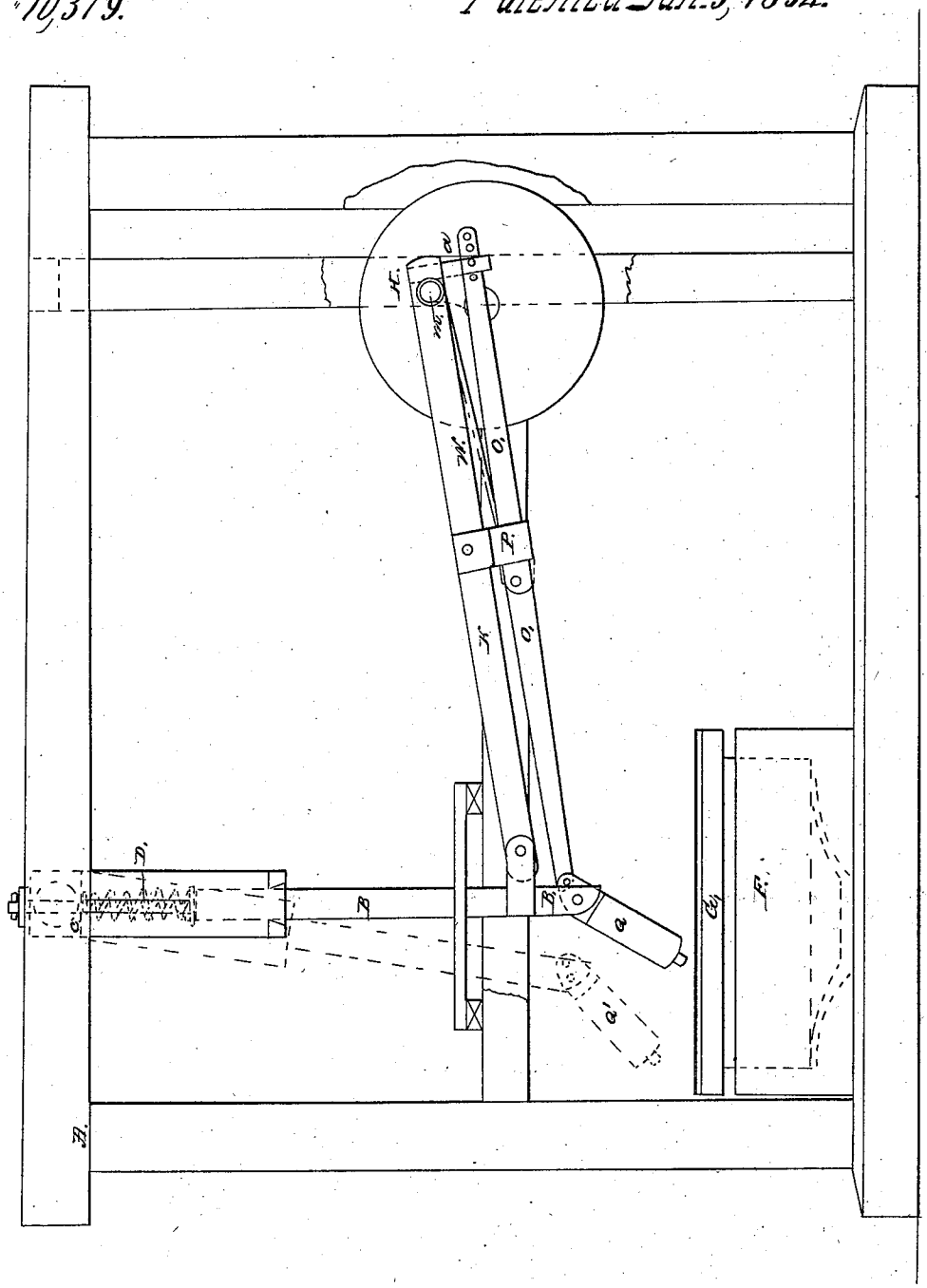
P. P. Tapley,

Dressing Leather.

No. 10,379. Patented Jan. 3, 1854.



UNITED STATES PATENT OFFICE.

PHILIP P. TAPLEY, OF LYNN, MASSACHUSETTS.

MACHINE FOR POLISHING LEATHER.

Specification of Letters Patent No. 10,379, dated January 3, 1854.

To all whom it may concern:

Be it known that I, PHILIP P. TAPLEY, of Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Machinery for Dicing, Polishing, or Finishing Morocco, Leather, or Various other Materials; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawing, letters, figures, and references thereof, such drawing exhibiting a side view of my improved machine.

In the drawings B represents a reciprocating arm which is supported by the frame work A so as to swing with a pendulous movement over the table or beam G. This arm works through a rocker shaft *c* and is pressed downward by a helical spring D suitably applied to it and the shaft. A short lever Q is jointed to the lower end of said arm and carries at its lower end the dicing or smoothing ball or surface. Beneath the arm B is a box F in which plays vertically a beam or table G that is supported in the usual way on springs placed within the box, the leather being laid on the top of this beam during the operation of polishing or dicing it. The reciprocating movement of the arm B is effected by a connecting bar or rod K which is jointed to the arm at one end and at the other it turns on a crank pin *m* projecting from a revolving plate or wheel H that is revolved by an endless band proceeding from any proper motor.

The upper arm of the lever Q has the front end of a secondary connecting rod O O jointed to it. This rod O O is formed in two parts O O jointed together so as to enable them to turn vertically toward or away from the connecting rod K. At the rear end of the connecting rod O O, such rod is jointed to the lower part of an arm *a* that extends down from or near the rear end of the connecting rod K. This secondary jointed connecting rod O O passes through a stirrup P that is extended down from the main connecting rod. There is one spring W applied on the upper side of the secondary connecting rod and rod K and for the purpose of bringing down the axes of the parts O O nearly into a straight line when necessary. This spring may be of any suitable form and material.

The object of the secondary connecting rod O O is not only to lift the dicing tool off the work after it has done its office, but to keep it out of contact with it until moved back to its farthermost position. Besides this it prolongs the action and pressure of the dicing tool on the leather and makes it pass over a greater surface of it with the required pressure than would otherwise result. As the dicing or polishing tool advances forward, the angle which the swing bar B makes with the connecting bar or rod K varies, so that if the rod O O were not a jointed one, such variation would cause the lever Q to turn too soon on its fulcrum.

When the swing bar B and the arm *a* are parallel the two parts O O of the secondary connecting rod make an angle with each other and are pressed at their inner ends up toward the rod K. During the forward movement of the dicing tool the draft on them by the vibrating rod K causes them to move downward and approach a straight line with each other so as to increase the distance between the joint pins of their two outer ends and thereby prevent the lever Q from turning on its fulcrum until the parts O O have reached their lowest positions. The crank wheel which operates the connecting rod K is so arranged that when the crank pin of it is in its lowest position, the dicing balls shall have advanced forward to or about to its extreme point of contact with the leather. This being the case, while the crank pin is carried around the next ninety degrees of its orbit of revolution, the lever Q will be entirely thrown up into the inclined position as denoted by dotted lines at Q′. During the next ninety degrees of orbital movement of the crank the rear end of the connecting bar K will be so much elevated as to prevent during the back movement of the swing bar B in the same time any material depression of the lever Q such as would carry its dicing or polishing end or ball down toward the table G. Thus the dicing ball is held up above the table during its back movement over the leather. During the next ninety degrees of orbital motion of the crank the lever Q is turned on its fulcrum so as to bring its dicing ball down upon the rear end of the leather or its point of starting, and during the next ninety degrees of orbital motion of the crank the dicing ball is removed forward in contact with the leather.

Were the two parts O O of the connecting

rod O O not jointed together and made to operate as described, the turning of the lever Q on its fulcrum would be effected sooner during its forward movement, but by and during the downward movement of the levers such turning is prevented, and thus the contact of the ball with the leather is prolonged.

I claim—

The above described combination and arrangement of the crank wheel, the connecting rod K, the swing bar B, the lever Q, and the connecting rod O, and also the improvement of making the connecting rod O O in two parts jointed together and to operate as specified, whereby the contact of the dicing or polishing ball or surface with the leather is prolonged under circumstances as stated.

In testimony whereof, I have hereto set my signature this twenty-ninth day of October A. D. 1853.

PHILIP P. TAPLEY.

Witnesses:

R. N. EDDY,

F. P. HALE, Jr.