A. Cochran,

Splitting Leather.

No. 113,631. Patented Apr. 11. 1871.

Fig. 1.

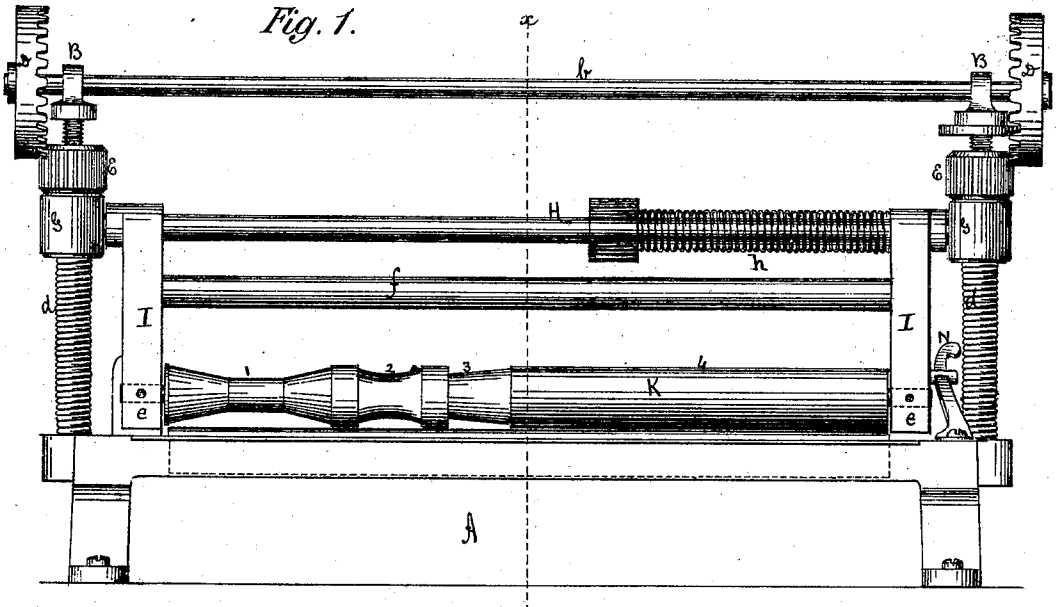
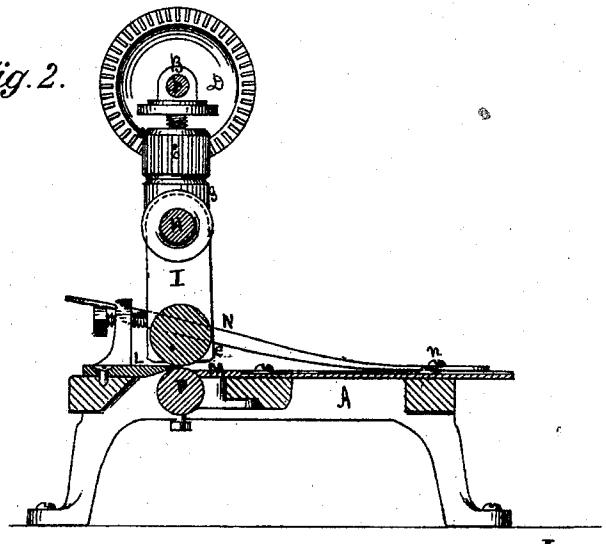


Fig. 3. Fig. 4. Fig. 5.

Fig. 2.



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ALEXANDER COCHRAN, OF ATHENS, OHIO.

Letters Patent No. 113,631, dated April 11, 1871.

IMPROVEMENT IN MACHINES FOR SPLITTING AND SKIVING LEATHER.

The Schedule referred to in these Letters Patent and making part of the same.

I, ALEXANDER COCHRAN, of Athens, in the county of Athens and State of Ohio, have invented an Improvement in Machines for Skiving and Splitting Leather, of which the following is a specification.

General Nature and Objects of the Invention.

My invention relates to the formation of depressions or recesses upon and about the gauge or pressure-roller of a machine for skiving and splitting leather to press the leather passing under the roller unequally against a straight-edged knife, and thus cause said knife to cut or split the leather uniformly along its entire length, so that its transverse section shall present an irregular form the counterpart of that of the recess on the roller under which it has passed; the object of my invention being to cut, with a straight-edged knife, heel-counters, welts, stiffenings, split-lifts, &c., and in fact any form of leather strips having a transverse section, either beveled, more or less, at one or both edges, or rounded or sloping.

Description of the Accompanying Drawing.

Figure 1 is an elevation of a machine for skiving and splitting leather having my invention applied thereto.

Figure 2, a transverse section in the line *x x* of fig. 1.

Figures 3, 4, and 5, transverse sections of strips of leather which have been split by being passed through under the recessed portions of the gauge-roller.

General Description.

I have illustrated my invention in the accompanying drawing as applied to the improved machine for skiving leather described in the United States Letters Patent No. 25,444, dated September 13, 1859, issued to Safford and Chase, although it is equally applicable to all leather-splitting machines having a straight-edged knife.

A is the frame or bed of the machine;

B B, standards, carrying in suitable bearings a horizontal revolving-shaft, *b*, operated by a suitable hand-wheel, C;

D D, cog-wheels on the ends of the shaft *b*; and

E, extended pinions revolving about the standards B B. These standards are threaded exteriorly, as illustrated in the drawing, and the pinions E E are threaded interiorly so as to screw upon said standards. Hence, as the pinions are made to revolve by the revolution of the cog-wheels D D they are carried up or down upon the screw-shafts or standards B B.

G G are loose collars placed upon the standards B B below the pinions E E, and held up against them by coiled springs *d d* encircling the same.

To the sleeves or collars G G are secured the end of a rod, H, from which is suspended a swing-frame, I, the ends *e e* of which are connected by a brace-rod *f*.

This frame I carries the gauge-roller K, which revolves freely in suitable bearings in the end pieces *e e* of the frame.

A powerful spring, *h*, is so coiled upon the rod H, and secured thereto and to the frame I, as to operate to throw up the frame when it is released from a spring catch, N, which otherwise holds it down and keeps the gauge-roller in position over the knife for work, as illustrated in fig. 1.

L, fig. 2, is a straight-edged knife, of the same length as the gauge-roller K, and secured in proper position upon the bed A by means of screws.

M is the spring apron or table of the machine, secured at its rear end to the bed A by screws *n n*.

P is a bar or rest, secured to the front edge of the spring table M, and which springs up under the knife-edge.

I claim no part of the machine as thus far described as of my invention.

My invention consists in forming upon the gauge-roller K one or more concentric recesses, 1 2 3, a diametric longitudinal section whereof, extending from the circumference of the roller to the bottom of the recess, will correspond or coincide with a transverse section of a strip of leather having the form which it is desired to obtain.

1, for instance, represents a recess turned upon the roller K for the purpose of forming strips for the counters of boots and shoes. These strips require both edges to be beveled off, and present, in transverse section, the form illustrated in fig. 3. Hence, a recess is cut circumferentially on the roller to a depth equal to the thickness required in the central portion of the counter, and of a width equal to said central portion thereof, the bottom of the recess being left parallel with the axis of the roller. A bevel is then cut at each end of the recess, sloping from its bottom outwardly, as illustrated in fig. 1 at 1, with an inclination corresponding to that desired in the bevel of the edges of the counters. If, now, a strip of leather, of proper width and thickness, be placed under the recessed portion 1 of the roller K and drawn through against the knife L, the inclined edges of the recess will carry down the edges of the leather so that the knife will split them upon a bevel the counterpart of that on the roller, while the central portion of the leather will pass over the knife without being cut, unless it exceeds a proper uniform thickness, in which case the knife will split or cut it evenly to a uniform thickness throughout.

For producing half-round leather for tugs or for split-lifts I form a recess, 2, having a curved section, as illustrated in fig. 1.

For producing split-lifts or welts in which a transverse section presents a wedge-shape or an incline, from an extreme thickness on one edge to a minimum on the other, I form a circumferential recess of the form illustrated at 3 of fig. 1.

The cross-section of a strip of leather passed under the recess 2 of the roller is illustrated in fig. 4.

The cross-section of a strip of leather passed under the recess 3 of the roller is illustrated in fig. 5.

A portion, 4, of the roller may be left of uniform diameter, for use in splitting and skiving leather in the usual manner, or a recessed roller may be substituted for the ordinary cylindrical roller in any form of splitting or skiving-machine for the purposes of my invention, the two sets of rollers being made detachable and interchangeable for the purpose.

Claim.

I claim as my invention—

In combination with the straight-edged knife of a machine for skiving and splitting leather, a gauge and pressure-roller having one or more circumferential depressions on its surface, each having a radial longitudinal section in form the reverse of that required in the leather strip which it is desired to produce therewith, all substantially as and for the purpose herein set forth.

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