S. H. JONES.

Leather-Trimming Machines.

No. 140,631. Patented July 8, 1873.

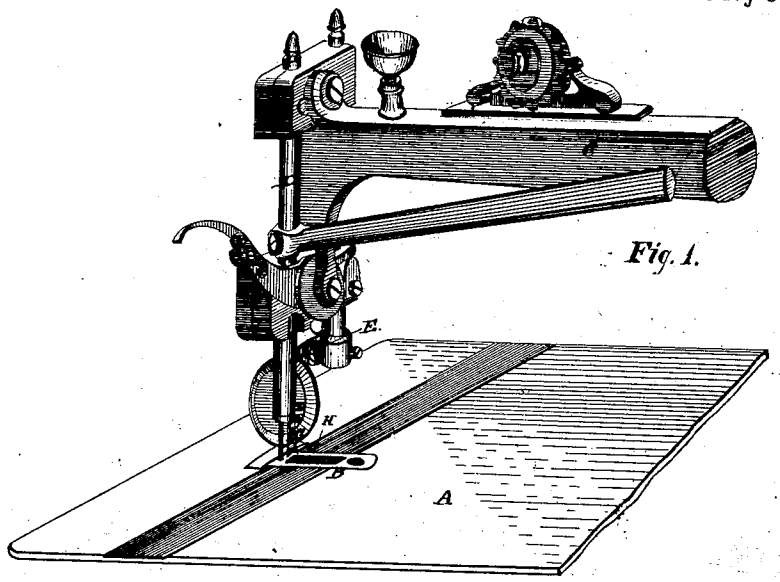

Fig. 1.

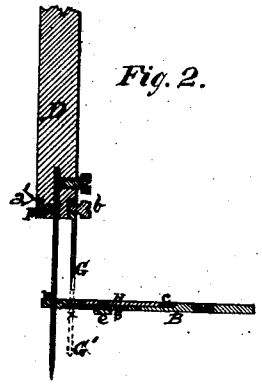

Fig. 2.

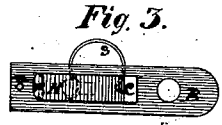

Fig. 3.

Fig. 4.

Fig. 5.

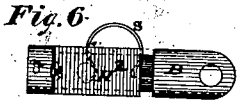

Fig. 6.

Fig. 7.

Fig. 8.

Witnesses: Cort. Van Dergee, Alex. Selkirk

Samuel H. Jones

Inventor.

UNITED STATES PATENT OFFICE.

SAMUEL H. JONES, OF EAST ALBANY, NEW YORK.

IMPROVEMENT IN LEATHER-TRIMMING MACHINES.

Specification forming part of Letters Patent No. **140,631**, dated July 8, 1873; application filed August 26, 1872.

To all whom it may concern:

Be it known that I, SAMUEL H. JONES, of East Albany, county of Rensselaer, State of New York, have invented certain Improvements in Apparatus for Trimming Leather, of which the following is a specification:

My invention relates to certain improvements in apparatus for trimming leather; and consists, in one part, of combining, with a vertical reciprocating chisel attached to the needle-bar, a curved or partially curved cutting-edge in such a manner that the said cutting-edge will operate to form a series of cuts, which will be of form other than straight-line cuts, the object of this part of my invention being to effect a series of cuts when the stitches are being taken, each of which will be distinct, and a succession of cuts will effect a continuous parting of the waste from the body, in which, by the curved form of the curved cutting-edge of the chisel, each cut, when effected, will have either its front end, or its front or back ends, curved on the waste, so that in operating with curves or scallops the trimmed edge of the body will present a clean-cut appearance. Another part of my invention consists in the combination of a side sleeve and set-screw with the chisel, and an annular tenon made on the end of the needle-bar, in such a manner that the said sleeve and set-screw will be capable of securing the chisel to the needle-bar, and also capable of affording a vertical adjustment of the needle as it becomes worn by use. Another part consists in the combination of an elastic sliding supporting-piece with the throat-piece in such a manner as to give a firm support to the material on the waste side when the chisel is entering the material, and be capable of yielding in a lateral direction as the cutting-edge of the chisel passes in the crack of the jointure between the said elastic support and the solid portion of the throat-piece, the object of this part of my invention being to cause the chisel to act with the edge of the solid portion of the throat-piece somewhat after the manner of shears, and in cutting down past the edge of the said solid portion of the throat-piece a space will be effected sufficient to admit the chisel to pass down to its full dip.

To enable others skilled in the art to make and use my invention, I will proceed to describe it in reference to the accompanying drawings and the letters of reference marked thereon, the same letters indicating like parts.

In the drawings, Figure 1 represents a perspective view of a sewing-machine embodying the improvements in this invention. Fig. 2 is a sectional elevation of the needle-bar and throat-piece embodying the invention. Fig. 3 is a vertical view of the throat-piece as improved. Fig. 4 is a cross-sectional view of the same. Fig. 5 is an end view of the cutter. Fig. 6 is a vertical view of the throat-piece with part of the improvements applied in a modified form. Fig. 7 is a cross-sectional view of the same. Fig. 8 is a view of a modified form of cutting-edge.

In the drawings, A represents the table or bed of the machine. C is the usual arm, supporting the upper working mechanism of the machine. D is the needle-bar. E is the presser-foot—all of which parts, or their modifications, form no part of my invention, and all are too well known to require particular description. In my invention I form, on the lower end of the needle-bar D, the annular tenon *a*, having a shoulder, *a'*, which tenon is made about one-fourth of one inch long, or more, and is to receive the sleeve F, which fits nicely on the same, and is firmly held by the set-screw *b*; being thus made the chisel is made capable of adjustment in a vertical direction, and may, as it becomes worn, be set down so as to have a proper drop of its cutting-edge, and thus secure a longer use of the chisel. Made with the said sleeve is the cutter or trimming chisel G, which cutter is located on the side of the needle-bar opposite the presser-foot E, as shown in Fig. 1. The said cutter, for ordinary leather-work, is made of such a length below the needle-bar as to strike the material operated with a little before the needle reaches its lowest dip, so that the said cutter will have a length of stroke after touching the top surface of the material of about one-eighth of one inch, more or less. The cutting-edge of the said chisel is made with a straight line of edge in a horizontal direction, and with a greater or less line of curve in a lateral direction on the waste side of the needle, as shown in Figs.

5 and 8. By this form of edge the trimmed edge of body-side will be made to present a clean-cut appearance, which cannot be had with a chisel having a lateral straight line of cutting-edge.

The throat-piece B is made with the usual form, and is provided with an elastic supporting-piece, H, fitting into the recess *c* made in the said throat-piece, so as to be flush with its top surface and present an even surface with the throat-piece proper, over which the material is to pass. The elastic supporting-piece H is made about one-sixteenth of an inch, more or less, shorter than the length of the recess *c*, and is capable of being slid back, and is held in place by any suitable holding screw or pin, *e*, which is secured with the piece H, and works in the slotted hole made from the recess through the throat-piece. The supporting-piece H is made elastic by any suitable spring, S, arranged to work against the throat-piece proper and the said sliding piece, by the holding screw or pin *e*, in such a manner that the end of the supporting-piece H toward the needle-hole *n* will press against the end wall of the throat-piece, as shown in Figs. 2, 3, and 4.

As the form and mode of applying the said spring to render the said supporting-piece elastic can be varied, I do not confine myself to any particular form or mode of application. The edge of the solid portion of the throat-piece which contacts with the elastic support, and also the contiguous edge of the said elastic support, are both made to conform with the respective forms of the sides of the chisel they are to face, so that when the elastic support is pressed against the edge of the said solid portion of the throat-piece the jointure between the same will present but a slight line of opening, as shown in Figs. 3 and 6, into which the chisel will enter, and the chisel striking past the said edge of the throat-piece will, with it, act as a shear to cause the cut to be made clean, which would effect substantially the same results.

In the throat-piece, at the termination of the recess *c*, is made the perforation *x*, which will permit the end of the cutter or chisel G to pass through when the needle-bar is cast down. The termination of the said recess *c* and the perforation *x* is located in such a manner as to be directly beneath the cutter or chisel G, so that when the cutter descends it will strike in the line of the jointure of the end of the elastic sliding supporting-piece H and wall of the recess *c*, and in continuing its descent will crowd the said sliding piece back and pass down through the perforation *x*, as shown by dotted lines H^1 in Fig. 2.

When the several parts of this invention are arranged as above described, the material to be operated upon is placed on the table A and the machine is operated in the usual manner, and when the needle is thrust through the material, as shown in Fig. 2, the edge of the cutter G will strike the material at a little distance from the stitching, and pass through the same and enter the perforation *x*, crowding the supporting-piece H back, and the said sliding supporting-piece, acting with the solid portion of the throat-piece, acts to give a permanent support for the material while being cut; and in yielding readily to the point of the cutter will admit the said cutter to pass clear through the material to effect the cutting in a clear and even manner, without any appearance of being ragged.

If desired, the throat-piece can be constructed with a sliding supporting-piece, H^2, arranged as shown in Figs. 6 and 7, which would act substantially the same as the sliding piece H, in Figs. 2, 3, and 4.

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

1. The combination of sliding plate H and spring S with the throat-piece, substantially as and for the purpose set forth.

2. The combination of the lateral-curved cutter G and needle-bar D with the throat-piece B provided with the sliding piece H and spring S, substantially as and for the purpose set forth.

SAMUEL H. JONES.

Witnesses:
CORS. VAN DERGE,
ALEX. SELKIRK.