Brooks & Sylvester,

Boot-Upper Machine,

No. 48,651, Patented July 11, 1865.

Fig: 2.

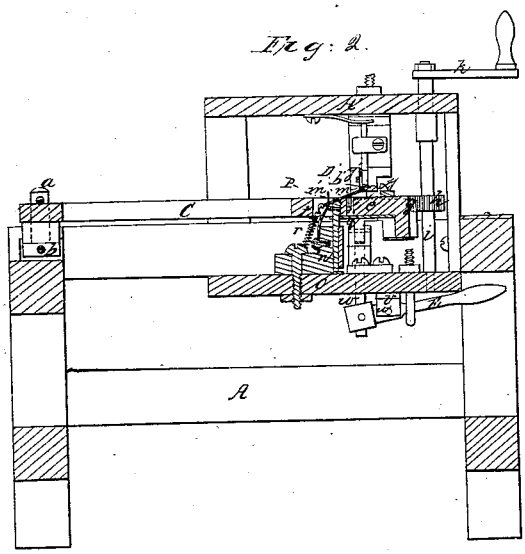

Fig: 3.

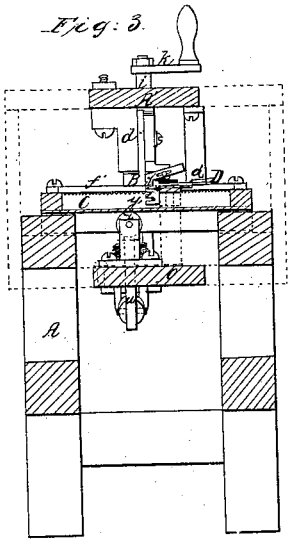

Fig: 1.

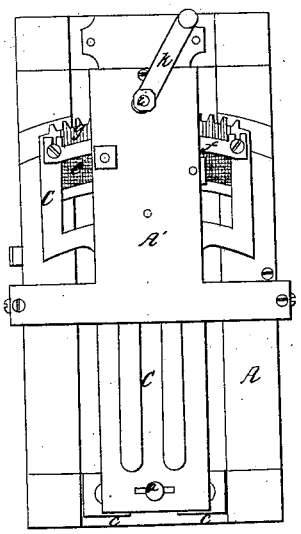

Fig: 4.

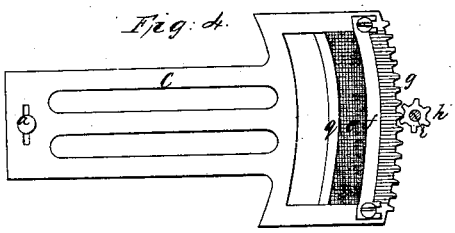

Fig: 6.

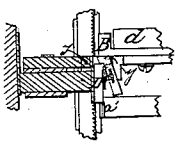

Fig: 5

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UNITED STATES PATENT OFFICE.

JOHN BROOKS AND CHAS. F. SYLVESTER, OF NORTH BRIDGEWATER, MASS.

IMPROVED BOOT-COUNTER MACHINE.

Specification forming part of Letters Patent No. **48,651**, dated July 11, 1865.

To all whom it may concern:

Be it known that we, JOHN BROOKS and CHARLES F. SYLVESTER, of North Bridgewater, in the county of Plymouth and State of Massachusetts, have invented an Improved Machine for Making Boot-Counters; and we do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view; Fig. 2, a longitudinal and vertical section of it, such section being taken through the splitting-knife. Fig. 3 is a transverse and vertical section taken through the lower edge-cutter, and so as to exhibit the parts in front thereof.

The object of this machine is not only to separate a strip of leather into counters by a series of transverse and parallel cuts, each of which is at an inclination with the two opposite flat surfaces of the piece, (the same being in the manner in which a strip of leather is cut into counters by the machine as patented to Aberdeen Keith on September 20, 1864,) but at the same time to trim the two opposite longer edges of each counter; and, furthermore, by our improved machine we are enabled to dispense with rollers for feeding the leather against the knife, and thus avoid the bad effects of such rollers on the counter. Instead of feed-rollers, we employ for supporting the leather and feeding it to knives a movable sector or platform and one or more stationary feet or pressers, which serve to keep the leather in a flat state and do not bend it and otherwise injure it, as do tapering feed-rollers.

In the drawings, A denotes the frame of the machine. On this frame there is arranged the radial sectoral platform C, which is supported by and so as to be capable of turning horizontally on a center pin, *a*, projecting upward from a rocker-shaft, *b*, which is supported in suitable bearings, *c c*, the same being so as to enable the platform to be tilted or moved upward and downward relatively to a stationary foot or presser, B, projecting downward from a bracket, *d*, such bracket being extended down from the upper part of an auxiliary frame, A′, which is bolted to the frame A and arranged as shown in the drawings.

The upper surface of the part *e* of the radial platform C, on which the leather is supported and by which it is moved under the foot, is or may be formed with teeth or prongs, as shown in Fig. 3, and also in Fig. 4, which is a top view of the said platform. There is also a curved gage-bar, *f*, fastened to the said part *e*, or arranged thereon, as shown in Figs. 1 and 4.

The platform C has an arc, *g*, of teeth made on that end of it which is farthest from its center pin, such arc of teeth being made to engage with a pinion, *h*, carried by a vertical shaft, *i*, supported by the auxiliary frame. A crank, *k*, is fixed on the upper end of the said shaft. By laying hold of and turning such crank so as to revolve its shaft the radial platform will be moved laterally on its center pin and underneath the stationary foot and a splitting-knife, D. The said splitting-knife consists of a rectangular plate of steel provided with a cutting-edge or cutter, *l*. (See Fig. 5, which is a top view of the knife.) One edge of the said knife rests against a stationary abutment, *m*, from which a flange, *b′*, projects over the said edge of the knife or cutter, the knife being pressed up to the abutment by a spring, *m′*, supported by a post, *n*, extending up from the lower part, *o*, of the auxiliary frame A′. The knife also rests on an angular supporter, *p*, which slides freely in a vertical direction on the post *n*, and projects over a flange, *q*, forming part of the radial platform and arranged thereon, as shown in Figs. 2 and 4. One or more springs, *r*, extending up from the portion *o* of the frame A′ to a bar, *t*, connected with the splitting-knife, serve to draw such knife in contact with the supporter *p*.

A lever, E, whose fulcrum *u* is supported in a stationary carrier, *v*, is arranged as shown in Fig. 2, and has a pitman, *w*, extending up from its shorter arm, and carrying a friction-roller, *x*, to bear against the under side of the radial platform. By means of the lever the said platform may be moved upward more or less. In moving upward it will cause the splitting-knife to be raised at its free end, or that to which the spring or springs are applied. The inclination of the knife to the platform will thus be varied as the platform may be elevated, the same being in order to properly adjust the cutting-edge of the knife to the leather as the latter may vary in its thickness.

Underneath the splitting-knife there is ar-

ranged a stationary edge-cutter or trimming-knife, *y*, and there is also another such cutter or edge-trimming knife, *y'*, arranged over the splitting-knife and against its inner end. These knives are shown in Fig. 6, which is a transverse or crosswise section taken through the splitting-knife and parts adjacent, so as to exhibit the edge-trimming knives. These latter are for paring the opposite longer edges of each welt while it is in the act of being made or separated from a strip of leather. Were it not for these trimming or paring knives the said edges would be likely to be uneven or more or less ragged. These knives are placed at a distance apart equal to the width of a counter, and one of them cuts on the outside and the other on the other or upper side of the strip.

The main or splitting knife D rests at its back against an auxiliary foot, *a'*, arranged as shown in the drawings.

In using the machine the piece of leather to be cut into counters is first laid on the upper surface of the radial rotary platform C, and with its end against the gage-bar *f*, such platform, prior to the application of the leather to it, having been moved to its rearmost extreme position. Next, the platform by means of the lever E should be moved so as to force the leather up to and in close contact with the foot B, after which the platform should be so moved as to carry the leather against the cutting-edges of the splitting and edge knives, which, while the leather is still further advanced by the platform, will operate so as to cut through it transversely from one edge to the other of it. By making cuts successively in the leather in such manner it will be reduced to counters.

The advantages of our invention or improved machine are not only the saving in stock effected by it, but the forming of the counters with trimmed or smooth curved edges, thus rendering unnecessary any subsequent trimming of the said edges and the waste of stock consequent thereto.

What we claim in the above-described machine as our invention is as follows:

1. The combination and arrangement of the edge-cutters *y y'*, the main cutter or knife D, and mechanism for feeding the strip of leather to such cutters, the same being in order that such strip may not only be separated into counters, but each counter be reduced or trimmed on its opposite longer or curved edges, substantially as specified.

2. The combination of the rotary platform C and its elevating and turning mechanisms with the stationary foot B, the tilting knife D, its stationary abutment *m*, and movable supporter *p*, the whole being arranged and the knife provided with springs, substantially as described.

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Witnesses:
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