

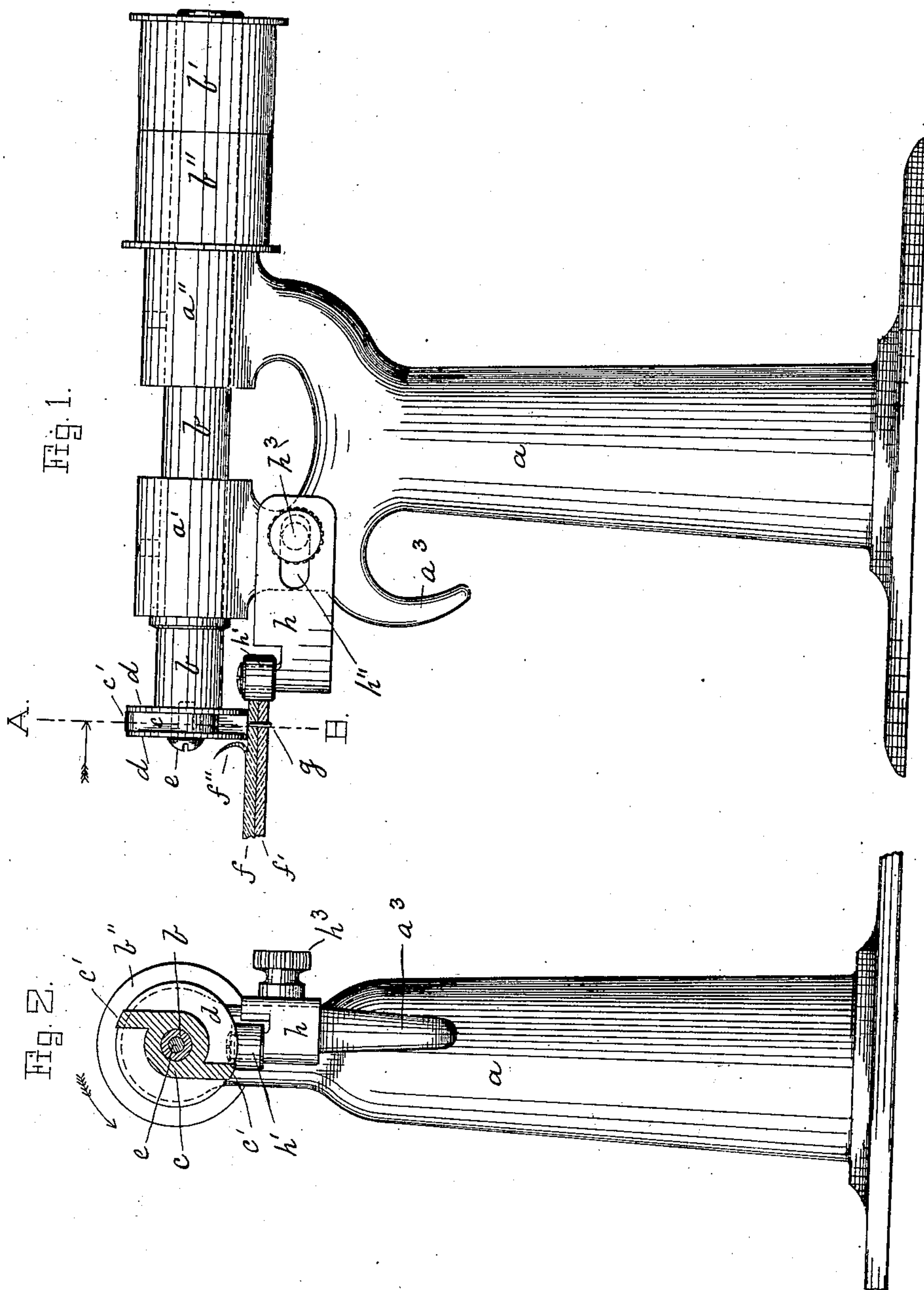
(No Model.)

A. G. WILLIAMS.

MACHINE FOR CUTTING FAIR STITCH LOOPS.

No. 389,866.

Patented Sept. 18, 1888.



Witnesses.

Herbert L. Chapin.  
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Inventor.

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his atty.



# UNITED STATES PATENT OFFICE.

ALLEN G. WILLIAMS, OF EAST BRIDGEWATER, ASSIGNOR OF ONE-HALF TO  
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## MACHINE FOR CUTTING FAIR-STITCH LOOPS.

SPECIFICATION forming part of Letters Patent No. 389,866, dated September 18, 1888.

Application filed February 11, 1888. Serial No. 263,737. (No model.)

*To all whom it may concern:*

Be it known that I, ALLEN G. WILLIAMS, a citizen of the United States, and a resident of East Bridgewater, in the county of Plymouth and State of Massachusetts, have invented new and useful Improvements in Fair-Stitch-Loop Cutters, of which the following, taken in connection with the accompanying drawings, is a specification.

10 This invention relates to improvements in machines for cutting fair-stitch loops on boot and shoe soles, and it is carried out as follows, reference being had to the accompanying drawings, wherein--

15 Figure 1 represents a side elevation of the machine, showing a boot or shoe sole in section below the rotary cutter; and Fig. 2 represents a cross-section on the line A B shown in Fig. 1.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

25 In the art of making boots and shoes it is sometimes customary to unite the outer sole and half-sole or welt by means of a row of stitches outside of the place where the upper joins the outer sole, which row of stitches is for the sake of ornament and not intended to unite such parts together. Such row of stitches is generally termed the "fair-stitch," and such

30 stitch is generally cut away by hand manipulation on the under side of the outer sole and pasted over by the flap cut at the edge of the outer sole, allowing the false or fair stitch to show outside of the edge of the upper.

35 My invention relates to a machine for the purpose of cutting said fair-stitch, and it is carried out as follows:

40 *a* is a frame or standard, having bearings *a'* *a''* in its upper end, in which is journaled the cutter-shaft *b*, which is set in a quick rotary motion by belt-power applied to the pulley *b'*, secured to said shaft.

45 *b''* is a loose pulley on the said shaft *b*, onto which the driving-belt is shifted when the shaft *b* is to be stopped. To the forward end of the shaft *b* is secured the toothed cutter *c*, having two or more circumferential teeth, *c'* *c'*, as shown. The cutter *c* is located on the end of the shaft *b*, between a pair of circular disks or washers, *d d*, and the latter and the said cutter preferably secured to the shaft *b* by means

of the set-screw *e*, or equivalent or well-known device. The teeth *c'* *c'* are made to project slightly beyond the circular edge of the washers, by which arrangement said washers are made to serve so as to limit the depth of cut during the rotation of the cutter and its washers. One or both of the washers *d d* may be held firmly secured to the frame *a* or its bearing *a'* without departing from the spirit of my invention.

60 In Fig. 1, *f* represents the outer sole of a boot or shoe, and *f'* represents the half-sole or welt, shown as held upside down against the cutting device above described.

65 *g* represents the fair-stitch passing through the outer sole and half-sole or welt at or near their outer edges, and *f''* represents the turned-up lip, as usual, for covering up the fair-stitch on the under side of the outer sole after such fair-stitch has been cut.

70 For the purpose of properly guiding the sole during the operation of cutting the fair-stitch, I secure in an adjustable manner to the frame of the machine or one of its bearings the plate *h*, having a vertical spindle in its outer end, on which is loosely journaled the guide-roller *h'*, as shown. The plate *h* has a slotted perforation, *h''*, through which passes the set-screw *h''*, which latter is screwed into the side of the frame, so as to firmly secure said plate *h* to the side of the machine after it has been properly adjusted thereon.

75 During the operation of the machine the operator holds the boot or shoe sole in his hands and presses it upward against the rotary cutter and its washers, while at the same time he holds the edge of the sole against the guide-roller *h'*, as shown in Fig. 1, by which operation the teeth of the rotary cutter cuts the fair-stitch on the face of the outer sole, and after the fair-stitch has been cut in this manner the sole is removed and the lip *f''* is pasted down, in the usual manner. By this means I am able to cut the fair-stitch very evenly, with great speed, and without liability of injuring the sole.

80 *a''* is a finger-hook on the front of the machine, for the operator to take hold of with one of his fingers while guiding the toe portion of the sole during the operation of cutting the fair-stitch.

85 Having thus fully described the nature, con-

struction, and operation of my invention, I wish to secure by Letters Patent, and claim—

1. The fair-stitch-cutting machine, as described, consisting of the rotary cutter-shaft *b*, supported in bearings of the frame or stand-  
ard *a*, and having the toothed cutter *c c'* secured to its end between and combined with the disks or washers *d d*, as and for the purpose set forth.
2. The rotary shaft *b* and its cutter *c c'* and washers *d d*, combined with the adjustable guide-plate *h* and its guide-roller *h'*, as and for the purpose set forth.

3. The rotary shaft *b*, having the cutter *c c'* secured to it between the washers *d d*, in combination with the adjustable guide *h'* and the stationary finger-hook *a'*, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 4th day of February, A. D. 1888.

ALLEN G. WILLIAMS.

Witnesses:

ALBAN ANDRÉN,  
JAS. S. ROGERS.