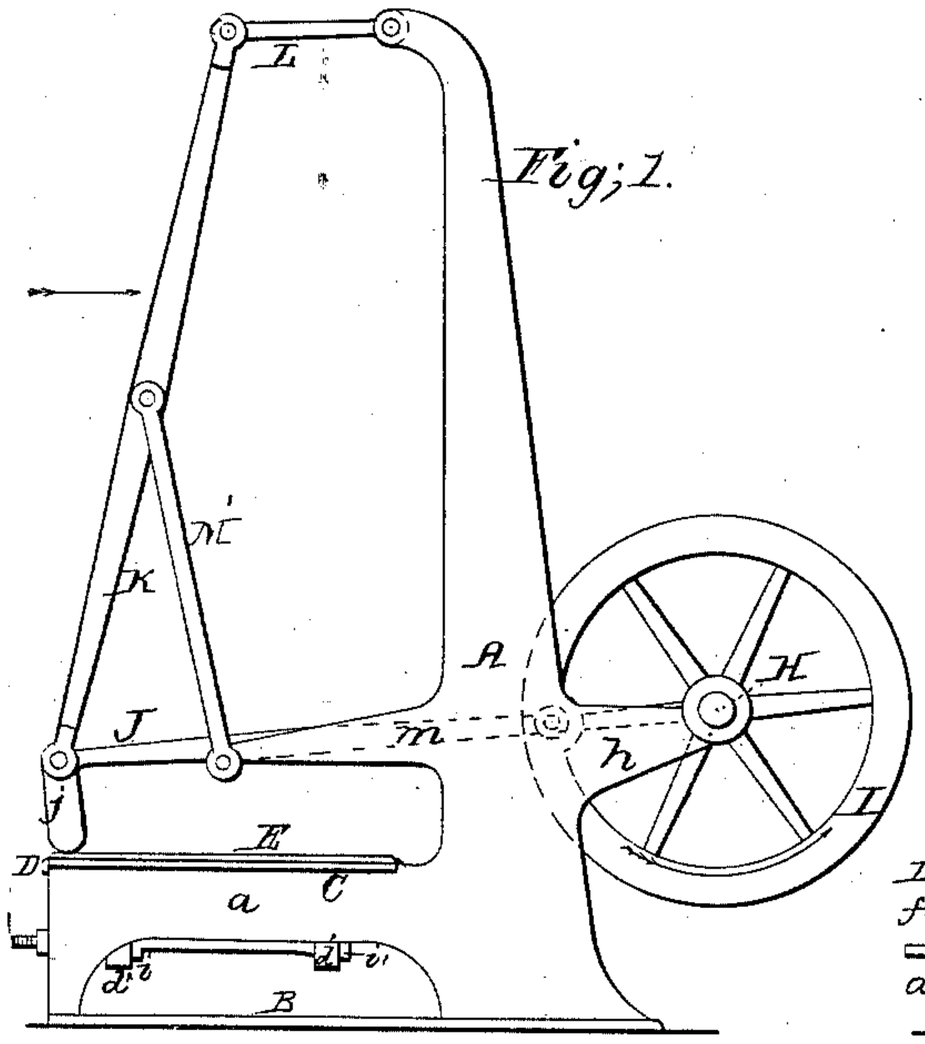
G. S. Adler,

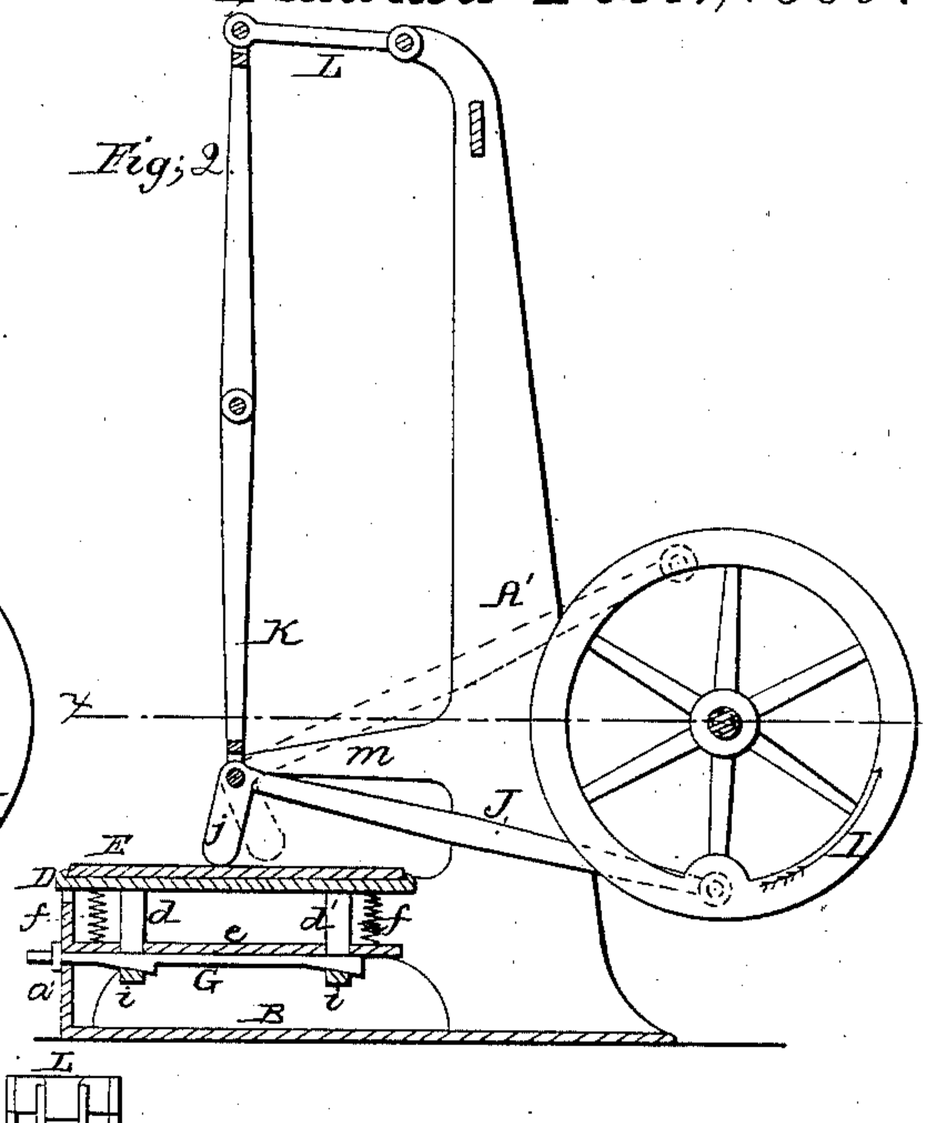
Dressing Leather,

No. 27,028. Patented Feb. 7, 1860.

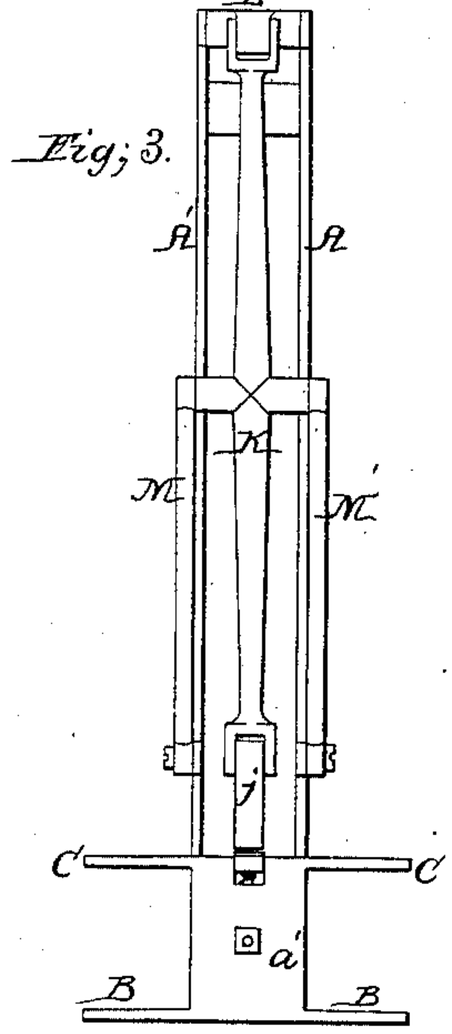
Fig; 1.



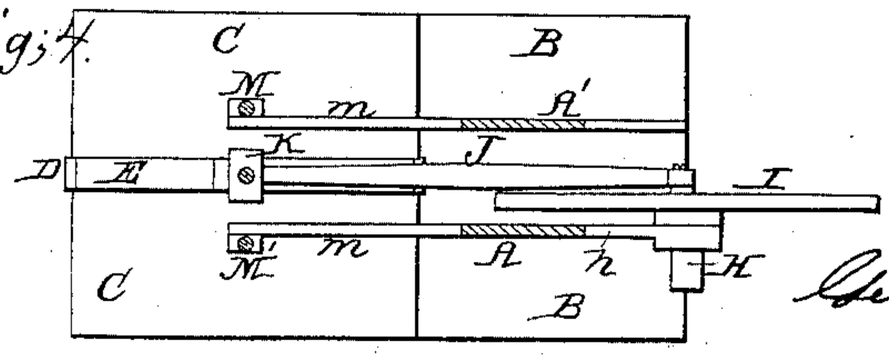
Fig; 2.



Fig; 3.



Fig; 4.



Witnesses;
Robert G. March
Henry Howson

Inventor,
Geo. S. Adler

UNITED STATES PATENT OFFICE.

GEORGE S. ADLER, OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR POLISHING LEATHER.

Specification of Letters Patent No. 27,028, dated February 7, 1860.

To all whom it may concern:

Be it known that I, GEORGE S. ADLER, of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Morocco-Polishing Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention relates to an improvement in morocco polishing machines in which a reciprocating agate or other hard polishing stone is caused to pass repeatedly in one direction only, in contact with the surface of the leather, and in the opposite direction free from contact with the leather which is placed on a level table, and my improvement consists in the combination of a crank wheel, a polisher, and certain rods arranged in respect to each other, and to the level table in the manner described hereafter whereby the proper movement is imparted to the polisher, without the aid of the usual knee joints.

In order to enable others skilled in this class of machinery, to make and use my invention, I will now proceed to describe its construction and operation.

On reference to the accompanying drawing which forms a part of this specification, Figure 1, is a side elevation of my improved morocco polishing machine; Fig. 2, a sectional view; Fig. 3, an end view looking in the direction of the arrow Fig. 1; Fig. 4, a sectional plan.

Similar letters refer to similar parts throughout the several views.

The frame work of the machine consists of two standards A, and A′, secured to or forming a part of the base B. Two projections *a*, *a*, of the standards A, and A′, support a platform C, the outer ends of the projections being connected together by a plate *a*′, and being secured to the base plate B. In the platform C, and at a point midway or thereabouts between the two plates is an opening in which the plate D fits snugly so as to move freely in a vertical direction only, this plate being furnished with a strip E, of box or other hard wood, usually employed in leather polishing machines. From the underside of the plate D, project two slotted bars *d*, and *d*′, which pass through and are guided by openings in a plate *e*, the latter forming a permanent part of the frame. Through the lower end of the slotted bars *d*, and *d*′, passes a rod G, the upper surface of which bears against the underside of the plate *e*, the inclined planes *i*, *i*, of the rod bearing, one on the bottom of the slotted bar *d*, the other on the bottom of the bar *d*′. The end of the rod G, on which is cut a screw, passes freely through the end plate *a*′, of the frame, and outside this plate the screwed end of the rod is furnished with a nut, by turning which in one direction the inclined planes *i*, acting on the bars *d*, and *d*′, will depress the latter and with them the plate D, and its box-wood strip E. Springs F, F, bearing at the top on the underside of the plate D, and at the bottom on the plate *e*, serve to raise the plate D, when by turning the nut in a contrary direction the rod G, is moved back so as to cause the inclined planes *i*, *i*, to recede from the projecting rods *d*, and *d*′. It will now be seen that the attitude of the plate D, depends upon the position of the inclined planes, but that the springs *f*, *f*, will allow it to yield on the application of pressure from above without disturbing the inclined planes.

H, is a shaft turning in the direction of the arrow, in the ends of the projection *h*, of one of the frames, and on this shaft is a fly wheel I, to a pin on which is connected one end of the rod J, the opposite end being jointed to the lower end of the rod K, and the upper end of the latter being connected to a rod L, which is pointed to the top of the frames A, and A′. To the middle of the connecting rod K, are hung the two radius rods M, and M′, one on each side, the lower ends of these rods being jointed to the end of the projections *m*, of the frame A. On turning the fly wheel I, a vibrating motion will be imparted to the rod K, the lower end of which will, owing to the radius rods M and M′, and rod L, move in a straight line parallel, or very nearly parallel, to the face of the strip E. The system of rods is in fact similar in principle to, although different in arrangement from, the parallel motion in Watts double acting steam engine. On the end of the rod J, and situated at right angles or thereabout, to the center line of the same, is a projection *j*, the lower rounded end of which coincides laterally with the strip of wood E, on the plate D, the lower end of this projection being furnished with a smooth agate or other suitable polishing stone. When the fly wheel revolves in

the direction of the arrow the inward vibration of the projection *j*, will be completed as the pin on the fly wheel accomplishes the under half of its revolution, the forward vibration of the projection being accomplished as the crank pin traverses the upper half of its revolution. Now the center of the fly wheel shaft H, is in the line *x*, which is parallel to the face of the strip E, on the plate D, and above the point where the end of the rod J, and its projection *j*, is connected to the lower end of the rod K. By this position of the center of the driving wheel the inward movement of the projection *j*, along the strip E, is accomplished, while the projection *j*, varies but little from a vertical position, but the moment the forward movement of the projection commences, and as the crank pin begins to traverse its upper half of a revolution the rod J, is elevated to such an angle that the lower end of its projection is turned up from the face of the strip E, and in this turned up position completes its outward stroke.

It will now be seen that on the morocco being placed on the strip E, and the wheel I, being caused to revolve in the direction of its arrow, the lower end of the projection *j*, during its inward vibration will bear upon the morocco and that during its outward vibration it will be turned up clear of the surface of the morocco, to which a clear and glossy surface can only be imparted by passing the polisher over it in one direction.

By means of the wedges *i*, *i*, on the adjustable rod G, the surface of the strip E, may be lowered or raised so as to accommodate it to different thicknesses of morocco, at the same time the strip will yield to any slight variation in the thickness of the hide submitted to the machine.

What I claim as my invention and desire to secure by Letters Patent is—

The rod J, its projecting polisher *j* and the crank wheel I, in combination with the rods K, L, M and M′, the whole of the above parts being arranged in respect to each other and to the horizontal bed of the machine as and for the purpose herein set forth.

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

GEO. S. ADLER.

Witnesses:
R. Y. Cross,
Jas. E. McGraw.