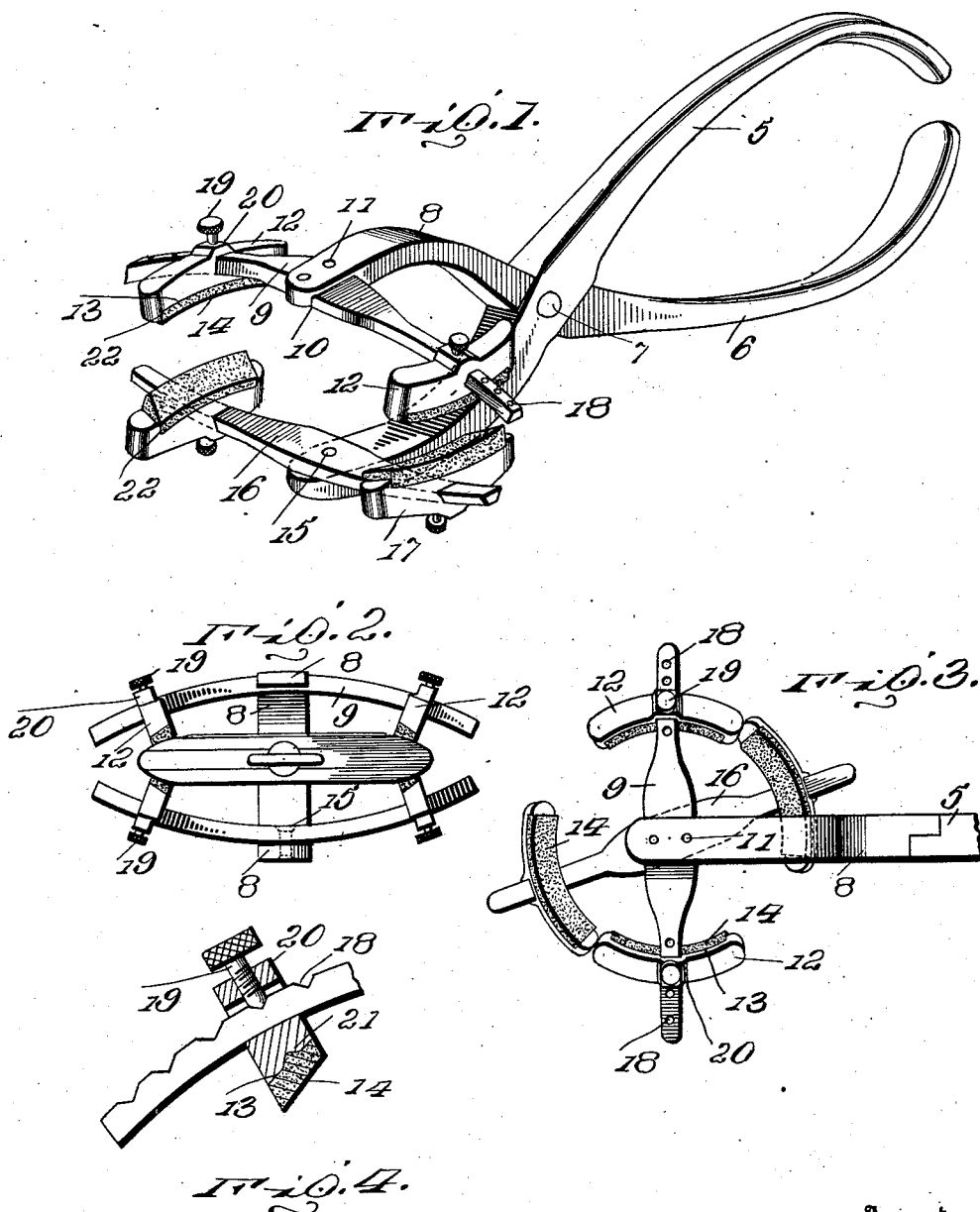


E. CAMPBELL.
WATCHMAKER'S TOOL,
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1,001,248.

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ELTON CAMPBELL, OF FRANKFORT, INDIANA.

WATCHMAKER'S TOOL.

1,001,248.

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To all whom it may concern:

Be it known that I, ELTON CAMPBELL, citizen of the United States, residing at Frankfort, in the county of Clinton and State of Indiana, have invented certain new and useful Improvements in Watchmakers' Tools, of which the following is a specification.

This invention relates to watch-makers' tools and more particularly to a wrench especially designed for removing the threaded backs and bezels from watch cases.

The object of the invention is to provide a comparatively simple, and thoroughly efficient tool of the character described by means of which the back or bezel of a watch case may be readily removed without danger of breaking the crystal or scratching or otherwise marring said watch case.

A further object is to provide a watch-maker's tool including pivotally united handles having relatively stationary and movable cross-arms secured thereto and on which are slidably mounted co-acting clamping jaws for engagement with the back or bezel of a watch case.

A further object is to provide a watch-maker's tool, the construction of which is such that the clamping jaws thereof may be adjusted to fit watch cases of different sizes.

A still further object is generally to improve this class of devices so as to increase their utility, durability and efficiency, as well as to reduce the cost of manufacture.

For a full understanding of the invention reference is to be had to the following description and accompanying drawing, in which:—

Figure 1 is a perspective view of a watch-maker's tool constructed in accordance with my invention. Fig. 2 is an end elevation showing a watch in position between the clamping jaws thereof. Fig. 3 is a top plan view showing the position of the movable jaw when the operating handles are oscillated to effect the removal of the back or bezel of a watch case. Fig. 4 is a detail sectional view showing the manner of locking the clamping jaws in position on the supporting arms.

Corresponding and like parts are referred to in the following description and indicated in all the views of the accompanying drawing by the same reference characters.

The improved watch-maker's tool forming the subject-matter of the present invention comprises co-acting handles 5 and 6 pivot-

ally united at 7, and each having one end thereof projected longitudinally beyond the pivot pin 7 to form an extension 8.

Secured to the free end of the extension 8 of the handle 6 is a stationary cross-arm 9 having its upper surface provided with a seating recess 10 for the reception of said extension and to which it is rigidly secured by bolts, rivets, or similar fastening devices 11. The opposite ends of the stationary cross-arm 9 are reduced and dove-tail in cross-section, as shown, to form supports for adjustable segmental clamping jaws 12. The jaws 12 are provided with dove-tail recesses for the reception of the reduced ends of the cross-arm 9 and on which they are slidably mounted so as to fit the backs or bezels of watch cases of different sizes.

The lower face of each clamping jaw 12 is provided with a seating recess 13, the bottom wall of which is inclined upwardly in the direction of the adjacent extension 8, there being packing strips 14 formed of leather, rubber, or other suitable material seated in the recesses 13 so as to prevent scratching, or otherwise marring the watch case when the tool is operated to effect the removal of either the bezel or back thereof.

Pivotally mounted at 15 on the extension of the handle 5 is a movable jaw 16, similar in construction to the stationary jaw 9 and on which are slidably mounted corresponding clamping members 17.

The outer faces of the stationary and movable cross-arms 9 and 16 are formed with a series of sockets or depressions 18 adapted to receive a clamping screw 19 threaded in a boss 20 on the adjacent jaw 12, and by means of which said jaws may be held in adjusted position.

The inclined walls of the recesses 13 are preferably formed with pockets or depressions 21 which serve to hold the adhesive material employed for securing the strips 14 in position thereon, said strips being held against longitudinal movement by terminal stop-shoulders 22 formed at the opposite ends of the seating recesses, as best shown in Fig. 1 of the drawings. It will here be noted that the bearing faces of the strips 14 are inclined or beveled to conform to the shape of the watch case so that a uniform pressure will be exerted on the watch case when the handles 5 and 6 are forced together.

In using the tool a watch case is inserted between the extensions 8 of the operating

handles with either the bezel or back thereof bearing against the strips 14 of the clamping jaws 17. The handles 5 and 6 are then forced together which clamp the upper jaws 15 in engagement with the watch case so that by holding the watch case and lower jaws 17 in one hand and oscillating the handles 5 and 6 with the other the back or bezel of the case may be quickly removed without danger of scratching or otherwise injuring the case, or works thereof.

By sliding the clamping jaws 12 and 17 longitudinally of the cross-arms and rotating the screws 19, said jaws may be readily adjusted to accommodate watch cases of different sizes, as will be readily understood.

It will of course be understood that the cross arms 9 and 16 may be round, square or of any other shape in cross section, in which event the openings in the clamping jaws will be correspondingly shaped. It will also be understood that by making the extensions 8 of the handles closer together, the cross arms 9 and 16 may be straight instead of curved.

The tools may be made in different sizes and shapes and nickered, japanned or otherwise coated to prevent rusting.

Having thus described the invention what is claimed as new is:—

1. A watch-maker's tool including pivotally united handles, co-acting cross arms carried by the handles, one of which is rigid and the other movable in an arc, and clamping jaws slidably mounted on said cross arms.

2. A watch-maker's tool including pivotally united handles, a relatively stationary cross-arm, carried by one of the handles, a movable cross-arm pivotally mounted on the other handle, clamping jaws slidably mounted on the cross-arms, and fastening devices extending through the jaws and engaging the adjacent cross-arms for holding the jaws in different positions of adjustment.

3. A watch-maker's tool including pivotally united handles each having one end thereof projected longitudinally beyond its pivot to form an extension, a stationary cross-arm secured to the extension of one handle, a movable cross-arm pivotally mounted on the extension of the mating handle, clamping jaws slidably mounted on said cross-arms, and fastening devices extending through the clamping jaws and engaging the adjacent cross-arms for securing the jaws in different positions of adjustment.

4. A watch-maker's tool including pivotally united handles, relatively stationary and movable cross-arms carried by the handles and each having a series of depressions

formed therein, clamping jaws slidably carried on the cross-arms, and screws threaded in the clamping jaws and engaging the adjacent depressions in the cross-arms for holding the jaws in different positions of adjustment.

5. A watch-maker's tool including pivotally united handles, relatively stationary and movable cross-arms carried by the handles, clamping jaws slidably mounted on the cross-arms and having their inner faces provided with seating recesses, and packing strips seated in said recesses and provided with inclined gripping faces.

6. A watch-maker's tool including pivotally united handles, relatively stationary and movable cross-arms carried by the handles having their opposite ends substantially dove-tail in cross-section, segmental clamping jaws having correspondingly shaped recesses formed therein for the reception of the cross-arms, packing strips secured to the inner faces of the jaws and provided with inclined gripping faces, and means piercing the clamping jaws and engaging the adjacent cross-arms for holding said jaws in different positions of adjustment.

7. A watch-maker's tool including pivotally united handles, each having one end thereof projected beyond its pivot to form an extension, a stationary cross-arm having seating recesses formed therein for the reception of the extension of one of the handles and to which is rigidly secured, a movable cross-arm pivotally mounted on the extension of the mating handle, said cross-arms being provided with depressions, segmental gripping jaws slidably mounted on the cross-arms and having their lower faces provided with seating recesses defining oppositely disposed stop-shoulders, there being pockets formed in the walls of the seating recesses, and threaded bosses formed on the jaws opposite said seating recesses, packing strips engaging the seating recesses and having inclined gripping faces, and screws threaded in the bosses on said gripping jaws and engaging the depressions in the cross-arms for holding said jaws in different positions of adjustment.

8. A watch-maker's tool including pivotally united members, co-acting concavo-convex cross arms carried by said members, one of which is rigid and the other movable in an arc, and clamping jaws mounted on said cross arms.

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

ELTON CAMPBELL. [L. S.]

Witnesses:

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