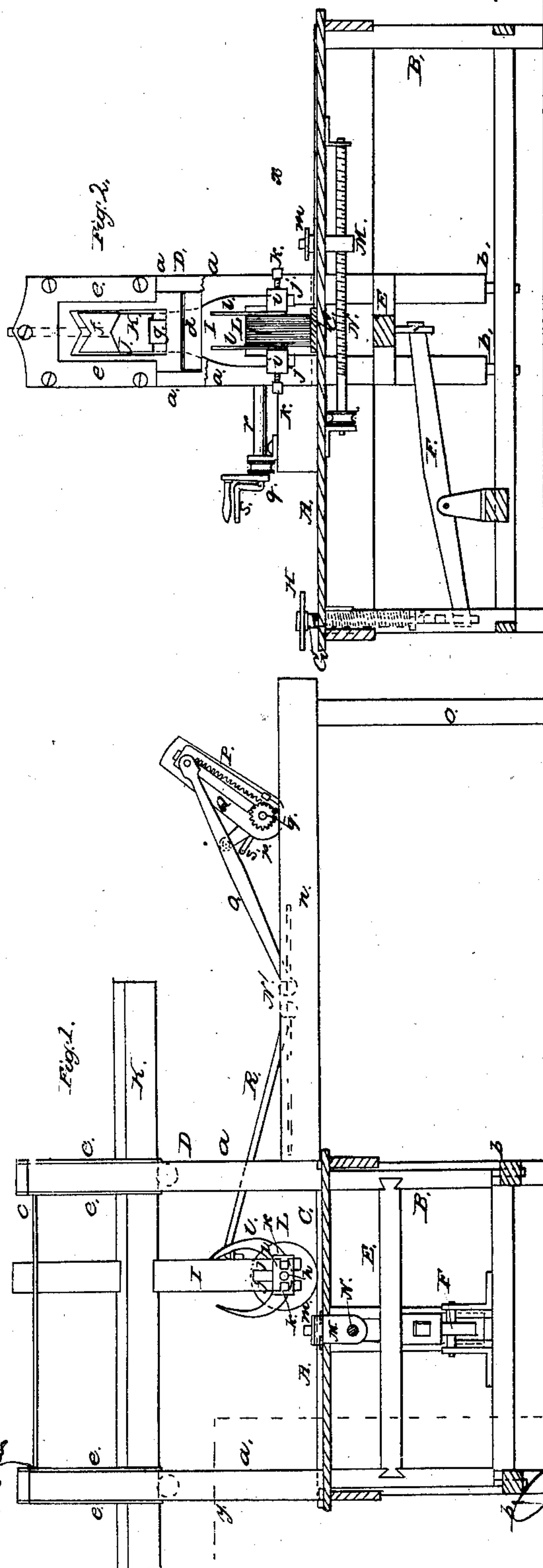


R.L. & C. Smith,

Dressing Leather,

No. 26,792,

Patented Jan. 10, 1860.



Witnesses:
Moses E. Thomas
Jacob Smith

Robert L. Smith
Cornell Smith

UNITED STATES PATENT OFFICE.

R. L. SMITH AND C. SMITH, OF STOCKPORT, NEW YORK.

MACHINE FOR FINISHING LEATHER.

Specification of Letters Patent No. 26,792, dated January 10, 1860.

To all whom it may concern:

Be it known that we, R. L. SMITH and C. SMITH, both of Stockport, in the county of Columbia and State of New York, have
5 invented a new and Improved Machine for Finishing or Polishing Leather; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings,
10 making a part of this specification, in which—

Figure 1, is a section of our invention taken in the line *x, x*, Fig. 2. Fig. 2, is a section of ditto, taken in the line *y, y*, Fig. 1.
15 Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain a machine whereby the length of the stroke or vibration of the tool, as well as the pressure of the same on the leather, may be regulated with the greatest facility, the face of the tool also kept parallel with the face of the bed over which the leather passes, and the latter fed by an automatic mechanism
25 evenly and with a regular movement to the tool.

To enable those skilled in the art to fully understand and construct our invention we will proceed to describe it.

30 A, represents a horizontal bed, which is supported at a suitable height by a proper framing B.

C, is a metal plate secured transversely on the bed A, at about its center. The plate
35 C, may be of cast iron.

D, is a frame composed of four vertical posts *a*, which pass through the bed A, two posts at each side of it, and are allowed to move freely up and down, the lower ends of
40 the posts having circular tenons or guides *b*, which fit in the lower longitudinal bars of the framing B. At the lower part of the frame D, there is a transverse bar E, to which one end of lever F, is connected, and
45 the opposite end of this lever is connected with a vertical screw G, which passes up through the bed A, and is surmounted by a hand wheel H, see Fig. 2. The upper part of the frame D, has two traverse bars *c*, attached to it, a space being allowed between
50 to serve as a guide to a tool stock I, which will be presently referred to. The parts *a, a*, at each side of the bed A, are connected by traverse bars *d*, and between each pair of
55 parts *a, a*, at their upper parts a slide J, is placed and fitted between suitable guide

plates *e, e*, each slide having a spring bearing on its upper surface, which springs have a tendency to keep the slides at the lowest point of their movement. In each slide J, 60 two rollers *f, g*, are placed. The upper rollers *f*, are of bi-conical form, as shown in Fig. 2, but the lower rollers *g*, have the faces of their peripheries parallel with their axes.

K, is a bar which is fitted, and works between the rollers *f, g*, and consequently extends transversely over the bed A. The upper surface of this bar is of double inclined form corresponding to the form of the peripheries of the rollers *f*, the lower surface 70 of the bar K, is grooved or recessed longitudinally to receive the edges of the rollers *g*, see Fig. 2.

The tool stock I, previously referred to, is a vertical bar which passes through the bar 75 K, and has its upper part fitted between the traverse bars *c, c*. The lower part of the stock or bar I, is recessed to receive a cylindrical tool L, which is of metal and has its axis *h*, fitted in metal bearings *i, i*, which are
80 fitted loosely on forked guides *j*, at each side of the tool said guides being attached to, or forming a part of the tool stock L. The bearings *i, i*, may be secured at any desired point within the scope of their movement by 85 means of set screws *k*. To the axis *h*, of the tool crescent shaped stops *l*, are attached which prevent it from casually turning.

The bed A, at one side of the plate C, is slotted at right angles with said plate, and 90 the upper part of a nut M, is fitted in said slot. The lower part of the nut M, is fitted on a screw rod N, placed longitudinally underneath the bed A. The upper part of nut M, has a screw button *m*, fitted to it by which 95 the skin or leather may be attached to the nut M.

To one side of the framing B, two horizontal bars *u*, are attached, the outer ends of said bars being supported by uprights *o*. 100 The bars *u*, are grooved at their inner sides longitudinally to form guides for a cross head N, to which one end of a connecting rod O, is attached. The opposite end of rod O, is connected to a rack P, which is fitted 105 to a crank Q, and has a pinion *p*, gearing into it, said pinion being attached to a shaft *q*, which passes longitudinally through the shaft *r*, of the crank Q. The shaft *q*, having a crank *s*, at its outer end. The rack P, is 110 allowed to slide freely on the crank Q, and may be fitted thereto in any proper way to

admit of such result. The cross head N', is connected to the tool stock I, by a rod R.

The operation is as follows: The skin or leather is placed on the bed A, and secured 5 to the nut M, by the screw button *m*. Motion is then given the shaft *r*, by any convenient power, and the tool L, is moved back and forth over the skin by means of the crank Q, connecting rod O, cross head 0 N', and rod R. The length of the stroke of the vibration of the tool L, may be varied as the dimensions of the skin may require by turning shaft *q*, thereby moving the rack P, through the medium of the pinion *p*, and 5 virtually lengthening or shortening the crank Q. As the tool L, vibrates the skin is fed to it by the rotation of the screw shaft N, which is turned from shaft *r*. The shaft N, moving nut M, to which the skin is at- 0 tached. By adjusting the bearings *k*, *k*, the face of the tool L, may be kept perfectly parallel with the surface of the skin, and plate C, over which the tool works with the skin between. The pressure of the tool on 5 the skin is regulated by turning the shaft G. The arrangement of the bar K, and tool stock I, insure a steady movement of the tool L.

In the ordinary machines the surface of 0 the table is composed of wood; upon which

the skin will slip unless moistened. By having the bed covered with metal C, the skin is retained without slipping and the time and labor of moistening is saved.

Having thus described our invention what 35 we claim as new and desire to secure by Letters Patent, is—

1. The combination of the polishing tool L, with a horizontally moving stock I, and bar K, arranged and operating substantially 40 as herein shown and described.

2. The arrangement and combination of the vertical feed regulating screw G, lever H, and bar E, as and for the purpose set 45 forth.

3. The arrangement of the horizontal feeding nut M, screw N, and shaft (*r*) as and for the purpose herein shown and described.

4. The combination with the crank Q, and 50 rod O, of the movable rack P, pinion and shaft (*p*), (*q*), whereby the length of stroke of the polishing tool may be changed at pleasure.

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