(No Model.)

C. M. KIMBALL.

PROCESS OF TREATING MOROCCO SKINS AND OTHER LEATHER.

No. 381,933. Patented May 1, 1888.

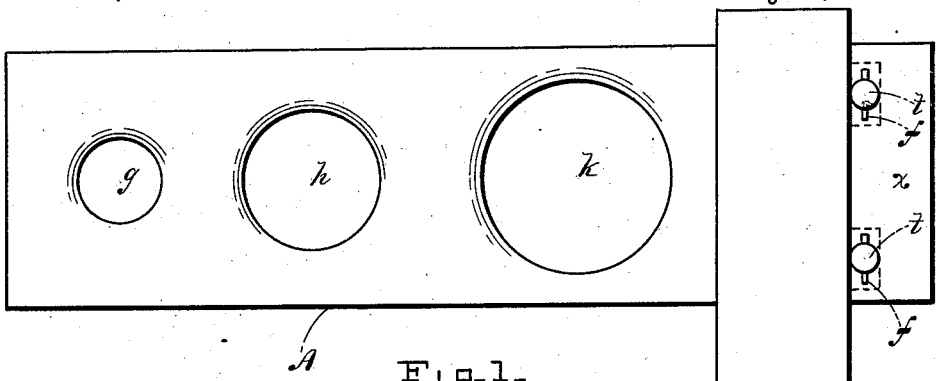


Fig. 1.

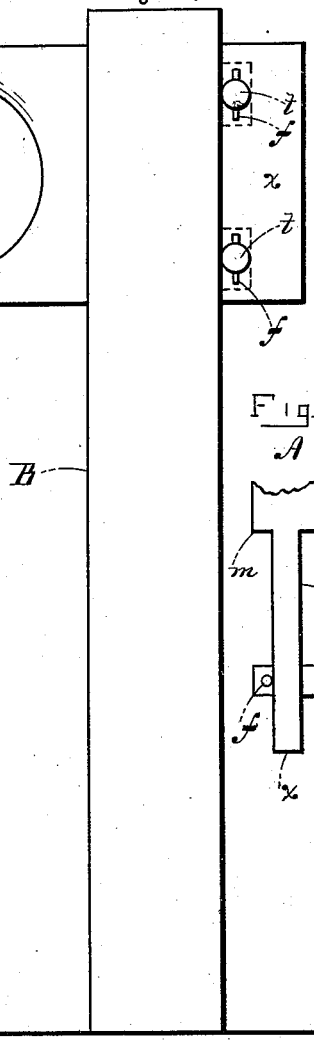
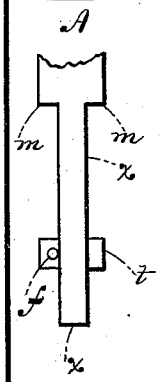


Fig. 5.



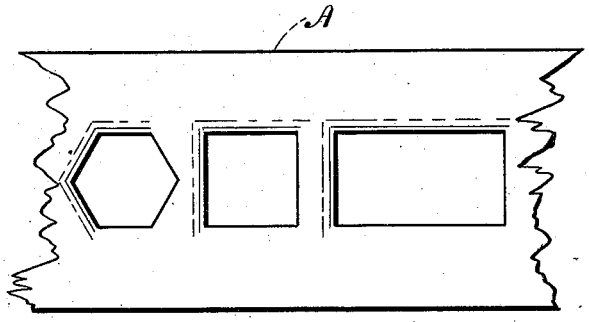
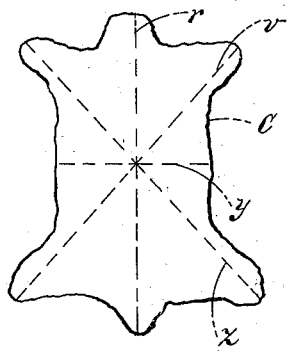


Fig. 2.

Fig. 4.



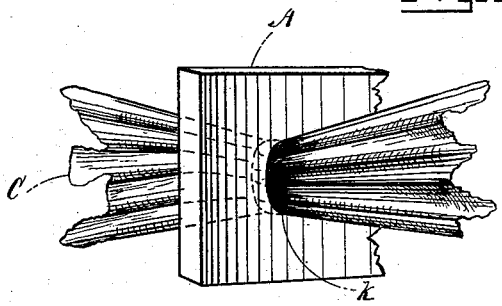


Fig. 3.

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Attys.

UNITED STATES PATENT OFFICE.

CHARLES M. KIMBALL, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND BENJAMIN MILTON KIMBALL, OF SAME PLACE.

PROCESS OF TREATING MOROCCO-SKINS AND OTHER LEATHER.

SPECIFICATION forming part of Letters Patent No. 381,933, dated May 1, 1888.

Application filed December 28, 1887. Serial No. 259,234. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. KIMBALL, of Haverhill, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in the Process of Treating Morocco Skins and other Finished Leather, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved die; Fig. 2, a sectional view showing certain details of construction; Fig. 3, an isometrical perspective view showing the skin on its passage through the die; Fig. 4, a reduced plan view of the skin before it is drawn through the die, and Fig. 5 is a detail top view showing the means of fastening the die in the standards.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to means for breaking up or disintegrating the grain of morocco-skins and other finished leather to meet the requirements of fashion and trade in that respect; and it consists in certain novel features, as hereinafter more fully set forth and claimed, the object being to produce a better article and accomplish the work in a simpler, cheaper, and more effective manner than it is now accomplished by the ordinary methods.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the die, and B the standard or support for the same. The die is preferably composed of hard wood, but may be made of metal or any other suitable material and of any suitable length, width, and thickness, the size of course corresponding with the work to be done. It may also be supported in any suitable manner. In the instance shown the die is provided with a tenon, *x*, and shoulder *m*, the tenon being inserted in a horizontally-arranged mortise formed in the upper portion of a fixed standard, B, and secured by keys *t* and cross-pins *f*. The die is provided with a series of holes, *g h k*, which pass transversely through it from side to side, the holes being preferably round and varying gradually in size, as shown in Fig. 1. They may, however, be oblong, square, or hexagonal, as shown in Fig. 2, or of any other suitable shape or size to qualify the die for properly performing its functions, and one or more holes may be used, in accordance with the requirements of the work.

In carrying out my improvement the skin C is loosely folded or rolled together on the dotted line *r* and drawn through the large hole *k* in the die, after which it is folded successively on the lines *v y z*, and again drawn through said hole at each folding. After being drawn through the large hole *k*, as described, the skin is again folded in like manner and drawn at each folding through the medium-size hole *h*, the process being concluded by again folding and drawing it through the small hole *g*.

If it is found that the grain has been sufficiently disintegrated or broken up by drawing the skin through one of the holes, as described, it will not be necessary to repeat the operation by drawing it through a smaller hole or holes.

It will be understood that the hole in the die through which the skin is drawn should be small enough to render the application of considerable force necessary to pull the skin through it, the strain on the skin stretching it and the die crowding its folds together, thereby imparting to the grain a peculiar and very beautiful finish which cannot be readily produced by any other means within my knowledge.

By folding the skin successively on the lines *r v y z* the grain will, in most instances, be more thoroughly disintegrated than when folded on one line only, although good results may be obtained by folding it continually on the same line and repeatedly drawing it through the die. The outer edges or ends of the hole are rounded or chamfered slightly to prevent them from catching and injuring the skin.

The skin may be drawn through the die alternately from the opposite sides thereof, in-

stead of being passed through from the same side at each folding, if preferred.

By "folding" the skin I do not mean that it is evenly folded or laid in plaits, but merely crowded together at each side of the central folding-line to enable it to be inserted in and drawn through the die.

As I have made the mechanism used in putting the process into practice the subject-matter of another application for Letters Patent, filed December 28, 1887, Serial No. 259,233, I do not claim the same, broadly, herein.

Having thus explained my invention, what I claim is—

1. The improved process of treating morocco and other finished skins herein described, the same consisting, essentially, in forcibly drawing the skin successively through two or more holes in a die, said holes being of different sizes, substantially as described.

2. That improvement in the art of treating morocco and other finished skins which consists, essentially, in forcibly drawing the skin through a hole in a die until the grain is broken or disintegrated, substantially as specified.

3. That improvement in the art of treating morocco and other finished skins which consists, essentially, in forcibly and repeatedly drawing the skin through a hole in a die until the grain is broken or disintegrated, the skin being turned or folded differently between the drawings to present it in different positions to the die, substantially as described.

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Witnesses:
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