No. 749,598. PATENTED JAN. 12, 1904.

C. F. WEST.

DEVICE FOR FILING KEYS.

APPLICATION FILED JULY 11, 1903.

NO MODEL.

Fig. 1.

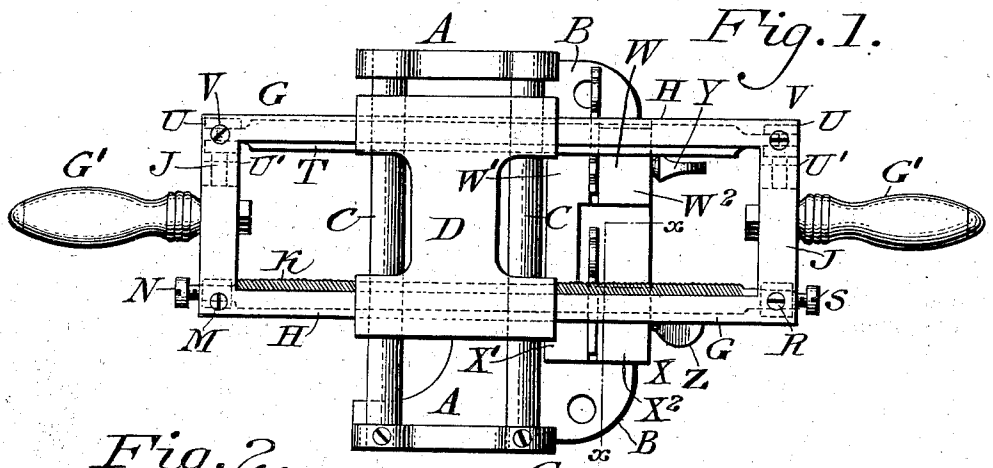


Fig. 2.

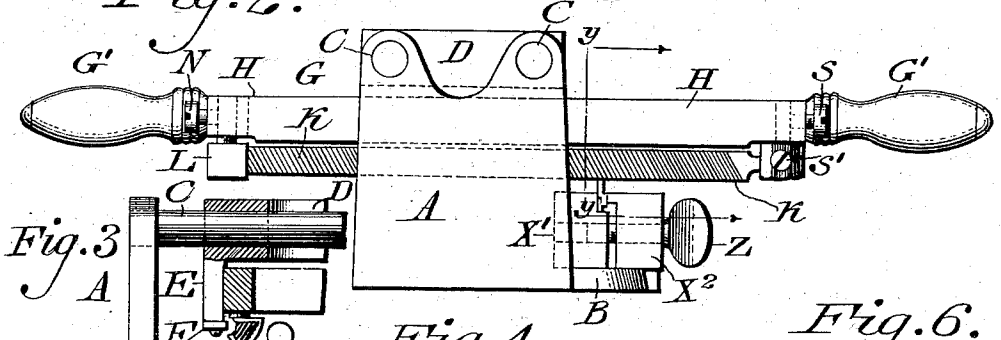


Fig. 3

Fig. 4.

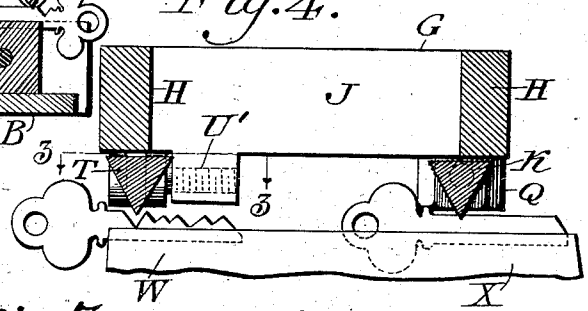


Fig. 6.

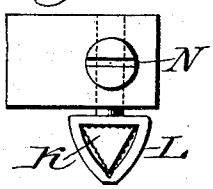


Fig. 5.

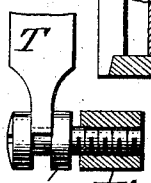


Fig. 7

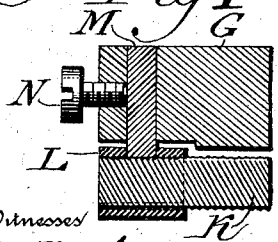


Fig. 8.

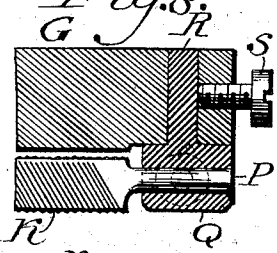
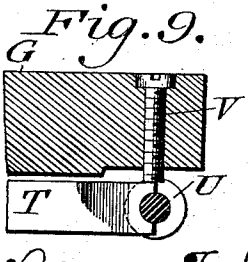


Fig. 9.



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No. 749,598. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

CHARLES F. WEST, OF PHILADELPHIA, PENNSYLVANIA.

DEVICE FOR FILING KEYS.

SPECIFICATION forming part of Letters Patent No. 749,598, dated January 12, 1904.

Application filed July 11, 1903. Serial No. 165,051. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. WEST, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented new and useful Improvements in Devices for Filing Keys, of which the following is a specification.

My invention consists of a device for filing keys embodying seats or holders for a pattern-key and key-blank, a pattern-guide which is adapted to operate in harmony with said pattern-key, and a file or cutter which is adapted to engage the edge of said blank and work thereinto, regulated by the action of said guide, and a carrier for said guide and file adapted to receive reciprocating motions in diametrically opposite directions, so that said file may be made to cut the blank according to the contour of the notches or recesses of the pattern-key, as will be hereinafter described, the invention being also applicable to other articles or shapes to be filed in a manner similar to keys.

Figure 1 represents a plan view of a device for filing keys embodying my invention. Fig. 2 represents a side elevation thereof. Fig. 3 represents a vertical section of a portion on line *x x*, Fig. 1. Fig. 4 represents a vertical section on line *y y*, Fig. 2, on an enlarged scale. Fig. 5 represents a horizontal section of a portion on line *z z*, Fig. 4. Fig. 6 represents an end view of the file and file-holder employed. Figs. 7 and 8 represent longitudinal sections of opposite end portions of said file and file-holder. Fig. 9 represents an end portion of the pattern-guide and adjacent parts.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates standards, and B designates a base from which the same rise. C designates horizontally-extending rods which are supported on the upper portions of said standards and have freely fitted thereon a transversely-movable carriage D. On the sides of said carriage are the hangers E, to the lower portions of which are secured the inturned ledges F.

G designates a frame or cutter consisting of the side pieces H and end pieces J, said frame being adapted to be fitted between the hangers E and freely rested on the laterally-projecting ledges F, whereby said frame may follow the motions of the carriage D in the transverse direction of the device, while also being movable on the said ledges F at a right angle to the direction of the carriage D.

K designates a file the front end of which is fitted in the socket L, which is provided with a stem M, the latter inserted in the end portions of the frame G and adjustably retained therein by the screw N, which is fitted to the proper portion of said frame G and adapted to tighten against said stem M. The opposite end portion P of said file is inserted in the ear Q, which is provided with a stem R, the latter being adjustably retained in the adjacent portion of the frame G, held by the screw S, which is fitted to said frame and adapted to tighten against said stem.

T designates a pattern-guide which in the present case is triangular in form in cross-section, its angles being smooth, in contradistinction to the filing or abrasive angles of the file K. In order to hold said guide in position, its ends are recessed and engaged by the double heads of the screws U, the latter being fitted in bosses U′, depending from proper portions of the frame G and prevented from loosening by means of the screws V, which are passed through said frame and engaged with the shanks of said screws. (See Figs. 1, 5, and 9.)

W designates the holder for a pattern-key, and X designates the holder for the key-blank to be filed. The holder W consists of the block W′, which rises from and is fixed to the base B and the block W^2, which is movable on said base, said blocks being adapted to receive between them the pattern-key to be filed and being tightened by the screw Y, which properly engages with said blocks, thus clamping said key.

The holder X consists of the block X′, which rises from the base B and is fixed thereto, and the block X^2, which is movable on said base, said blocks being adapted to receive the blank between them, they being tightened by means of the screw Z, thus clamping said blank.

The operation is as follows: The pattern-key and key-blank are located and secured in

position, it being noticed that the frame G is above said key and blank and carries the file and pattern-guide and that the lower angle or edge of the file rests on the upper edge of the blank, while the lower angle or edge of the pattern is above one of the notches or grooves constituting the bit of the pattern-key. The frame is now moved to and fro, pressed down by the handles G′ thereof, whereby the file works into the blank and the frame may also be moved with the carriage to the right and left, if required, limited by the sides of the guide T, contacting with the walls of the groove which is occupied by said guide, and thus the file forms a notch or groove the counterpart in depth, width, and shape of that of the pattern. The spaces between ledges F and carriage D are sufficient to permit the elevation of the carrier G to the proper extent to place the file or cutter and pattern-guide in primary position. When the work is accomplished and the key as filed removed, the carrier H rests on the ledges F, and so is prevented from dropping from the carriage D and being displaced from the device.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A filing device comprising means for holding a pattern and a blank, a pattern-guide, a cutter, means for maintaining said guide and cutter in parallel relation and means for limiting the movement of said guide and said cutter above said holding means.

2. A filing device comprising means for holding a pattern and a blank, a pattern-guide, a cutter, means having vertical and reciprocatory movement with respect to said holding means on which moving means said guide and cutter are mounted and a carriage for said moving means longitudinally adjustable with respect to said holder.

3. A filing device comprising means for holding a pattern and a blank, a pattern-guide, a cutter, a carrier having vertical and reciprocatory movement with respect to said holder and on which said guide and cutter are mounted in parallel relation and a carriage moving at an angle with the line of movement of said carrier and on which said carrier is mounted.

4. A filing device comprising means for holding a pattern and a blank, a pattern-guide, a cutter, a carrier having vertical and reciprocatory movement with respect to said holder and on which said guide and cutter are mounted and a carriage movable at an angle with the line of movement of said carrier and on which said carrier is mounted, one of the parts mounted on said carrier being adjustable thereon.

5. A filing device comprising means for holding a pattern and a blank, a pattern-guide, a cutter, a carrier having vertical and reciprocatory movement with respect to said holder and on which said guide and cutter are mounted and a carriage movable at an angle with the line of movement of said carrier and on which said carrier is mounted, said cutter being detachably and adjustably secured in said carrier.

6. A filing device comprising means for holding a pattern and a blank, a pattern-guide, a cutter, means for maintaining said guide and said cutter in similar relation to said holding means and means for limiting the vertical, lateral and reciprocatory movements of said maintaining means.

7. In a filing device of the character stated, a pattern-holder, a blank-holder, a groove-cutter, a pattern-guide, a carrier having vertical and reciprocating movement for said cutter and guide and a carriage to which said carrier is fitted, said carrier and carriage being movable in directions at an angle to each other.

8. In a filing device of the character stated, a cutter, a pattern-guide, a carrier capable of vertical and reciprocating movement for said cutter and guide, a movable carriage to which said carrier is freely fitted, said carrier being movable at an angle to said carriage, a pattern and means for clamping said pattern and a blank to be filed respectively below said cutter and guide.

9. A filing device having a pattern-guide, a cutter, a reciprocating carrier on which said guide and said cutter are mounted and a carriage movable at an angle with the line of movement of said carrier and on which said carrier is mounted and a laterally-projecting ledge upon which said carrier may rest, controlling the descent of the latter.

CHARLES F. WEST.

Witnesses:
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WM. CANER WIEDERSHEIM.