G. W. Pratt,

Dressing Leather,

No. 48,876. Patented July 18, 1865.

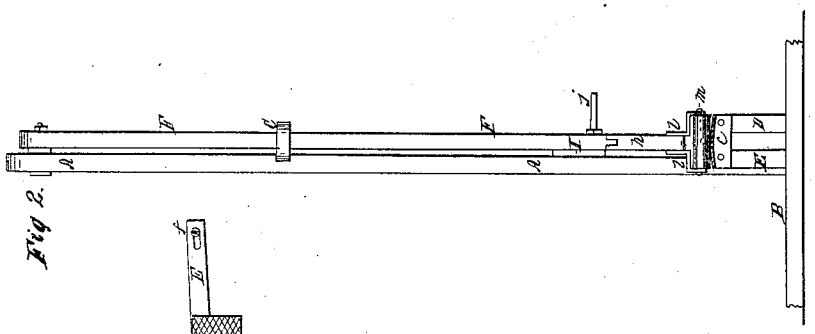

Fig 2.

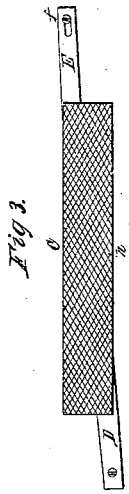

Fig 3.

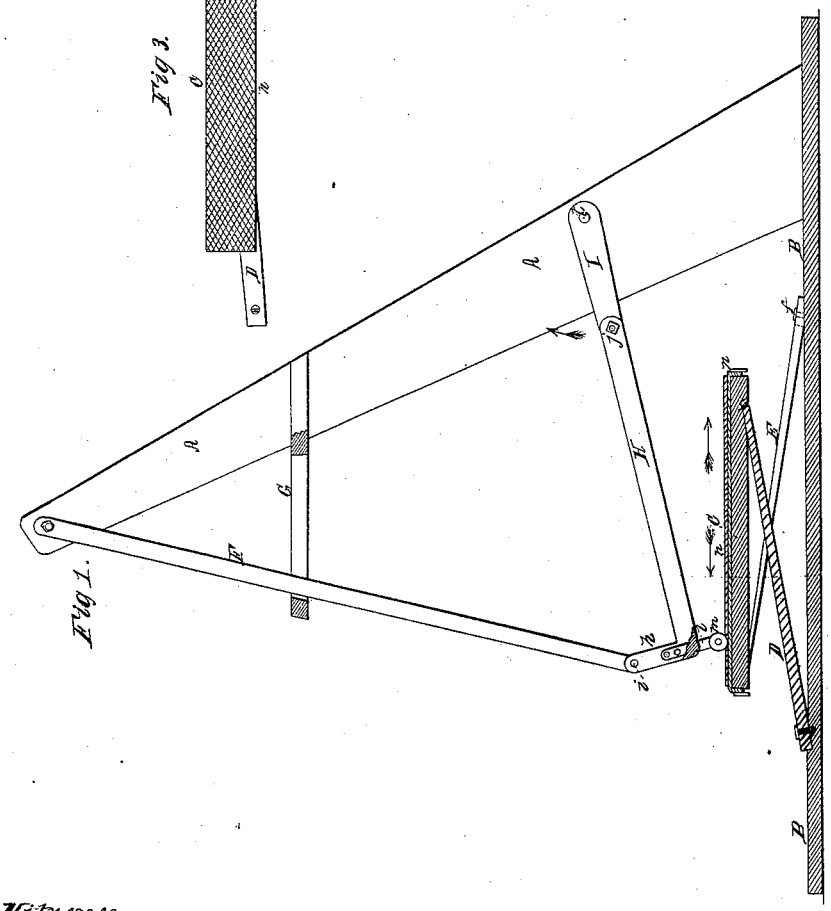

Fig 1.

Witnesses.
Wm. H. Bishop
Charles F. John

Inventor.
Geo. W. Pratt.
By his atty.
J. C. McCarter

UNITED STATES PATENT OFFICE.

GEORGE W. PRATT, OF SALEM, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND WM. P. MARTIN, OF SAME PLACE.

IMPROVED MODE FOR EMBOSSING LEATHER.

Specification forming part of Letters Patent No. **48,876**, dated July 18, 1865.

To all whom it may concern:

Be it known that I, GEORGE W. PRATT, of Salem, in the county of Essex, in the State of Massachusetts, have invented certain new and useful Improvements in Embossing Leather and other Skins; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this application.

My invention relates to a new method of pebbling or embossing leather or other skins.

Previous to my invention it has been customary to produce an embossed or configurated surface upon leather or other skins by means of a metallic roll having a design cut or ingrained upon its cylindrical surface and passed over the grain side or face of the skin, bearing upon the latter with a proper degree of pressure, while the skin was supported upon a table or platform. This method of producing the embossing or configuration upon the face of the skin is well known to those familiar with the trade. In this method heretofore produced there are numerous objectionable features, among which may be mentioned the following, viz: the incapacity of the machine to run rapidly without spoiling the work or design, the incapacity to produce a uniformity in the embossed surface, the tendency to stiffen the material and render it more harsh and brittle, and the expensiveness of the requisite machinery.

My invention has for its objects to overcome all these and other objections existent in the present method of embossing or pebbling leather, &c., and render the performance of this operation more rapid and economical and the article operated upon more desirable in every respect; and to these ends my invention consists in placing the stock or material to be operated upon with its face or grain side upon a flat, or nearly flat, surface, which has the design produced upon it, (either by covering it with canvas or wire gauze or by ingraining or cutting it, as may be deemed most expedient,) and passing a plain pressure-roll or rubber over the flesh side of the stock, whereby the stock is forced against the embossing plane or table and the face of the stock configurated, as described.

To enable those skilled in the art to make and use my invention, I will proceed to describe it more fully, referring by letters to the accompanying drawings, in which—

Figure 1 is a sectional elevation of a machine embodying my invention. Fig. 2 is a front or edge view of the same, and Fig. 3 a detail plan view of the embossing-table.

In the several figures the same letter of reference indicates the same part of the machine.

A represents an oblique standard, which projects upward from the floor or platform B, and to the upper end of which is pivoted the pendulum or vibratory arm F. This arm F works or swings in a slotted bar, G, which is permanently secured to the standard A, and has pivoted or hinged to its lower extremity a short bar or arm, *h*, at the lower end of which is hung upon axis in a suitable metallic frame, *l*, the presser-roll *m*. The arm *h* has rigidly connected to it, and extending off from it at about right angles, a longer arm, H, whose end is pivoted to the crank-pin handle *j* of the crank-bar or link I, which turns on a stud, *t*, projecting from the main frame or standard A.

C is the bed plate or table, in the upper surface of which is produced the design to be imparted to the skin. (I have shown this table to be covered with coarse canvas stretched tightly over it, by which a very fair design will be produced on the stock.) This table C may be supported on spring-bars D E, fastened at their upper ends to the said table and connected at their lower ends to the floor or base B.

The operation of a machine constructed as just described is as follows: The table C being provided or formed with any suitable design, the stock or skin is placed with its face or grain side against the surface of said table and temporarily held or secured in position. Power is then applied to the handle *j* to rotate it, as indicated by the red arrow, Fig. 1, whereby a vibratory motion is imparted to the bar F and a compound motion to the arm *h* which carries the roll *m*. The motion of the axis of the roll *m* is such that the said roll is carried along (in the direction of the blue arrow) in contact with the upper or flesh side of the stock and back again over and out of contact with said stock, for it will be seen that when the arm *h* is pushed by rod H in the direction of the blue arrow the roll *m* will move in the arc of a circle whose center is in the

pivot at upper end of arm F, and that said roll *m* will consequently press hard upon the upper surface of the stock or table C and cause the same to be forced down into the die or embossing-surface of the latter, while, when the arm H pulls the bar *h* back in the direction indicated by the black arrow, the latter will be swung upward on its pivot *i* to clear the stock, and then be carried along out of contact with said stock. As the roll *m* travels over and against the stock (represented in the drawings by a heavy red line) the table C yields by virtue of the spring-supports D E and accommodates itself to the line of travel of the roll, at the same time allowing the rolls to pass over it with about a uniform pressure on all points of the stock.

Of course the machine which I have shown is subject to innumerable modifications without departing from the spirit of my invention. In lieu of the roll *m*, a rubber of different construction may be employed; and, instead of the organized machine shown being used, the work may be done exceedingly well by the use of the roll or rubber tool in the hand of the workman.

It will be seen that by the method involved in my invention I am enabled with machinery to operate upon the stock with much more rapidity, and consequent economy of time, than can be attempted successfully in a machine where the design is formed on the traveling roll; and it will also be seen that the finish will be more uniform and desirable on the stock than that heretofore produced. By having the stock receive its impression or design from the surface of the table and passing a smooth roll or rubber tool over the flesh side, as described, a softening or mellowing of the stock is effected during the embossing operation, whereas by the methods of embossing heretofore practiced the stock has been rendered more harsh and brittle.

It will be understood that by the formation of the design on the flat surface of the table in any manner economy in the cost of the machinery is effected.

My invention is adaptable to the wants of the leather-finisher, in any economic manner, to a much greater extent than the methods heretofore employed, for, by simply covering the leather-dresser's table with canvas, wire gauze, or other material to produce a design, he is enabled with the use of a hand-tool to easily and perfectly emboss the skins at comparatively small cost.

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

Pebbling or embossing leather or other treated skins by placing the face or grain side in contact with a flat, or nearly flat, surface having the design formed in it, and applying the rolling or rubbing tool under pressure to the flesh side of the skin, substantially as described.

In testimony whereof I hereunto set my hand and seal this 1st day of April, 1865.

GEORGE W. PRATT. [L. S.]

In presence of—
ALFRED POOR,
GEO. H. PHILLIPS.