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JUSTIN HABERBUSH, JOSEPH BENTZ, AND F. S. VOGEL, OF LANCASTER, PENNSYLVANIA.

Letters Patent No. 87,167, dated February 23, 1869.

IMPROVED MACHINE FOR CUTTING LEATHER STRAPS, &c.

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

To all whom it may concern:

Be it known that we, JUSTIN HABERBUSH, JOSEPH BENTZ, and F. S. VOGEL, of Lancaster, in the county of Lancaster, and State of Pennsylvania, have invented a new and improved Machine for Cutting Leather Straps for Fly-Nets and other purposes; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a vertical transverse section of our improved leather-strap-cutting machine, the plane of section being indicated by the line *z z*, fig. 2.

Figure 2 is a plan or top view of the same.

Figure 3 is a vertical longitudinal section of the same, taken on the plane of the line *y y*, fig. 1.

Figure 4 is a horizontal section of the same, taken on the plane of the line *z z*, fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to obtain a convenient machine for cutting leather into fine strands for fly-nets and other purposes; and

The invention consists of a combination of a rotating clamp for holding and pulling the leather, with a set of revolving cutters, which are adjustable any desired distance apart, to make straps of desired width, and which are fitted into a sliding frame to allow the convenient insertion of the leather to be cut.

A, in the drawing, represents a frame, made of iron or other suitable material.

It consists of a bed-plate, *a*, from which two vertical posts, *b b*, project upward, and two curved arms, *c c*, downward, or to one side.

Upon the bed *a* is fastened a plate, B, which is or may be covered with leather, *d*, or other suitable material, and which is removable, being fitted with its ends into grooves formed in the frame A, as is clearly shown in fig. 3.

Between the posts *b b* is arranged a sliding frame, C, which can be moved up or down at will.

In it are the bearings for a horizontal shaft, D, upon which a suitable number of circular knives, E E, is mounted, the same being held suitable distances apart by means of washers, *e e*, interposed between them.

These cutters, when the frame is lowered, rest upon the plate B, and fit into incisions therein formed to prevent vibrations.

A piece of leather resting upon the plate B, and drawn along, will, by the knives, be cut into straps of the desired width.

When in operation, the frame C is held down by means of a T-shaped lever, F, which is pivoted to a post, *b*, and which fits over a pin, *f*, on the frame C, as shown by black lines in fig. 3.

When the frame C is to be elevated, to insert a new

leather, or to adjust the plate B, it is also held up by the T-shaped lever F, as shown by red lines in fig. 3.

Upon the bed B is arranged an adjustable transverse bar, G, which fits, with its hook-shaped ends, into grooves formed in the front and rear edges of the bed *a*, and which can be moved laterally at will.

Its object is to form a guide for the leather to be cut, if such leather is not as wide as the distance between the posts *b*.

The bar G is then arranged so as to form a guidance on one side of the leather, as shown in fig. 3, and is clamped in the desired position by means of a screw, *g*, shown in fig. 1.

In the ends of the arms *c c* are the bearings of a horizontal shaft, H, which has a crank, *h*, so that it can be turned.

On the shaft H is hung loosely a drum, I, which has a large slot on one side, and two narrow slots, *i i*, besides.

One end of the drum has a flange, *j*, affixed to it, and the other end has an adjustable flange, J, which is fastened, by means of screws, *k*, to the drum, said screws fitting through the slots *i*, as shown in figs. 2 and 4.

The flange J is or should always be adjusted in line with the guide G, so that the cut leather is fitted between the flanges *j* J.

Within the drum I is mounted, on the shaft H, a ring, *l*, from which an arm, *m*, projects, as in fig. 1.

To the end of the arm *m* is pivoted a rod, *n*, which is, at its outer end, pivoted to the inner edge of a plate, L.

M is a curved plate, with projecting ears, *o o*, at the ends, which ears are pivoted, by pins *p*, to the side of the drum, near one edge of the broad slot, as shown in fig. 1.

The end of the plate L has also projecting ears *r*, which are, by means of pins *s*, pivoted to the ears *o* of the plate M.

The plate L is thus not only connected with the shaft H, but also with the plate M.

The outer edges of the plates L M thus form a clamp for holding the leather, as indicated in fig. 1.

When the shaft H is turned in the direction of the arrow in fig. 1, the first tendency will be to draw, by the connections *m n*, the plate L around the pivots *s*, and to thereby force its clamping-edge against that of M. Then, by its connection with the drum, it also revolves the drum, so as to wind the leather around the same.

It will be noticed that the drum is loose on the shaft H, but connected with the same by means of the parts *m n L M*, so that the clamps are invariably closed before the drum is turned, if the shaft is turned in the direction of the arrow.

If turned in the opposite direction, the clamps will first be opened to release the leather.

The leather to be cut into straps is first placed with its end upon the plate B, and is then drawn forward until it can be clamped between the plates L M.

Then the shaft H is turned, so as to pull the leather along, whereby the knives are set in motion to cut it into the straps, said straps being wound around the drum.

They can easily be taken off by opening the clamp, as aforesaid.

The frame C has a backward-projecting horizontal extension, *t*, to hold down the leather.

We claim as new, and desire to secure by Letters Patent—

1. The strap-cutting machine, consisting of the frame A, slide C, rotating cutters E, shaft H, drum I, and clamps L M, all made, combined, and operating substantially as herein shown and described.

2. The clamps L M, when connected with each other by the pins *s*, and with the shaft H by the connecting-rods *m n*, and with the drum I by means of the pins *p*, substantially as set forth, for the purpose specified.

3. Providing the drum I with the fixed flange *i* and with the loose adjustable flange J, substantially as herein shown and described, and for the purpose set forth.

4. The adjustable guide G, when arranged in combination with the adjustable knives E E, substantially as set forth, for the purpose specified.

JUSTIN HABERBUSH.

JOS. BENTZ.

Witnesses:

F. S. VOGEL.

M. HABERBUSH,

JOHN TROST.