M. M. CLOUGH.

Machine for Skiving Leather.

No. 208,959. Patented Oct. 15, 1878.

Fig: 1.

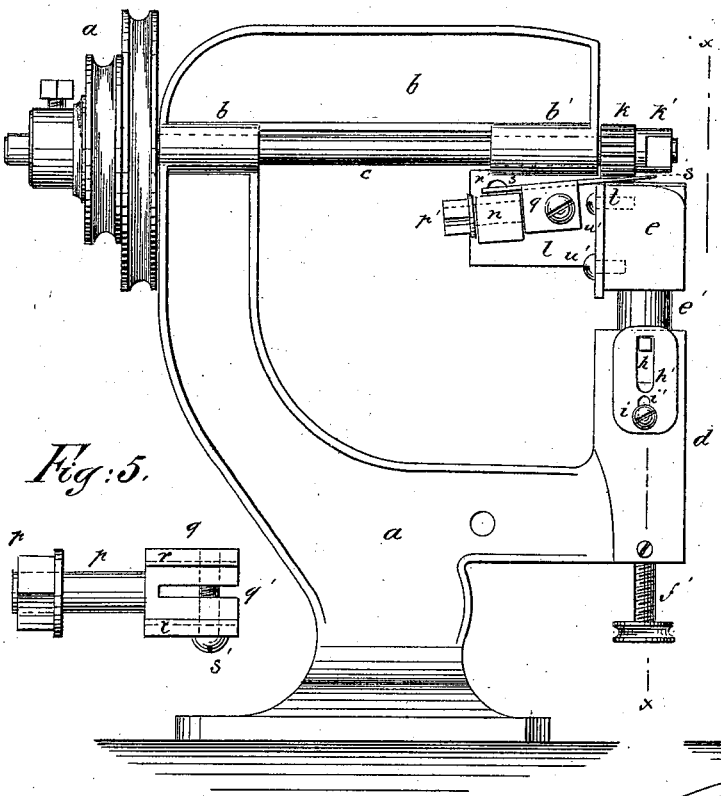


Fig: 2.

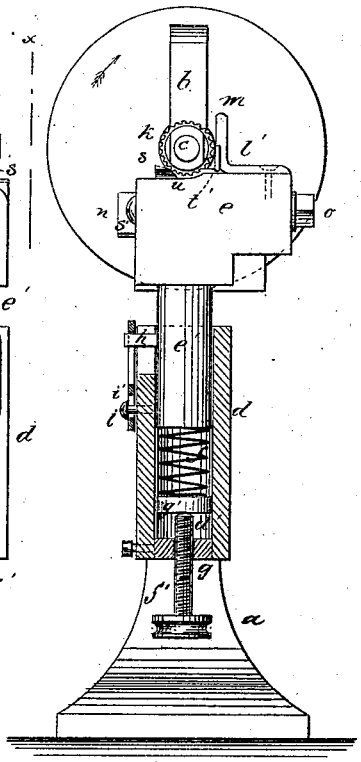


Fig: 5.

Fig: 3.

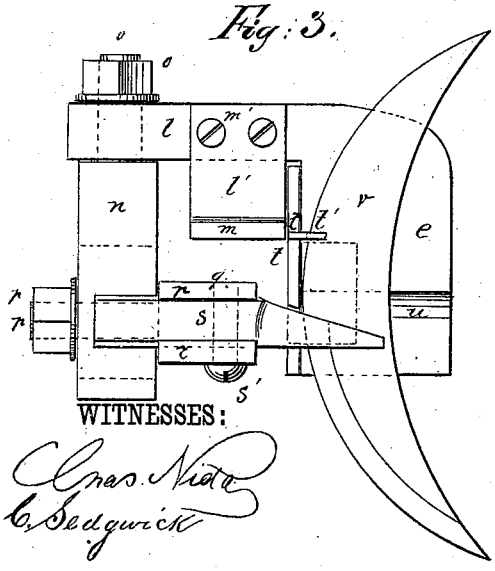
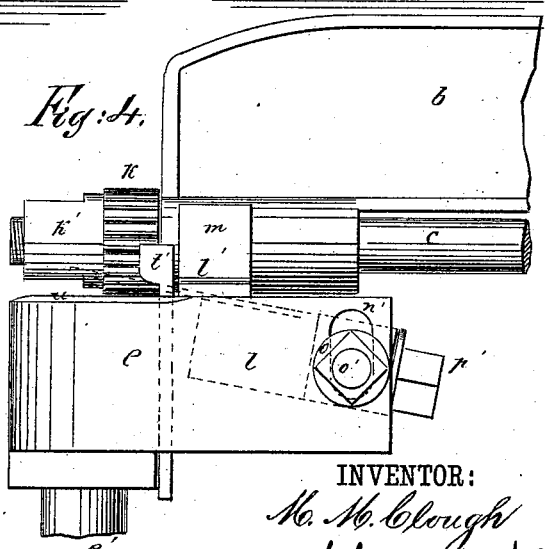


Fig: 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

MORTON M. CLOUGH, OF MARLBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR SKIVING LEATHER.

Specification forming part of Letters Patent No. **208,959,** dated October 15, 1878; application filed August 19, 1878.

To all whom it may concern:

Be it known that I, MORTON M. CLOUGH, of Marlborough, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Leather-Skiving Machine, of which the following is a specification:

My invention relates to machines for skiving or chamfering the edges of leather, particularly counters for boots and shoes.

My invention consists in an adjustable elastic bed, carrying a stationary knife, against which the leather is forced by a feed-roller above the bed.

My invention also consists in certain details of construction hereinafter set forth.

In the accompanying drawings, Figure 1 is a side elevation of my improved machine. Fig. 2 is an end view with the frame in section at the line *x x*. Fig. 3 is a plan view of the bed with the feed-roller removed. Fig. 4 is an elevation of the bed and feed-roller at the side opposite to Fig. 1, and in larger size; and Fig. 5 shows the knife-clamp detached.

Similar letters of reference indicate corresponding parts.

The frame of the machine consists of a base, *a*, of iron, that is to be secured to a table by bolts or screws. *b* is a horizontal arm, cast with the base *a*, and carrying in the bearings *b'* the driving-shaft *c*, that has upon its outer end the cone-pulleys *a'*. *d* is a vertical arm, formed with base *a*, having a circular hole, *d'*, through it. (See Fig. 2.) *e* is the bed on which the leather to be skived rests. The bed *e* is supported at the upper end of arm *d* by its shank *e'*, that is within the hole *d'*, and rests upon a spring, *f*, so as to give an elastic support to bed *e*. The pressure of the spring *f* is regulated by a screw, *f'*, which passes through a plug, *g*, that closes the bottom of hole *d'*, and said screw *f'* bears upon a washer, *g'*, beneath the spring *f*. The extent of upward motion of bed *e* is limited by a pin, *h*, which projects from one side of shank *e'* through a slot in arm *d*, and into a slot in the plate *h'*, that is secured to arm *d* by a screw, *i*. This screw *i* passes through a slot, *i'*, in plate *h'*, so that plate *h'* may be raised and lowered. The pin *h* also prevents the shank *e'* from turning in the hole *d'*.

The upper side or face of bed *e* is beneath the feed-roller *k*, that is upon the end of driving-shaft *c*, and is clamped thereon by a nut, *k'*, or held in any other desired manner. The distance of bed *e* from the roller *k* is regulated by the position of plate *h'*, as described, and the bed may give downward and adjust itself to inequalities in the thickness of the material.

The bed *e* has a right-angle arm, *l*, (see Fig. 3,) that extends parallel with arm *b* of the machine. This arm *l* carries the knife-supporting devices, hereinafter described. *l'* is a flanged plate, attached by screws *m'* to arm *l* in such position that its flange *m* rests against the side of arm *b* on the side from which the leather is fed. The purpose of this plate *l'* is to prevent twisting of the bed *e* upon its shank.

n is an arm, that is held to the arm *l* of bed *e* by a nut, *o*, that screws upon a pin, *o'*, of *n*, which pin *o'* passes through the vertical slot *n'* of arm *l*. The arm *n* extends beneath the shaft *c*, and is slotted lengthwise at its outer end to receive the shank *p* of the knife-clamp *q*. *p'* is a nut at the outer and screw-threaded end of *p*, by which the clamp *q* is held in any desired position in the slot of *n*.

The knife-clamp *q* is slotted lengthwise, as seen at *q'*, and is formed with raised edges *r* upon its upper surface, which edges are undercut to receive the beveled edges of the knife *s*.

The two parts of clamp *q* formed by the slot *q'* may be drawn together to clamp the knife *s* by a screw, *s'*, and the knife is thereby held tightly between the edges *r*, or may be released by loosening the screw *s'*.

The knife *s* extends over the bed *e* behind the feed-roller *k*, and may be adjusted nearer to or farther from said roller by moving the clamp *q* in the slot of arm *n*. The angle of the knife to the bed *e* is varied by turning the arm *n* axially in the slot *n'* of arm *l*, and by the various adjustments permitted by the connections of the knife-supporting devices described the knife can be set to skive the leather at any bevel and to suit any thickness of material. The knife is held rigidly, and moves with the bed when the latter is adjusted or moved downward by the material passing beneath the roller *k*.

t is a guide, secured by screws *u'* to the inner side of bed *e*, and extending above the surface of bed *e*, for the purpose of keeping the

material in line with the roller *k*. *t'* is a projection from *t*, which comes in front of and covers a portion of feed-roller *k*, and serves to protect the leather from injury by the roller *k*.

The surface of bed *e* beneath the feed-roller *k* is cut out in a circular form, as seen at *u*, Fig. 2, so that the surface beneath the knife *s* is slightly lower. This construction permits the feed-roller *k* to take hold upon a larger extent of surface, and the roller *k* is ribbed, as shown, to give it a better hold on the material.

I have shown in Fig. 3 a counter for a boot or shoe, represented by *v* in position upon bed *e* for being skived by the knife *s*. The material is fed to the roller *k*, the said roller being revolved by competent power, and by the roller it is carried forward against the sharp edge of knife *s*. The spring-pressure of the bed *e* acts, in connection with roller *k*, to hold the material firmly, and the said pressure may be regulated as described.

The machine may be used for other material besides leather—such as card-board, which is extensively used for boot-counters.

I do not limit myself to the exact details of construction set forth, as they may be varied without departing from my invention.

I am aware that elastic and grooved beds have been used in leather-skiving machines, and that clamps for holding the knife have been attached to the bed so as to move with it, and capable of being adjusted relatively thereto, and I do not claim such; but

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

1. The combination of the hollow arm *d*, spring *f*, washer *g'*, screw *f'*, and slotted plate *h'* with the pin *h* and the shank *c'* of the bed *e*, substantially as and for the purpose described.

2. The flanged plate *l'*, secured upon the bed *e*, in combination with the arm *b* of the supporting-base *a*, for the purposes set forth, and substantially as described.

3. The clamp *q* and arm *n*, in combination with the arm *l* of the bed *e*, the said parts being connected together for operation, substantially as and for the purposes set forth.

4. The guide *t*, having projection *t'*, in combination with the bed *e* and feed-roll *k*, substantially as and for the purposes set forth.

MORTON M. CLOUGH.

Witnesses:

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JEROME B. GARDNER.