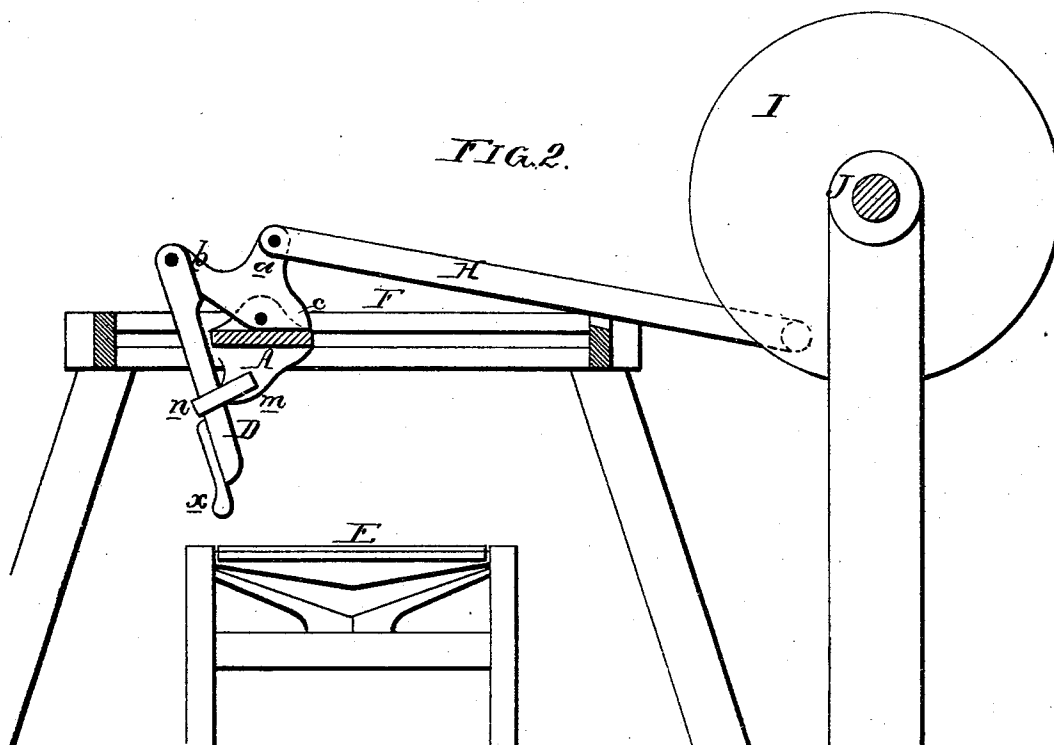
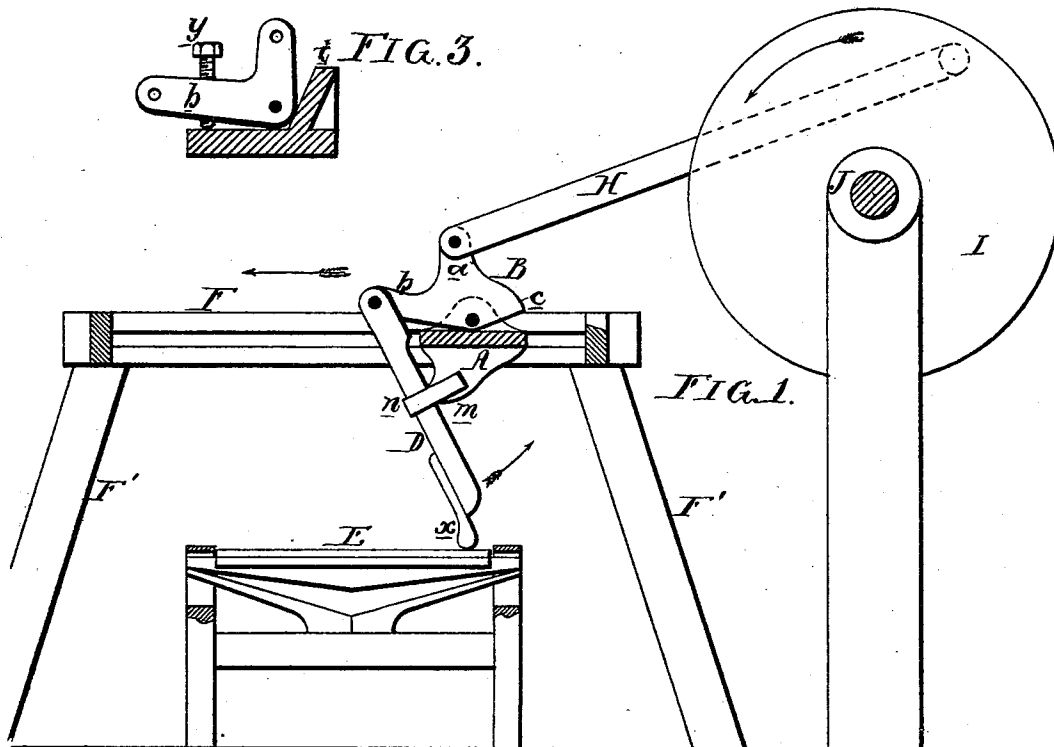


W. COX.
Mechanical Movements.

No. 148,551.

Patented March 17, 1874.



Witnesses, Harry Smith
John Rupertus.

William Cox
by his Attys.
Housen and Son

UNITED STATES PATENT OFFICE.

WILLIAM COX, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF
AND DANIEL KNIPE, OF SAME PLACE.

IMPROVEMENT IN MECHANICAL MOVEMENTS.

Specification forming part of Letters Patent No. **148,551**, dated March 17, 1874; application filed
August 12, 1873.

To all whom it may concern:

Be it known that I, WILLIAM COX, of Philadelphia, State of Pennsylvania, have invented a new Mechanical Movement, of which the following is a specification:

The object of my invention is a mechanical movement which can be applied to the polishing of leather and other useful purposes; the said movement consisting of the combination of a reciprocating slide, A, a lever, B, which is hung to the slide, and through which the latter receives its movement, and an arm, D, connected to the slide, bearing against the same, and carrying at its lower end the tool for operating on the leather or other material, all substantially as shown in Figures 1 and 2 of the accompanying drawing.

In the present instance, I have illustrated my invention as applied to a leather-polishing machine, E being the usual yielding top of a table on which the leather is placed. To guides F, above and parallel with the face of the table, and forming part of any suitable frame, is adapted a slide, A, to which is hung the above-mentioned lever B, having three arms, *a*, *b*, and *c*, to the first of which is connected one end of a rod, H, the opposite end receiving the pin of a crank-wheel, I, on a driving-shaft, J. To the arm B of the lever B is jointed the upper end of the arm D, which, in the present instance, carries at its lower end the agate *k*, usually employed in polishing leather, the said arm bearing against a projection, *m*, on the slide A, to which it is loosely confined by a strap, *n*, the latter in no way interfering with the free sliding and vibratory movement of the said arm D. Presuming the crank-wheel I to be moving in the direction of the arrow, the force exerted through the lever B to move the slide A in the direction of its arrow will also be exerted, through the same lever, to depress the arm D, and force its polishing-agate against the leather on the table E; for it should be understood that, in this case, there is nothing to resist the force exerted to depress the arm D, excepting the leather and the table on which it is placed, while the tendency of the arm D to move in the direction of the arrow 2 will be resisted by the projection *m* of the slide A. Before the slide commences to return, the first rearward movement of the con-

necting-rod H will be exerted to move the lever B until its arm *c* is in contact with the slide; and, by this movement of the lever, the arm D will be elevated, as shown in Fig. 2, and will retain its elevated position as the slide returns, and until the forward movement of the rod H commences, which movement will first depress the arm, and force its polisher against the leather before the slide recommences its forward movement. This movement of the polisher is precisely what is required to impart to the leather the desired finish. During the forward movement of the slide, the arm *b* of the lever is not in contact with it, the pressure of the agate on the leather being unrestricted. This is desirable for leather-polishing purposes, but the device may be applied to other uses which demand a limit to the downward movement of the arm. In grooving or planing stone or marble, or other material, for instance, where the tool at the end of the arm D must cut to a definite depth, the arm *b* of the lever B should be in contact with the slide during the forward movement of the same; or the arm may be furnished with a set-screw, *y*, as shown in Fig. 3, by the adjustment of which the extent of the depression of the arm D, and, consequently, the depth of the cut of the tool, may be regulated at pleasure. It is not essential that the lever B should have the third arm *c*, as the vibration of the lever, which may be of the bell-crank form, (shown in Fig. 3,) may be limited by a projection, *t*, on the slide, as seen in that figure.

I claim as my invention, and as a new mechanical movement—

The combination of reciprocating slide A, lever B, hung to the slide, and serving as the medium through which the slide is operated, and the arm D, also hung to the lever, and restricted as regards its vibrating movement by a projection, *m*, on the slide, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM COX.

Witnesses:

I. I. BUCHEY,
J. SHERBORNE SINGER.