

L. D. WEBBER & S. M. COMSTOCK.

DEVICE FOR FORMING FULCRUM SEATS IN PIANO-KEYS.

No. 172,222.

Patented Jan. 11, 1876.

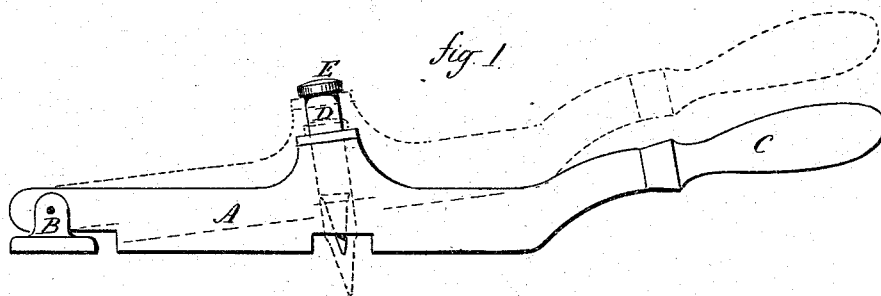


Fig. 2.



Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN DEVICES FOR FORMING FULCRUM-SEATS IN PIANO-KEYS.

Specification forming part of Letters Patent No. **172,222**, dated January 11, 1876; application filed  
July 6, 1875.

*To all whom it may concern:*

Be it known that we, LORENZO D. WEBBER and SAMUEL M. COMSTOCK, both of Centre Brook, in the county of Middlesex and State of Connecticut, have invented a new Device for Forming Fulcrum-Seats in Piano-Keys; and we do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, side view; Figs. 2 and 3, longitudinal sections of keys, to illustrate the operation.

This invention relates to an improvement in the device for shaping that mortise in keys for pianos and like instruments which sets over the vertical pin to form the fulcrum. This mortise is of substantially the form seen in Fig. 3, the front side being slightly inclined backward, while the rear side is inclined still more, so that the mortise is longer at the top than at the bottom, and so as to allow the free play of the key on the vertical fulcrum-pin. This fulcrum-pin is usually considerably longer than the thickness of the key, so that it projects above the key. It is frequently desirable to raise the key from the fulcrum-pin; and in order to prevent the lower front side of the mortise bearing against the pin, so as to prevent the key being raised, it is cut forward or inclined, and the pin is also slightly inclined. These mortises are usually formed in the board before the keys are separated, and are done by first boring a slightly-inclined hole, *a*, Fig. 2, and then enlarging the hole from above, as seen in Fig. 3.

The object of this invention is to construct a convenient holder for the enlarging-tool, so that it may be properly set over the perforation, and serve as a guide for the tool as well as a lever to withdraw it; and the invention consists in a stock constructed with a handle

at one end, and hung upon a fulcrum at the other, combined with the enlarging-tool set through a mortise in the stock.

A is the stock, its rear end hung in a fulcrum-block, B, the other forming a handle, C, by which to conveniently raise and lower that end of the stock. Through a mortise in the stock the enlarging-tool D is set, and inclined backward, so as to stand nearly in the arc of a circle, of which the fulcrum B is the center. This tool D is inclined to a point on the front and rear edges, but both inclining backward, the front less than the rear, and corresponding to the form required for the mortise, and the tool is also provided with a suitable head, E, upon which it can be struck.

The operator, taking the handle C in one hand, places the fulcrum upon the board in line with the perforation which is to be enlarged, and so as to bring the tool D over the perforation; then, lowering the stock onto the board, he strikes the head of the tool D, so as to drive it through the perforation, and enlarge the mortise to the shape required; then, to withdraw the instrument, simply lift the handle, as denoted in broken lines.

In order to more perfectly dress the front side of the mortise, the front edge of the tool is constructed with teeth, so as to work like a broach, and thereby smooth and shape the front side, while the wood on the rear will be forced or compressed into shape.

We claim—

The combination of the stock A, constructed with the handle C, and hung upon a fulcrum-block, B, at the other end, with the enlarging-tool D set through a mortise in the said stock, substantially as and for the purpose described.

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Witnesses:

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