

H. STAIB.
Leather-Finishing Machine.

No. 210,474.

Patented Dec. 3, 1878.

Fig: 1.

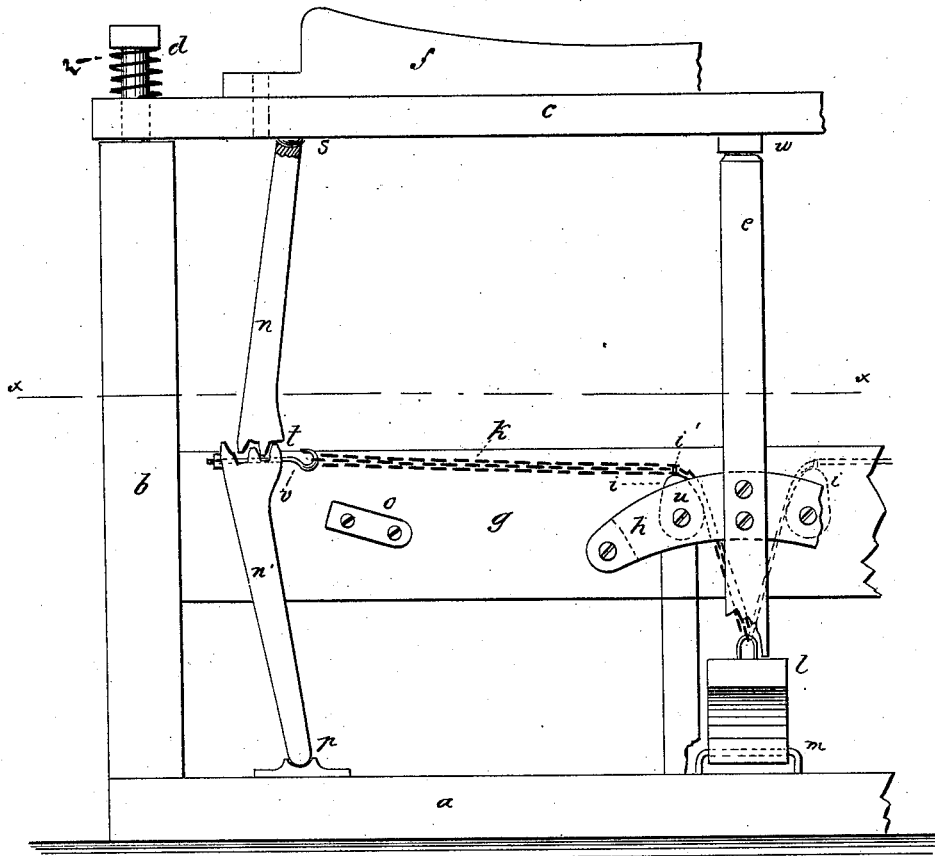
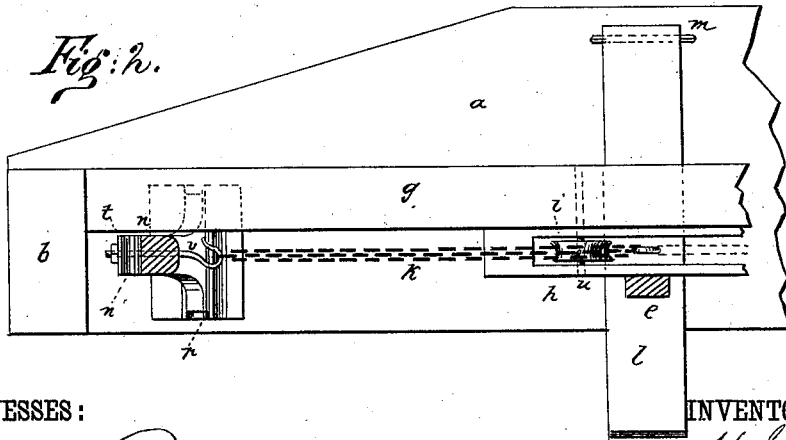


Fig: 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY STAIB, OF BLOSSBURG, PENNSYLVANIA.

IMPROVEMENT IN LEATHER-FINISHING MACHINES.

Specification forming part of Letters Patent No. **210,474**, dated December 3, 1878; application filed June 18, 1878.

To all whom it may concern:

Be it known that I, HENRY STAIB, of Blossburg, in the county of Tioga and State of Pennsylvania, have invented a new and useful Improvement in Leather-Finishing Machines, of which the following is a specification:

In the process of finishing or rolling leather it is usual to employ a table supporting a bed having its upper surface shaped to conform to an arc of a circle, on which bed the leather is laid. Swinging arms carrying rollers in contact with the leather are used to work upon the leather, and pressure is applied to cause the rollers to bear more or less upon the leather by raising the bed to cause under-pressure, or adjusting the rolling device to and from the bed.

The object of my invention is to construct a machine for finishing or rolling leather which will permit the operator to control the pressure and apply the most power when it is needed—that is, at the time of greatest pressure—and also to construct the machine so that it will “let off” and free the leather from the operating-rollers instantaneously.

My device is an under-pressure machine; and the invention consists in connecting the table and bed with toggle-levers and operating the toggle bars or levers by a chain connected to a treadle and passing over an elliptic or cam pulley, to raise the bed vertically and increase the pressure against the rollers. The toggle-levers are connected to the bed by universal joints, which permit the bed to adjust itself to inequalities in the leather and prevent damaging marks upon the leather.

In the drawing, Figure 1 shows a front elevation of one end of my leather-dressing machine, and Fig. 2 is a sectional plan of the same at the line *x x*.

Similar letters of reference indicate corresponding parts.

The rollers for operating upon the leather are not shown, and they, as well as the frame for carrying them and the means for operating the rollers, may be of any desired character. My pressure-bed is adapted for application to finishing-machines now in use, and may be applied without alterations to the machines, or requiring special skill to set it up.

a represents a support or platform for the machine, having at each end a vertical post, *b*.

c is the table, held at its ends upon the post *b*, and kept in place by pins *d* passing through the table *c* into the ends of the post *b*. These pins *d* project above the table *c*, to form guides for the same as it moves up and down on the pins, and spiral springs *r* around the pins *d*, held between the table *c* and a head on the pins, keep the table down upon the post *b*, except when it is raised, as hereinafter described.

g is a rail extending from one post *b* to the other, and connected therewith.

n n' are toggle bars or levers extending from the table *c* to the platform *a*. *n* is connected with the table *c* by a ball-and-socket joint at the under side of the table, as seen at *s*; and the lower end of *n'* is made wide, as seen in Fig. 2, and rounded so as to fit in a round socket, *p*, which forms a step for the lever *n'*, and prevents any twisting of *n* or *n'*. These levers *n* and *n'* are connected together midway between the table *c* and platform *a* by any desired form of toggle-joint. I have them formed with rack-segments *t*, meshing together.

i is an eccentric pulley or roller turning upon a pin, *u*, on the plate *h*, which is attached to the rail *g*. This plate *h* carries two pulleys, *i*, one at each side of the center bar, *e*, and it is to be understood that the table *c* is raised at both ends simultaneously by the duplication of the mechanism shown and described, at one end.

l is a treadle, hung at *m* on the bed *a*, and *k* is a chain from the treadle *l*, passing over the pulley *i*, and connected with the toggle-lever *n'* adjacent to where it meshes with *n* by a hook upon a screw-bolt, *v*, which bolt *v* serves also to adjust the parts.

e is a bar affixed to the rail *g* at the center of the machine, and serving as a center support for the table *c*, and I provide a block, *w*, of elastic material, between *c* and *e*. The lower end of *e* serves as a means for limiting the upward motion of the treadle *l*.

f is the bed, secured upon the table *c*, and having a curved surface, as usual, to conform to the arc in which the finishing-roller moves.

The leather to be finished is laid upon the bed *f*, and pressed into contact with the finishing-roller by bearing down upon the treadle *l*

with the foot. The motion of the treadle draws upon the chains *k*, and causes the toggle-levers at both ends of the table *c* to assume a more vertical position, thereby raising the table *c* squarely upward and with great power. As the chain *k* moves over the cam-pulleys *i* they revolve, and the point of the cam assumes a more horizontal position, and gives greater leverage to the chain in operating the toggles, so that as the bed *f* is pressed nearer to the finishing rollers it may be held with greater power. A pin, *i'*, on the cam-pulley *i*, passing through the chain-links, retains the cam in its proper position, and a stop, *o*, on the rail *g* prevents the levers *n n'* from bending inward. As soon as the treadle *l* is relieved the springs *r* force the bed downward and the toggle-levers assume their normal position. The bed *f* adjusts itself to any inequalities in the leather by the vibrating motion permitted by the universal joint *s* of the toggle *n*; and if more elasticity is desired, a rubber block

may be put under the step *p*, and secured by the lug-screws which hold the step.

I do not limit myself to the particular form of the parts as described, as they may be varied without departing from my invention.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The treadle-lever *l*, chain *k*, and toggles *n n'*, in combination with the bed of a leather-finishing machine, substantially as and for the purposes set forth.

2. In a leather-finishing machine, the combination of toggle-levers *n n'*, chain *k*, cam-pulley *i*, and treadle-lever *l*, all substantially as shown and described, for the purpose specified.

HENRY STAIB.

Witnesses:

WM. GREEN,
B. F. HEBB.