

S. M. COMSTOCK.

MACHINE FOR SHAPING PIANO-KEYS.

No. 171,995.

Patented Jan. 11, 1876.

fig. 1.

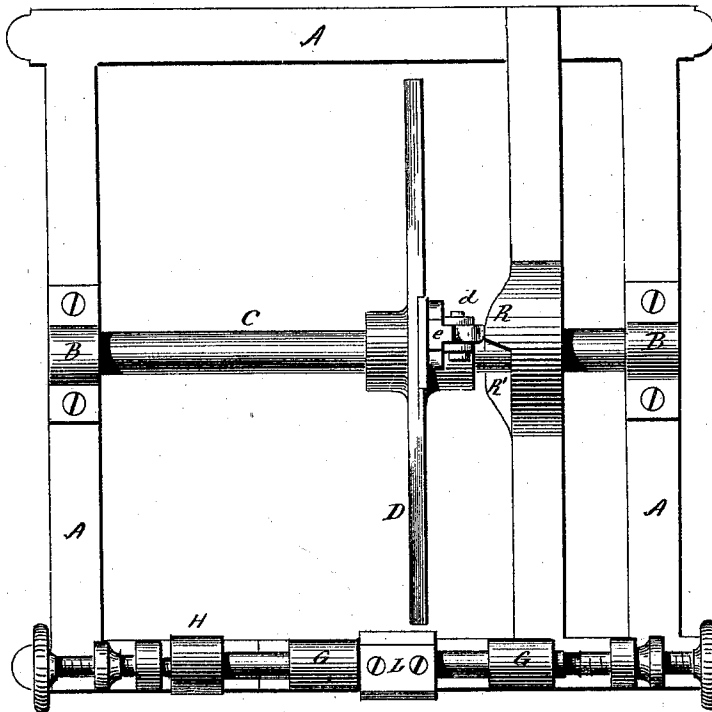
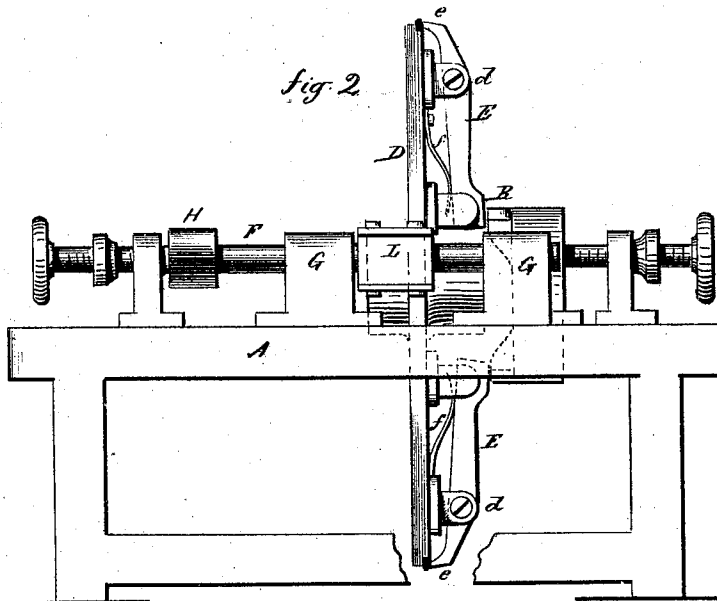


fig. 2



Witnesses.
J. H. Shannon
Oliver Broughton

Saml. M. Comstock
 By atty. *John S. Earle*
 Inventor

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fig 3

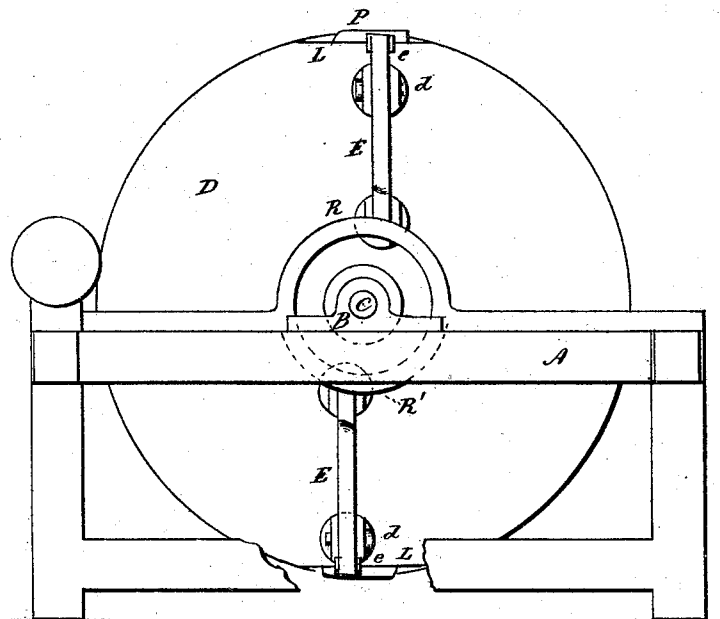
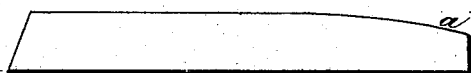


fig 4



Witnesses.

J. S. Hummway
Chas. Broughton

Saml. M. Comstock
Inventor
By *Atty.*

John S. Earle

UNITED STATES PATENT OFFICE.

SAMUEL M. COMSTOCK, OF CENTRE BROOK, CONNECTICUT, ASSIGNOR TO
COMSTOCK, CHENEY & CO., OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR SHAPING PIANO-KEYS.

Specification forming part of Letters Patent No. **171,995**, dated January 11, 1876; application filed
June 17, 1875.

To all whom it may concern:

Be it known that I, SAMUEL M. COMSTOCK, of Centre Brook, in the county of Middlesex and State of Connecticut, have invented an Improvement in Machines for Shaping Piano-Keys; and I 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, plan view; Fig. 2, front view; Fig. 3, side view; Fig. 4, side view of a flat.

This invention relates to an improvement in machines for shaping the black keys, or flats and sharps, of pianos and similar instruments. These keys require to be cut back in a circular form, on the upper surface, to the rear, as seen at Fig. 4, and it is to shape the rear end in this manner that is the object of my invention; and it consists in a disk provided with one or more substantially radial jaws, constructed to clamp the blanks at the periphery of the disk and present them to a cutter, which will dress the rear end as the key is presented to the cutter by the revolution of the disk, the circumference or path in which the blanks move corresponding to the curvature required to be given to the end of the key, and combined with mechanism for automatically opening the jaws to receive and discharge the blanks, as more fully hereinafter described.

A is the frame, upon which, in suitable bearings B, the main shaft C is arranged so as to revolve freely. On this shaft is a disk, D, the diameter of which is slightly less than that of the curve required to be given to the keys. On the side of this disk one or more levers, E, are hung on a fulcrum, *d*, the outer end of these levers forming a jaw, *e*, and this jaw forced toward the disk by a spring, *f*, between the other arm of the lever and the disk. At the point where the jaw would bear against the surface a recess or seat, L, is formed in the disk, so as to receive and locate the key-blanks

P, the heel of the key taking a bearing against a shoulder in the recess, so as to prevent its longitudinal movement. Parallel with the shaft C, and outside the disk, is another shaft, F, supported in bearings G, and driven rapidly by power applied thereto, through the pulley H. On this shaft is a cutter-head, L, in line with the disk, and which revolves in close proximity thereto, so that, as the key-blank passes the cutter, its heel or rear end will be dressed or cut away by the revolving cutter and brought to the shape required.

In order to automatically open the jaws, both for the reception and discharge of the blanks, I arrange a stationary cam, R and R', the one above and the other below the shaft C, and so that as the inner end of the lever E passes the said cam, as in Figs. 1 and 2, the jaws will be opened thereby—the upper one for receiving the blank to be dressed, and the lower for the discharge of the blank; and this introduction may be made while the disk is slowly revolving for the presentation of the blanks to the cutter, and as the levers pass from the cam they close again, the upper one onto the blank.

A single cam may be employed, and the removal and introduction occur at the same time; but I prefer the two cams—the discharging-cam below—so that, as the jaw opens, the key will fall from its seat without the necessity of handling.

The disk may be provided with numerous jaws, or as near together as seats can be made for the blanks, thereby allowing the cutter to be nearly constantly at work.

I claim—

The combination of the disk D, constructed with one or more seats to receive the blanks, radial levers E on said disk, stationary cam or cams R, and the revolving cutter L, substantially as and for the purpose described.

S. M. COMSTOCK.

Witnesses:

GILES POTTER,
IRA T. PAYNE.