant source of annoyance and delay.

My invention has for its object to overcome all of these difficulties; and it consists in a pair of pliers having their jaws provided with pointed projections adapted to be brought into contact with the opposite ends of the broken screw for the purpose of turning the same, one or both of the projections having its end or point roughened or otherwise formed to prevent it from slipping on the end of the screw as the pliers are moved around by the hand in the proper direction to extract it.

In the said drawings, A B represent two levers, pivoted together at *a*, the lower portions of the levers forming handles, and the portions above the pivot *a* forming jaws *b c*. The jaw *b*, which is straight, is provided on its inner face with a pin or projection, *d*, inserted therein, and the jaw *c*, which is curved as shown, is tapered at its end, forming a projection, *e*, which is opposite to and in line with the projection *d*. The extremity or point of the projection *e* is made flat, and of about the diameter of the shanks of the screws used in watch-movements, as is also the end of the projection *d*, and the end of the projection *e* is serrated or roughened, as shown in Fig. 3, to prevent it from slipping on the end of the screw when applied thereto.

When the head of a screw, *f*, Fig. 2, in a watch-movement has been accidentally broken off flush with the watch-plate C, through which it passes, and it is desired to remove it, the implement is grasped in the hand, and the projections *d e* of the jaws brought into contact with the opposite ends of the screw *f*, which is thus held firmly between them, and sufficient pressure applied to cause the roughened end of the projection *e* to take a firm hold upon the adjacent end of the screw *f*, which is then turned by a movement of the implement in the proper direction when the pressure of the hand is relieved, and the implement swung back to take a fresh hold upon the screw, when the movement is repeated to again turn the screw, the operation being continued until the screw is turned out of the plate or withdrawn sufficiently to enable its end to be seized and turned by means of ordinary pliers, a simple and convenient means being thus afforded of extracting broken screws, by which much valuable time may be saved, and the annoyance and delay heretofore experienced in taking out these broken screws entirely avoided.

If preferred, the ends of both the projections may be serrated or roughened, or instead of being roughened they may be otherwise formed or shaped to prevent them from slipping, and enable them to lay hold of and turn the screw to which they are applied.

By making one of the jaws curved, as shown, the manufacture of the implement is facilitated, as the curved jaw can be easily bent before it is tempered, so as to bring the two projections

d e exactly in line with each other, which can thus be more easily accomplished than would be the case if both jaws were made straight and each provided with a pin or projection inserted into a hole drilled to receive it. If preferred, however, both jaws may be curved and formed like the jaw *c;* or both of the jaws may be made straight, and be provided with inserted pins or projections, if desired.

It is obvious that my improvement may be applied to pliers provided with parallel jaws, as well as to those having jaws pivoted, as shown.

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

1. The herein-described implement for removing broken screws, consisting of pliers having their jaws provided with pointed projections *d e*, adapted to be brought into contact with the opposite ends of a broken screw for the purpose of turning the same, one or both of the projections having its end serrated, roughened, or otherwise formed to prevent it from slipping on the end of the screw as the implement is turned, substantially as set forth.

2. The combination of the pivoted levers A B, with their jaws *b c*, the former having a projection, *d*, and the latter being curved and provided with a pointed projection, *e*, placed opposite to and in line with the projection *d*, substantially as and for the purpose described.

Witness my hand this 21st day of February, A. D. 1881.

WILLIAM H. BLAISDELL.

In presence of—

P. E. TESCHEMACHER,

W. J. CAMBRIDGE.