CHARLES D. BIGELOW.

Machine for Goring Shoes.

No. 127,015. Patented May 21, 1872.

Fig. 1

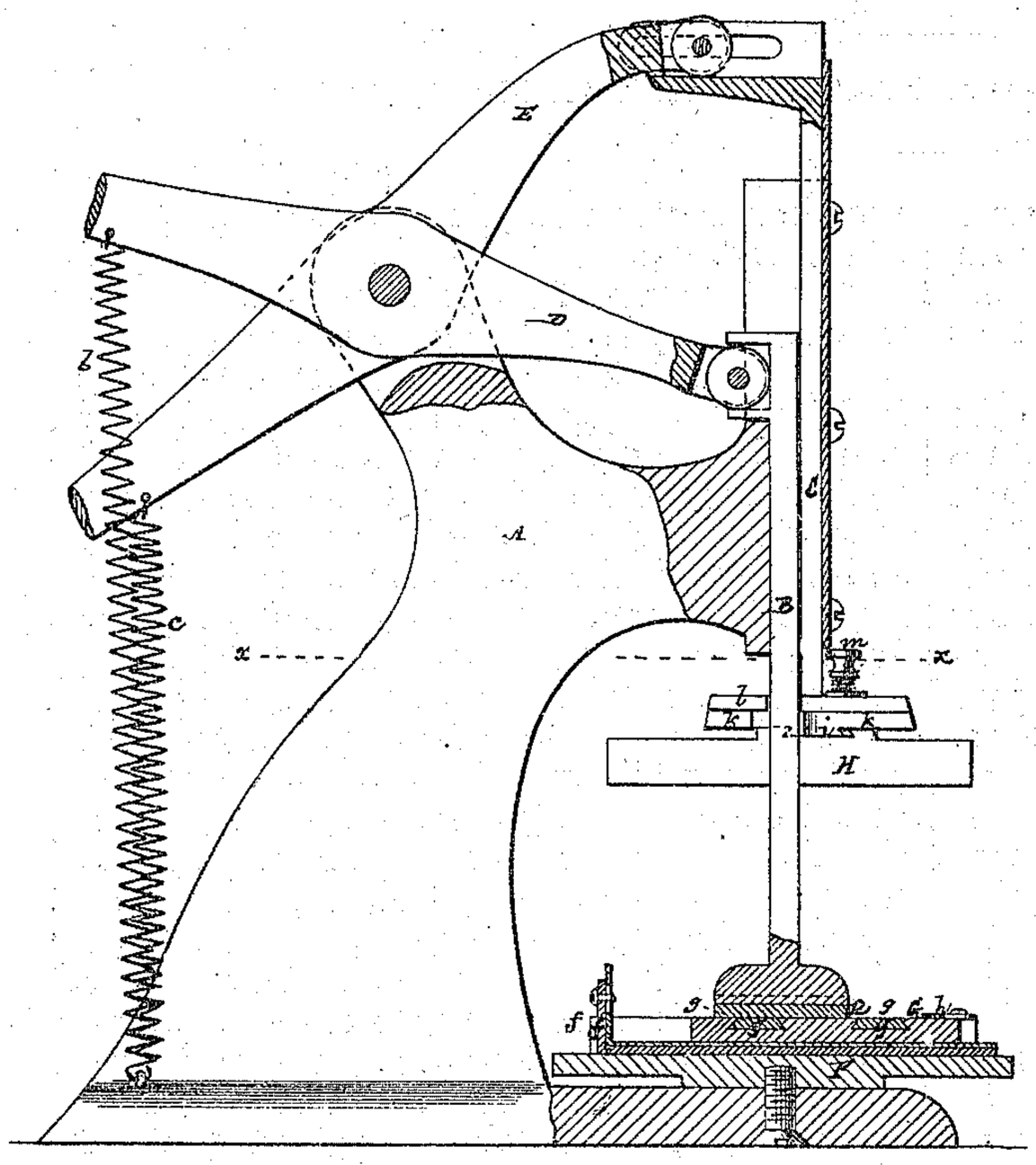


Fig. 2

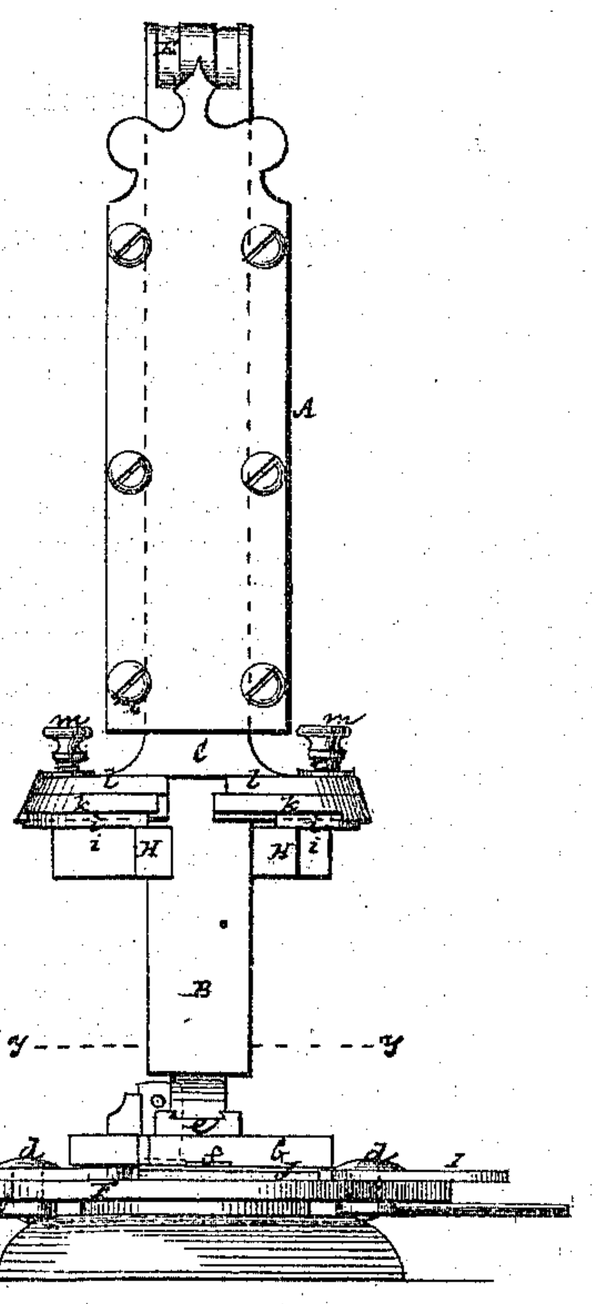


Fig. 3

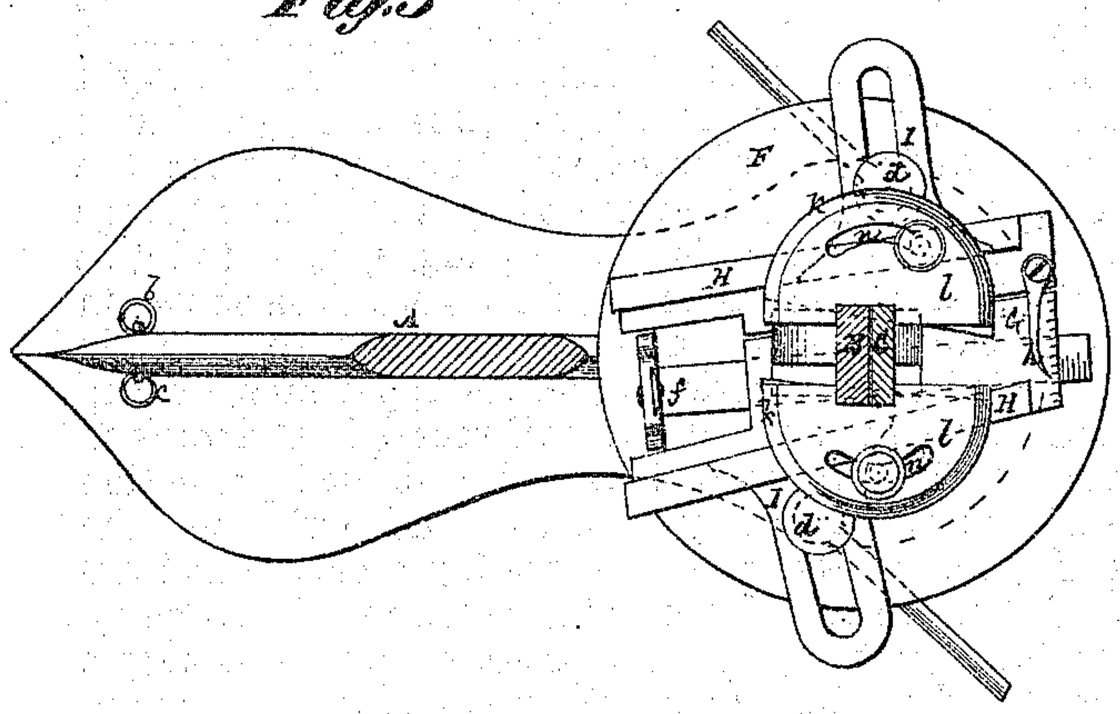
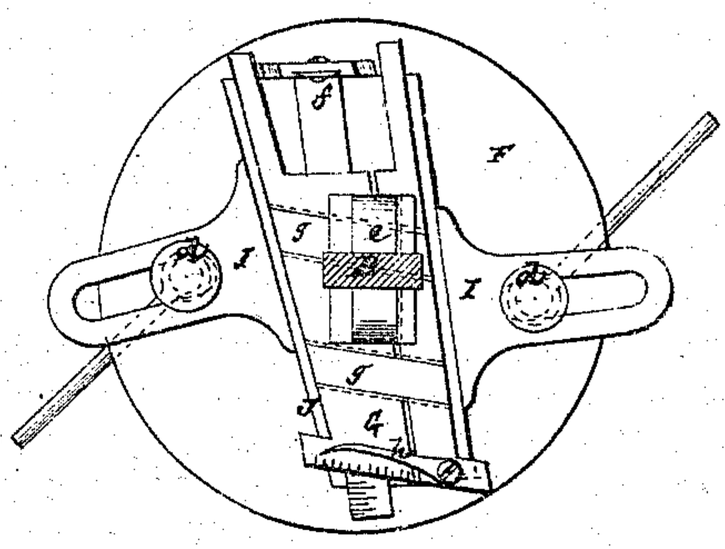


Fig. 4



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CHARLES D. BIGELOW, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR GORING SHOES.

Specification forming part of Letters Patent No. 127,015, dated May 21, 1872.

Specification describing certain Improvements in Goring-Machines for Boots and Shoes, invented by CHARLES D. BIGELOW, of Brooklyn, in the county of Kings and State of New York.

This invention is designed to be used in the manufacture of boots and shoes having gores of elastic material in their sides; and consists in certain novel devices or combination of devices applied to a machine for pasting or uniting the gores to the vamp and counter or other parts. These devices include a guide-pattern constructed to cover the portion of the gore which is intended to be left exposed when applied to the boot or shoe to be made, thus protecting said exposed portion from the paste or cement used to unite the gore with its adjacent parts; likewise, said pattern serving as a guide to place or arrange such parts in proper relation for lapping on or over the margins of the gore between said pattern and gauges, having the gore in between them. This guide-pattern may either be adjustable or fixed, but it is preferred to make it adjustable to suit different widths of gore, and to provide it with a gauge or gauges, substantially as hereinafter described. In the operation of the machine such guide-pattern is brought down upon the gore, and after the parts to be joined to it, previously smeared with paste or cement on their margins, have been set up against the sides of the pattern, clamping or pressing-strips, also preferably made adjustable to suit different widths and angular shapes of gore, are brought down upon the lapped portion of the work on either side of the pattern, and the gore and its adjacent parts firmly pressed together and united. This straight action of the guide-pattern and presser is preferable to an up-and-down and lateral movement of parts; and by means of my improvements not only may uniformity and rapidity of work be secured, but the pitch of gore and set of a shoe be accurately insured.

Figure 1 in the accompanying drawing represents a sectional side elevation of a goring-machine constructed in accordance with the invention; Fig. 2, a front view of the same; Fig. 3, a horizontal section thereof at the line *x x;* and Fig. 4, a horizontal section at the line *y y.*

Similar letters of reference indicate corresponding parts throughout the several figures of the drawing.

A is the frame of the machine. Said frame may be of any suitable construction to carry the operating parts, and to provide, as by slides B C, traveling within guides for a straight or up-and-down separate movement of the guide-pattern and presser, which devices are attached to or connected with the lower ends of said slides. Levers D E may be employed for raising and lowering, in their required order, the guide-pattern and presser, said levers being connected with the slides B C, and being controlled by springs *b c* to throw the pattern and presser up, while treadles attached to the levers are used to bring them down to the work. F is the table on which the work to be done is placed. G is the guide-pattern, and H H the presser. The table F is provided on its top with gauges I I, between which the gore J is placed, said gauges being slotted and adjustable about screw or clamping-pivots *d d*, whereby the gauges may not only be set closer or further apart, but at different angles in relation with each other, to adapt them to different widths, tapers, and pitches or sets of gore. The guide-pattern G is flat on its face and of varying width and tapering form, corresponding with the shape or pitch of the gore, but narrower than the latter, so that when brought down the longitudinal sides or edges of said pattern lie parallel, or thereabout, with the guiding edges of the gauges I I, but at some little distance from the gauges, so as to leave a marginal exposure of the gore J, as shown in Fig. 4. Said pattern is attached to the slide B by a projection, *e*, on its upper face, having a wedge-shaped dovetail recess in it arranged to fit a corresponding wedge-shaped projection on the lower end of the slide, whereby the guide-pattern may be readily removed and another substituted for it, to adapt the machine to right and left hand gores or to different sizes and pitches or sets of gore, or such pattern may be permanently attached to its slide, and different machines having different guide-patterns be employed to operate on different gores. It is preferred, however, to make said pattern removable and to provide it with a rear gauge, *f*, adjustable in direction of the length of the pattern to serve as a stop for the back end of

the gore or of each gore of a series in succession to fit against, to insure the proper disposition of each gore between the gauges I I. It is also desirable in some cases to construct said pattern G adjustable in direction of its width to adapt it to different widths of gore. This may be done by dividing the pattern longitudinally into two parts and connecting the same by oblique dovetailed slides *g g* and regulating the adjustment by an index, *h*. The presser H H consists of two bars or cheek-pieces set to correspond with the longitudinal sides or edges of the guide-pattern G, in close proximity to which, when down, they lie. Each bar of said presser may be made separately adjustable to suit different widths and pitches or sets of gore, or they may be fixtures at the lower end of the slide C to work in connection with a fixed guide-pattern attached to the other slide B. To make them adjustable they may be formed with dovetailed slides *i i* in or on carrying-plates *k k* to vary the distance of the bars apart, and said carrying-plates made capable of circular adjustment against or under upper plates *l l*, attached to the slide C by means of springs and holding-screws *m m*, arranged to fit through curved slots *n n* in the upper plate for the purpose of varying the angular position of the bars relatively with each other and with the guide-pattern.

The operation is the same whether the guide-pattern G and presser H H be adjustable or fixed in relation with their respective slides B C. Said operation is as follows: The gore J, to be joined to the contiguous leathers or portions of the shoe, being properly placed on the table F between the gauges I I, which are made thin to conform to the thickness of the gore, and the guide-pattern G being brought down to bear firmly on the gore, and so as only to expose a marginal surface along either side of the gore, as represented in Fig. 4, the leathers or parts to be joined to the gore being smeared with paste along the margins of their under sides, are slipped or passed up over the gauges I I till their pasted margins meet or strike the sides of the guide-pattern and fit into the angles thereof, and thus serve to direct the adjoining parts uniformly over the exposed margins of the gore and to cover the latter at its portion that is left exposed after the junction has been made, thus protecting said portion from being smeared with paste. The presser or pressing-bars H H are then brought down over the lapping pasted portions of the adjoining parts, pressing them so that they firmly adhere to each other, after which the gore and adjoining parts may be permanently or further secured by stitching.

What is here claimed, and desired to be secured by Letters Patent, is—

1. The guide-pattern G, arranged for operation in relation with the table F and gauges I I, substantially as and for the purposes herein set forth.

2. The combination of the presser or pressing-bars H H with the guide-pattern G, the table F, and the gauges I I, essentially as specified.

3. The attachment, to the guide-pattern G, of an adjustable rear gauge, *f*, substantially as described.

4. The construction of the guide-pattern G in two longitudinal parts or halves, adjustable in relation with each other, essentially as specified.

5. The construction of the presser of separate bars or cheek-pieces H H, adjustable independently of each other to vary their distance apart and angle or set in relation with each other and with the guide-pattern, substantially as described.

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