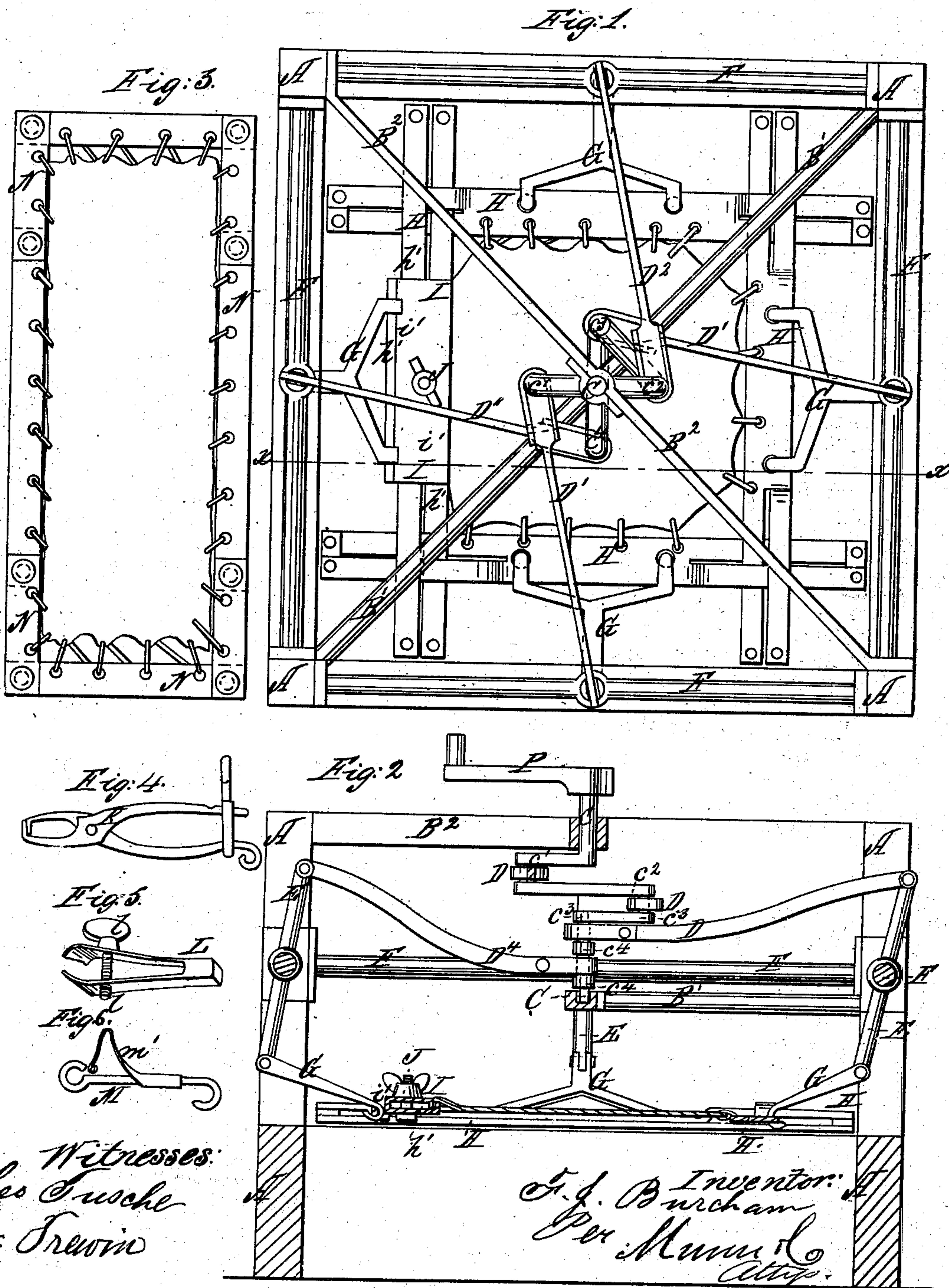


F. J. BURCHAM.
MACHINE FOR SOFTENING OR DRESSING LEATHER OR SKINS.
No. 66,125. Patented June 25, 1867.



Witnesses:
Chas. Fische
W. Trewin

Inventor:
F. J. Burcham
Per Munn & Co.
Attys.

United States Patent Office.

F. J. BURCHAM, OF RACINE, WISCONSIN.

Letters Patent No. 66,125, dated June 25, 1867.

IMPROVED MACHINE FOR SOFTENING OR DRESSING LEATHER OR SKINS.

The Schedule referred to in these Letters Patent and, making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, F. J. BURCHAM, of Racine, in the county of Racine, and State of Wisconsin, have invented a new and improved Machine for Softening or Dressing Leather or Skins; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top or plan view of my improved machine.

Figure 2 is a vertical cross-section of the same taken through the line *x x*, fig. 1.

Figure 3 represents a modification of the stretching-frame.

Figures 4 and 5 represent different forms of clamps for securing the leather to the frame.

Figure 6 represents a spring hook for securing the leather to the frame.

Similar letters of reference indicate like parts.

My invention has for its object to furnish a convenient and effective machine for softening or dressing leather, particularly buck-skins, calf-skins, kid calf-skins, &c., but equally applicable to other kinds of skins, whether having the hair on or off; and it consists in the combination of the quadruple crank-levers and pitmen with each other and with the stretching frame to which the leather is attached, and in the construction of the frames, clamps, and spring hook for holding the leather.

A is the frame of the machine. B¹ B² are beams passing diagonally across the machine from post to post and at a sufficient distance apart to receive the quadruple crank between them. C is the crank-shaft, the lower end of which is pivoted in a socket formed in the middle of the beam B¹. The upper end of the crank-shaft C revolves in bearings in the middle part of the beam B², above which it projects for the attachment of the crank P, by which the machine is operated. Upon the crank shaft C are formed four cranks, *c*¹ *c*² *c*³ *c*⁴, at right angles with each other, as shown in fig. 1. To the cranks *c*¹ and *c*², which extend out upon opposite sides of the axis of the shaft C, are pivoted the ends of the pitmen D¹ and D², and to the cranks *c*³ and *c*⁴ are pivoted the ends of the pitmen D³ and D⁴, as shown in the drawings. The other ends of the pitmen D are pivoted to the upper ends the levers E, the middle parts of which are attached to the shafts F, the ends of which are pivoted to the corner posts of the frame A. If desired or convenient, the middle parts of the levers E may be pivoted to any suitable and sufficient support. To the lower ends of the levers E are pivoted the outer ends of the connecting-rods G, the inner ends of which are branched and are pivoted to the bars of the stretching-frame H. The bars of the stretching-frame H are connected to each other at their ends, as shown in fig. 1, so that they may all operate in the same plane. The leather or skins may be secured to the frame H by lacing, the laces being passed through holes in the bars of the frame and in the edges of the skin, or one or more clamps may be attached to each of the bars of the frame H, between the jaws of which the edges of the skins are secured. In the clamp shown in figs. 1 and 2 the inner edge of the bar *h*' is turned up and serrated to form one jaw of the clamp I. The other jaw is formed of the plate *i*', the front edge of which is turned down and serrated, and the middle part of the rear edge of which is so formed as to enter a slot in the bar *h*' to form the hinge of the clamp. The two jaws are held together, clamping the skin by means of the screw and thumb-nut J. The clamp K, shown in fig. 4, is similar in general construction to a blacksmith's tongs, except that its forward ends are bent over and serrated to form the jaws of the clamp, and there is a hook or eye formed upon the rear end of one of its arms or handles for convenience in attaching it to the frame. The clamp L consists of a pair of spring jaws, the rear ends of which are riveted to each other at the proper distance apart to receive the bar of the frame H, and the forward ends of which are held together to clamp the skin by the screw *l* passing through a hole in one jaw and screwing into a hole in the other jaw, as shown in fig. 5, or the skins may be attached to the frame by a double spring hook, M, having a hook or eye at one end, by which it is pivoted to the bars of the frame, and a hook at the other for the attachment of the leather, the point of the last-mentioned hook being covered by a spring, *m*', to prevent the skin from working off while the machine is being operated. In the case of light skins, I prefer to use a frame, N, formed of four longer and four shorter bars pivoted to each other alternately, as shown in fig. 3, the longer bars being connected to the ends of the connecting-rods G. In using the machine, the leather or skin to be softened or dressed is attached to the stretching-frame by

any of the means herein shown and described and the crank P operated. The effect is that the skin is drawn or stretched alternately in different directions, working and softening it to any desired extent.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the quadruple crank C, pitmen D, levers E, and connecting-rods G with each other and with the stretching-frame to which the skin is attached, substantially as herein shown and described and for the purpose set forth.

2. The stretching-frame H, constructed and operated substantially as herein shown and described and for the purpose set forth.

3. The stretching-frame N, constructed and operated substantially as herein shown and described and for the purpose set forth.

4. The clamp I, constructed and arranged substantially as herein shown and described and for the purpose set forth.

5. The clamp K, constructed substantially as herein shown and described, when used for the purpose of attaching skins to a stretching-frame.

6. The clamp L, constructed substantially as herein shown and described, when used for the purpose of attaching skins to a stretching-frame.

7. The double spring hook M, constructed substantially as herein shown and described and for the purpose set forth.

F. J. BURCHAM.

Witnesses:

JOHN M. OSGOOD,

JOHN LONGFELLOW.