C. White,

Crimping Leather,

No. 5,412. Patented Jan. 12, 1848.

Fig: 1.

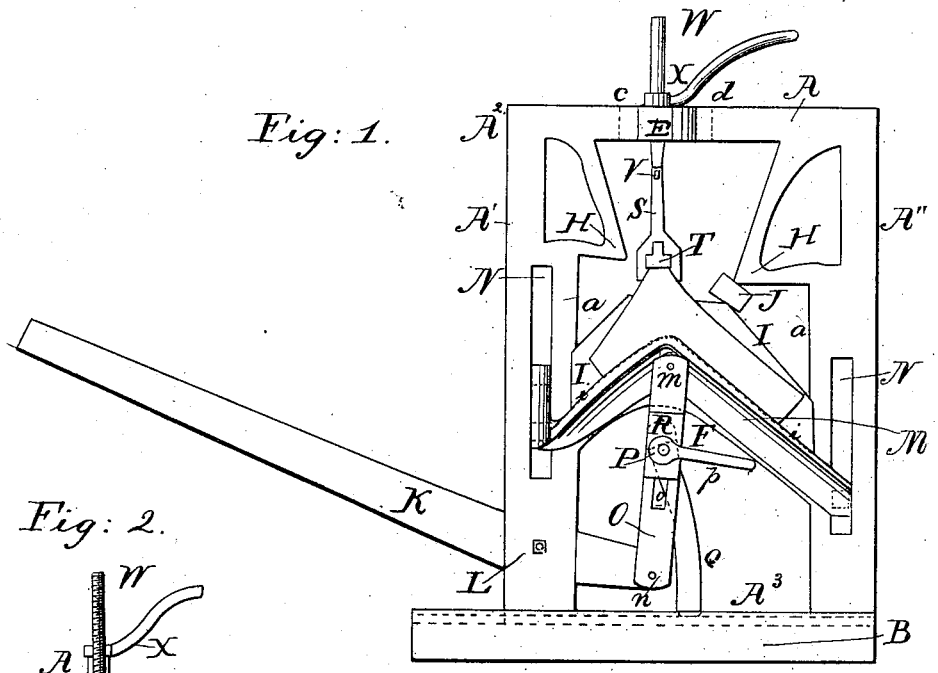


Fig: 2.

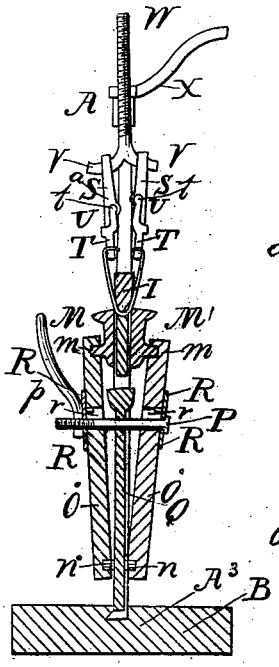


Fig: 3.

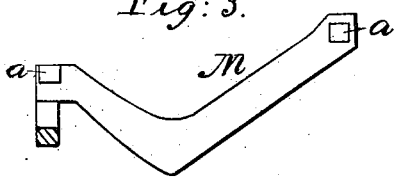


Fig: 4.

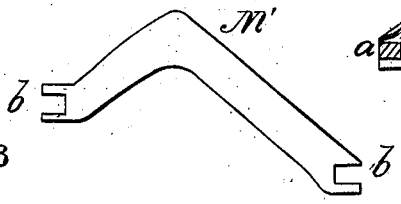
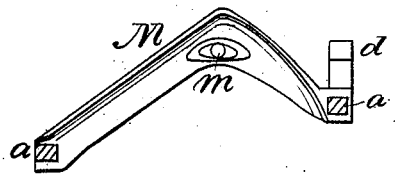


Fig: 5.



UNITED STATES PATENT OFFICE.

COSMAN WHITE, OF GALWAY, NEW YORK.

BOOT-CRIMP.

Specification of Letters Patent No. 5,412, dated January 12, 1848.

To all whom it may concern:

Be it known that I, COSMAN WHITE, of Galway, in the county of Saratoga and State of New York, have invented a new and useful Improvement in Machines for Crimping Boots; which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a side elevation of the machine. Fig. 2 is a vertical cross section through the center of the same. Fig. 3 is an elevation of one of the jaws separated from the other showing the side next the crimp board and the cogs thereon. Fig. 4 is an elevation of the other jaw showing the mortises therein into which the aforesaid cogs are inserted. Fig. 5 is a view of the jaws as interlocked together.

Similar letters in the several figures refer to corresponding parts.

The nature of this invention consists in connecting the jaws M to the end of the lever K for operating the same by two slightly inclined bars, for connecting rods, O, attached at their upper ends to the jaws and at their lower ends to the lever, by pins or bolts, *m n* having oblong slots *o* formed in them through which is passed a horizontal bolt P which is also passed through the end of a curved bar or dog Q extending downward between the inclined bars *o* and through two oblong metallic plates R pressed against the outsides of the slotted bars by a head and thumb, or hand nut, *p*, at the extremities of the bolt in such a manner that when motion is given to the lever and the upper edges of the jaws commence to crimp the leather, the upper end of the curved bar or dog Q will strike the lower edge of a curved form or bar F forming part of the frame, and arrest the progress of the bolt and plates, while the jaws will be allowed to proceed, and be forced over the boot leather; and being kept the same distance from the crimp by the plates and bolt, will exert the same degree of pressure at every point. Also in connecting the extremities of the jaws together by projections, or cogs, cast on the inner sides of one jaw and extending through vertical slots N in the frame into mortises formed in the extremities of the jaw on the opposite side thus not only performing the office of guides for the jaws during their up and down movement but also connecting the two together. Likewise in casting a guide arm on the cogged jaw for moving up and down in one of the mortises in the frame for guiding the jaws during the operation of crimping.

The frame A is of an oblong form, in dimensions generally about two by three feet, and a quarter of an inch thick, cast in a single piece, or otherwise formed, and placed erect on a sill, or block, or bed B, and firmly fastened thereto by any suitable means. Oblong openings N are made in the sides of the frame to admit cogs and the guide arm cast on one of the jaws to slide up and down in said openings. In each of the upper angles of said frame is an angular brace H for giving strength to the frame and extending inwardly sufficiently to form shoulders against which blocks or wedges J are placed for holding the crimp board I in its place when the machine is in operation.

The crimp-board I is made as usual, except that the ends thereof are grooved, to correspond with bevels made on the inside edge of each side of the frame at a point just above the conjunction or union of the bar or former F with the sides of the frame.

The lever K for operating the jaws is attached by a screw bolt L to the side of the post A at any point desirable, said bolt forming its fulcrum.

The middle bar or former F which is cast whole with the sides of the frame is of an angular or curved form—the upper edge thereof (represented by dotted lines *i i*) corresponding to the shape of the lower edge of the crimp-board I, which prevents plaits, or folds, forming in the leather during the operation of crimping. The angular sliding jaws M M′ extending across the frame are made of cast iron—one of them M having cogs *a* Figs. 3 and 5 projecting from the inner face thereof and at right angles to it passing through apertures N made through the frame, and also through apertures or gains *b* Fig. 4 made in the ends of the other jaw M′ corresponding with said cogs which are inserted therein. This mode of interlocking the jaws and connecting them with the frame causes the jaws to move up and down with precision, regularity, and equality of speed, during the operation of spreading and smoothing the leather over the crimp-board. On the outside of each jaw near the angle thereof is a projecting pivot *m* on which is suspended an inclined connecting rod O extending down to the end of the lever and fastened thereto by similar pivots

n. The inclination of said connecting rod O is shown more clearly in Fig. 2.

Through the bars O passes a screw rod P; on the end of this screw rod is screwed a corresponding female screw *p* having a handle by which it is turned. By turning this female screw to the right any desirable pressure on the crimp-board may be produced. The openings *o* in the rods O through which the screw P passes are of sufficient length to allow the jaws to pass up and down over said screw P while the crimping is being performed. On the outside of the side bars O are plates R through which the rod P passes. Propections *r* are formed on the inner faces of these plates R which are made to play freely in the openings *o o* in the bars O O to prevent the plates from turning on the bolt P. The stationary position of the screw rod P is maintained by the dog Q striking against the bar F when the long arm of the lever is pressed down. The curved dog Q through which the screw bolt P passes is of less length than the space between the form F and the bottom A of the frame so as to allow the dog and bolt and plates to rise with the connecting rods O and jaws M, until the latter shall have passed up over the tapered or thin edge of the crimp board when the dog is caused to strike the bar F and stop the upward motion of the bolt P and plates R—at the same time allowing the connecting rods and jaws to continue their upward movement by having the rods O made with slots *o* in which the bolt P is inserted.

Through the top of the frame at E there is an oblong aperture in which is inserted a screw rod W having arms V on its lower end to which the grippers S are attached. The upper end of said rod passes through a corresponding female screw X having a handle by which it is turned on the top of the frame to raise or lower the rod.

The grippers S, T, are made, arranged, and operated in the usual manner, except the socket joints of the shutters. These are formed by means of small projections *u u* on the inside of the plates S through which are made cavities corresponding to the form of the upper ends of the shutters which are rounded to fit said cavities, in the manner shown at *t*, *t*, Fig. 2.

The operation of the machine is as follows: The leather to be crimped should be thoroughly wet, doubled and hammered down so as to produce a crease through the middle. It should then be placed over the jaws and form, with the central crease on the bar F. Then insert the crimp I and wedge it firmly upon the leather by means of a wedge J between the shoulders or projections H on the frame and crimp board; then insert the corners of the leather from the outside through the openings of the grippers S; then shut the hinged shutters T firmly upon the leather; then turn the female screw X until the leather be tightened; then turn the female screw on the bolt P until the jaws be pressed against the leather sufficiently. The operator should now take hold of the lever K and vibrate it which will move the jaws up and down over the leather on the crimp-board; and occasionally he should draw up the corners of the leather until the crimping is performed sufficiently, the dog Q striking alternately the form F and bottom of the frame A^3 and thus arresting the motion of the bolt P and plates R while the sliding slotted connecting bars O with the jaws M M′ continue to ascend or descend as far as may be desired.

I do not claim as my invention a frame, sliding jaws, crimp board, grippers, screws, connecting bars and lever combined in a machine for crimping boots, as these have been used in various ways; nor do I claim keeping the jaws parallel with the crimp board during the operation of crimping the uppers of boots, but

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

1. The before described method of preserving the parallelism of the inner sides of the jaws with the outer sides of the tapered crimp board during the operation of raising and lowering the jaws for crimping the upper by which a uniform and equal pressure is produced upon the leather by means of the aforesaid combination and arrangement of the dog Q, screw P, and plates R, with the slotted bars O and curved jaws M, M′ operating in the manner and for the purpose described—the said dog being free to play up and down loosely between the form and base of the frame.

2. I also claim interlocking the ends of the jaws by means of the cogs *a* and mortises *b* in combination with the oblong mortises N in the frame, in which the cogs rise and fall during the operation of the jaws as described.

3. I likewise claim the manner of connecting the shutters T to the plates S by means of the socket joints *t u* as described.

4. I also claim making the frame with a curved form F the shape of the lower edge of the crimp board, upon which the leather to be crimped is first placed preparatory to its being pressed over the crimp-board.

In testimony whereof I have hereunto signed my name before two subscribing witnesses at Galway, N. Y., this 1st day of January, 1848.

COSMAN WHITE.

Witnesses:
E. O. Smith,
James Jones.