W. P. Martin,

Leather-Finishing Machine,

No. 52,728, Patented Feb. 20, 1866.

Fig. 1.

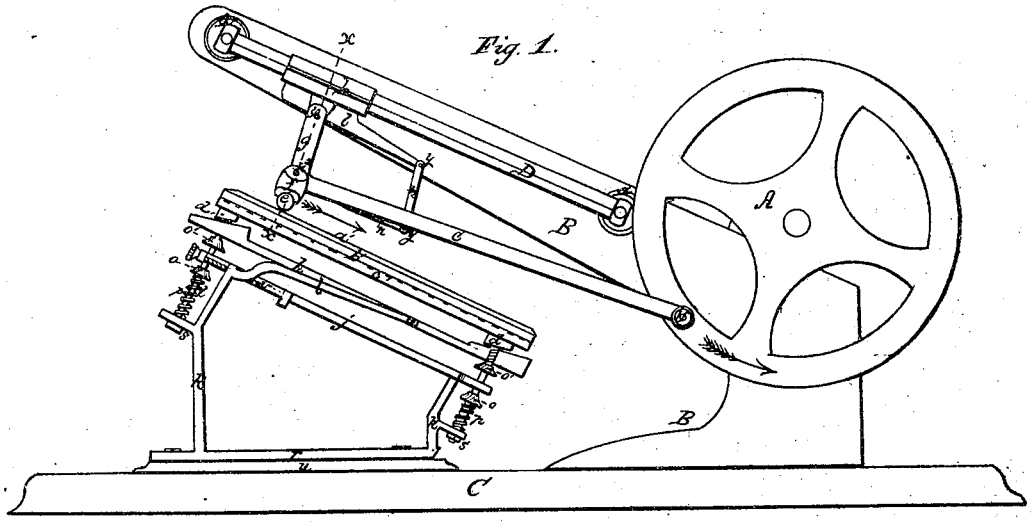


Fig. 2.

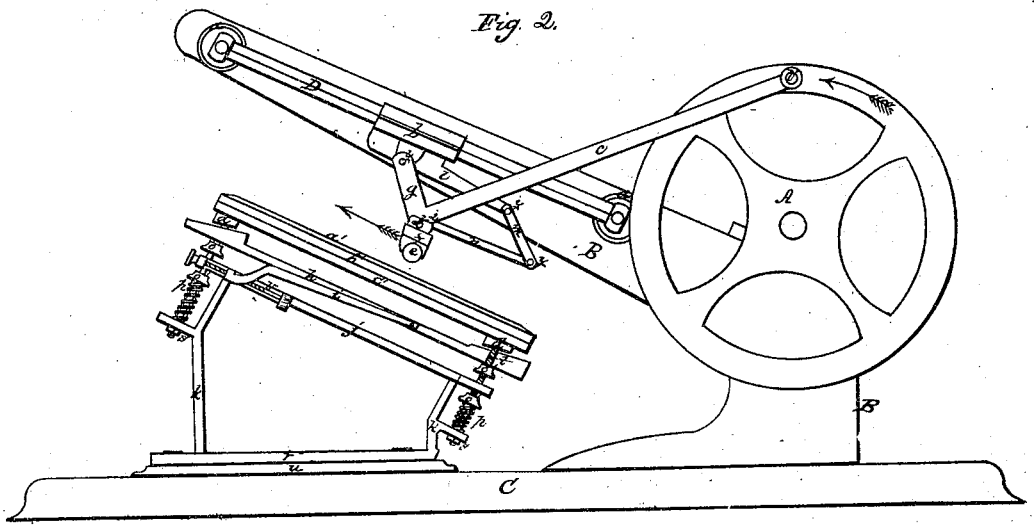


Fig. 3.

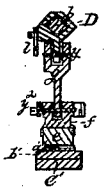
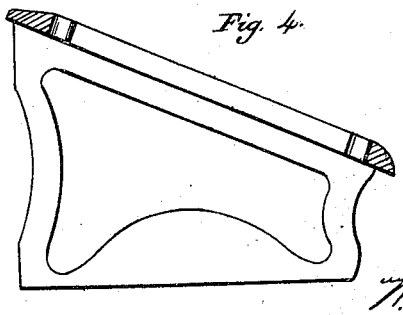


Fig. 4.



Witnesses.

Wm. G. McIntire

F. J. Huntoop

Inventor.

W. P. Martin.

By his attorney

J. N. McIntire.

UNITED STATES PATENT OFFICE.

WILLIAM P. MARTIN, OF SALEM, MASSACHUSETTS.

IMPROVED MACHINE FOR ROLLING LEATHER.

Specification forming part of Letters Patent No. **52,728**, dated February 20, 1866.

To all whom it may concern:

Be it known that I, WM. P. MARTIN, of Salem, in the State of Massachusetts, have invented a new and useful Machine for Rolling, Glazing, Pebbling, and Finishing Leather; 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 specification.

My invention relates to a new machine for rolling, glazing, pebbling and finishing leather, and has for its object to produce an organized machine adapted to various adjustments and tools for the ready and perfect accomplishment of all the before-recited operations; and to these ends my invention consists in the employment, in combination with a yielding bed for sustaining the leather to be operated upon, of a reciprocatory carriage arranged about parallel with the said bed, and a combination of pivoted levers, whereby the tool-stock is carried along in contact with the bed and back over the bed, all as hereinafter more fully set forth.

To enable those skilled in the art to make and use my invention, I will proceed to describe the construction and operation of one of my new machines, referring by letters to the accompanying drawings, in which—

Figure 1 is a side elevation, Fig. 2 is a similar view, showing the parts in a different position. Fig. 3 is a detail section at the line *x x* of Fig. 1; and Fig. 4 is a detail sectional elevation of the work-table, which is omitted in Figs. 1 and 2 in order that the working parts of the machine might be more clearly delineated.

In the several views I have designated the same part by the same letter of reference.

C represents the base or floor, on which are erected or secured the working parts and the table and frame of the machine.

The frame B, the peculiar shape of which is clearly seen, may be made of any suitable material of proper strength, and to the side of the projecting arm portion of this frame is secured the square working bar or way D, upon which travels the reciprocatory carriage *b*. This carriage *b* is driven through an intermediate combination of pivoted levers, as will be presently explained, by a pitman, *c*, connected at *v* to the main crank-pin on the driving-wheel A, which latter may be rotated on its axis by hand or any other motive power. On the sill *u* is arranged the base-plate *r* of a metallic stand, *j k k*. At each end of this metallic stand is a screw-rod, on the lower end of which is a nut, *s*, and on which is arranged also two other nuts, *o o'*, and a spiral spring, *p*. The construction and arrangement together of these bolts, nuts, springs, and the stand are clearly shown in the drawings. The lower one, *o'*, of the two nuts *o* and *o'* is used to vary and control the action of the spring *p* on each bolt, while the upper nut, *o*, supports the adjusting-bar *h*. This bar, it will be seen, has two inclined planes or oblique surfaces near its two ends, on which inclined surfaces rest the supporting blocks or lugs *d d* of the metallic bed *c'*, on which the skin *a'* to be operated on is placed. This bed *c'* may be covered on top with a stratum of leather, as seen at *b'*, Figs. 1, 2, 3.

On one side of the adjusting-bar *h* is pivoted, at *x*, one end of a rod, *i*, the other end of which has a nut in it, within which works the screw-rod *v*, which is provided with a knurled head, by means of which it is readily turned, for purposes to be presently explained.

f is the "hand" or tool-stock, in which is hung the tool *e*, as shown. To the carriage *b* is secured a plate, *l*, to which, at *y y*, are pivoted one end of pitman *c*, where it is bent up, as seen at *g*, and one end of a link, *m*, the other end of said link *m* being pivoted in turn to one end of bar *n*, which latter is pivoted at its other end to the angle of pitman *c g*, and also to the hand *f* by means of the pivot or stud y^2.

The operation of the machine thus far described may be thus explained: The leather to be rolled, pebbled, or otherwise operated upon being properly placed on the yielding bed at *a'*, and said bed adjusted by means of the nuts *o o* and sliding bar *h*, the motive power is applied to the main wheel A, causing it to rotate in the direction indicated by the arrow, and through the pitman *c* impart a reciprocatory motion to the carriage *b*.

At Fig. 1 the parts are shown as they are when the carriage *b* has just started on its downward stroke in the direction indicated by the arrow. It continues during this stroke to travel with the hand or tool-stock *f* in such position that the roll *e* travels in contact with and pressing against the upper surface of the leather or other stock being worked upon. At

about the completion of this stroke, and, while the crank-pin *v* is passing a dead-center, the relative position of the hand *f* and carriage *b* is changed and the parts assume the position seen at Fig. 2, in which position the return or upward stroke of the carriage and pitman is made, the hand *f*, it will be understood, moving back above and at same distance from the leather. As the crank-pin *v* passes over the next dead-center the hand *f* is again thrown down onto the leather, as seen at Fig. 1, and another stroke is made, and so on the rubbing over the surface of the leather of the hand is continued. As the operation of the machine continues the yielding bed is manipulated by the adjustment of the bar *h* and supporting-nuts *o o* and springs *p p*, in a manner similar to that described in a previous patent to me and familiar to those skilled in the art.

It will be seen that while the machine is running the adjustment of the yielding bed up and down may be effected by simply turning the screw-shaft *v*.

It will be seen that with a machine constructed as shown and described all the various operations of rolling, pebbling, glazing, finishing, &c., may be performed on various kinds of stock by placing different tools in the place occupied by the one *f* shown in the drawings; and it will be understood that by means of the jam-nuts *o' o'*, in connection with the rods and springs *p*, the amount or degree of elasticity at each end of the yielding bed may be regulated and varied to suit the peculiar nature of the different portions of the stock being operated upon.

Most of the features embraced in the yielding bed and its mechanism are seen in a previous patent to me, and I need not therefore so fully dwell upon that part of my present machine, the main feature of my present invention being in the new method of applying and working the hand or tool-stock *f* by attaching it to a system of levers involving a sort of parallel motion in conjunction with a reciprocatory carriage driven from a crank-motion, as already set forth.

It is obvious that other peculiar combinations of pivoted levers and mechanical devices may be employed in connection with the carriage *b*, or its equivalent, to effect the same peculiar motion ascribed to the hand *f*, or to any tool which may be substituted for it. I do not therefore desire to be understood as limiting myself to the precise combination and arrangement of parts shown and described; but,

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

1. The employment of a reciprocatory carriage, in combination with the yielding bed and a suitable mechanism for effecting the described motion of the hand or tool-stock, substantially as set forth.

2. The employment of the screw-shaft *v*, in combination with the stationary stand *j* and sliding adjusting-bar *h*, the whole arranged to operate as set forth.

3. The combination of the springs *p* and regulating-nuts *o'* with their screw rods, the whole arranged to operate with the bed, substantially as hereinbefore described.

WILLIAM P. MARTIN. [L. S.]

In presence of—
J. N. McINTIRE,
WM. C. McINTIRE.