

*Patented May 15, 1866.*



W. Livingston,  
Glen Duch.

Inventor:

# UNITED STATES PATENT OFFICE.

WILLIAM S. ATCHLEY, OF WILLIAMSBURG, OHIO.

## IMPROVED SKIVING-MACHINE.

Specification forming part of Letters Patent No. 54,664, dated May 15, 1866.

*To all whom it may concern:*

Be it known that I, WILLIAM S. ATCHLEY, of Williamsburg, in the county of Clermont and State of Ohio, have invented new and useful Improvements in Machines for Skiving and Splitting Leather, &c.; 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.

The present invention relates to certain new and useful improvements in machines especially intended for the skiving of leather, although with slight additions it can be applied to the splitting as well of leather, whereby many important advantages are secured, as will be obvious from the following detail description of the machine, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a plan or top view of the machine; and Fig. 2, a vertical section taken in the plane of the line *xx*, Fig. 1, and in the direction of the length of the machine.

A in the drawings represents the bottom or bed-plate of the machine, made in two parts, with the portion A<sup>2</sup> immediately under the knife-blade B used, the arrangement of which will be presently explained, susceptible of having its outer end, C, raised or lowered by means of a thumb or set screw, D, upon the under side of the frame E, in and between the side steps, F, of which the said portion A<sup>2</sup> moves up and down and is guided as the screw D acts upon the same. The inner end, G, of the plate A<sup>2</sup> is made concave across its entire width, and fits over the convex or rounded contiguous end H of the other and stationary portion, A, of the said plate, thus forming a hinge-joint, as it were, for the plate A<sup>2</sup> to turn on. In the upper surface of the plate A<sup>2</sup>, at or near its end, where it is hinged to its other portion, A, and across its surface, is cut a groove or concave I, which I fill with lead or other soft and suitable metal, which will not injure or destroy the cutting-edge of the knife-blade B as it comes in contact therewith, it being intended that this line of soft lead shall form one limit or end of the movement of the knife-blade over the surface of the plate A<sup>2</sup>. At or near the outer end of plate A<sup>2</sup>, upon each side, is a small pin, *a*, each fitting in a groove formed

in the sides of the frame E, provided for the plate A<sup>2</sup>, the purpose of these pins being to prevent the plate A<sup>2</sup> from sliding in the direction of its length as the knife-blade moves over it.

The knife-blade B is secured to the under side of a horizontal cross-bar, H<sup>2</sup>, arranged just above the plate A<sup>2</sup>, with each end in a slot or groove, *b*, of the side strips, E, of the frame for the same, extending their whole length and inclined from their outer ends, I<sup>2</sup> I<sup>2</sup>, to their inner ends, J, sufficiently to bring the cutting-edge of the knife-blade B, when at the lead portion of the plate A<sup>2</sup>, in direct contact therewith. The back edge of the cross-bar H<sup>2</sup> is a little higher than its front edge, or that from which the knife-blade projects.

To the upper side of the cross-bar H<sup>2</sup>, and at or near each end, are secured the angular arms K of a horizontal rack or toothed bar, L, extending through a vertical slot, M, of the post N of the bed-plate A, resting upon a roller, O, thereof, with which rack engages the toothed segmental wheel P of a vertical lever-arm, *g*, hung and turning upon a fulcrum-pin, R, of the upper end of the said post N, and in its slot.

S is a roller hung at each end in the arms K of the cross-bar, to which the knife-blade is secured, and just in front of the cutting-edge of the said knife-blade, the bearings for the said roller in the arms being adjustable to allow the roller a movement or play up and down, or in a vertical plane.

When the machine having the construction and arrangement above described is to be used for the skiving of leather, the plate A<sup>2</sup> is first lowered by turning the set-screw upon which its outer end rests in the proper direction therefor sufficiently to allow the end of the leather which is to be skived to be drawn under the knife-blade toward the front end of the plate A<sup>2</sup> to the required distance, according as it is intended to cut to a feather or thin edge, or to have a greater or less thickness, (the end of the leather, if to be skived to a feather edge, being placed over the soft metallic strip or portion of the plate A<sup>2</sup>, but if to be more or less thicker, proportionally nearer to the outer end of the said plate,) when, then raising the plate A<sup>2</sup> by turning the set-screw D in the proper direction therefor sufficiently to cause the leather placed on it to be tightly bound

between it and the knife-blade, the lever handle or arm, *g*, is then brought down, thereby, through the connecting parts above explained, drawing the knife-blade over the leather upon the plate  $A^2$ , and as the cross-bar to which the knife is attached moves in inclined guides or grooves of the side pieces, *E*, skiving or cutting the end of the leather to a bevel, as is obvious without explanation, the roller just in front of the knife-blade, and moving in connection with it, holding the leather smooth, thus causing it to be presented evenly to the action of the knife, its adjustable bearings giving it sufficient play in a vertical direction to allow of the free escape or passage of the shaving cut from the leather by the knife-blade as it moves over it. In order to prevent all possibility of the leather slipping upon the plate  $A^2$  as the knife is moving over it, I have arranged at the outer end of the frame in which the plate is placed a swinging cross-bar, *X*, the lower edge of which is beveled or inclined, which bar is swung down upon the leather and there held with the hand as the skiving-knife is acting upon it, this bar being so hung that if the leather is drawn in the least degree forward by the action of the knife it will only all the more tightly bend it.

In order to adapt my improved skiving-machine hereinabove described for the splitting of leather, I have placed in the plate  $A^2$  and across the same a roller, *Y*, with its upper

side tangent with, or nearly so, the upper surface of the plate, over which roller the roller of the knife-blade frame is brought, and then this frame securely fastened in place by set-screws *Z Z* of the stationary frame *E*, so that it cannot possibly move, when, having properly adjusted the plate  $A^2$ , the leather which is to be split is placed by one end between the two rollers from the back side of the same, and drawn through and between them, the knife-blade, as it is thus drawn through, splitting it as desired, and as is obvious without further explanation.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the adjustable bed-plate  $A^2$  with the knife-blade *B*, when the two are arranged together so as to operate substantially in the manner described, and for the purposes specified.

2. In combination with the above, the pressure-roller *S* of the knife-carrying frame *K*, arranged just in front of the knife-blade, as and for the purpose specified.

3. Hanging the roller *Y* in the bed-plate *A*, as and for the purpose described.

The above specification of my invention signed by me this 7th day of February, 1866.

WILLIAM S. ATCHLEY.

Witnesses:

FRANK WHITE,  
JOHN ATCHLEY.