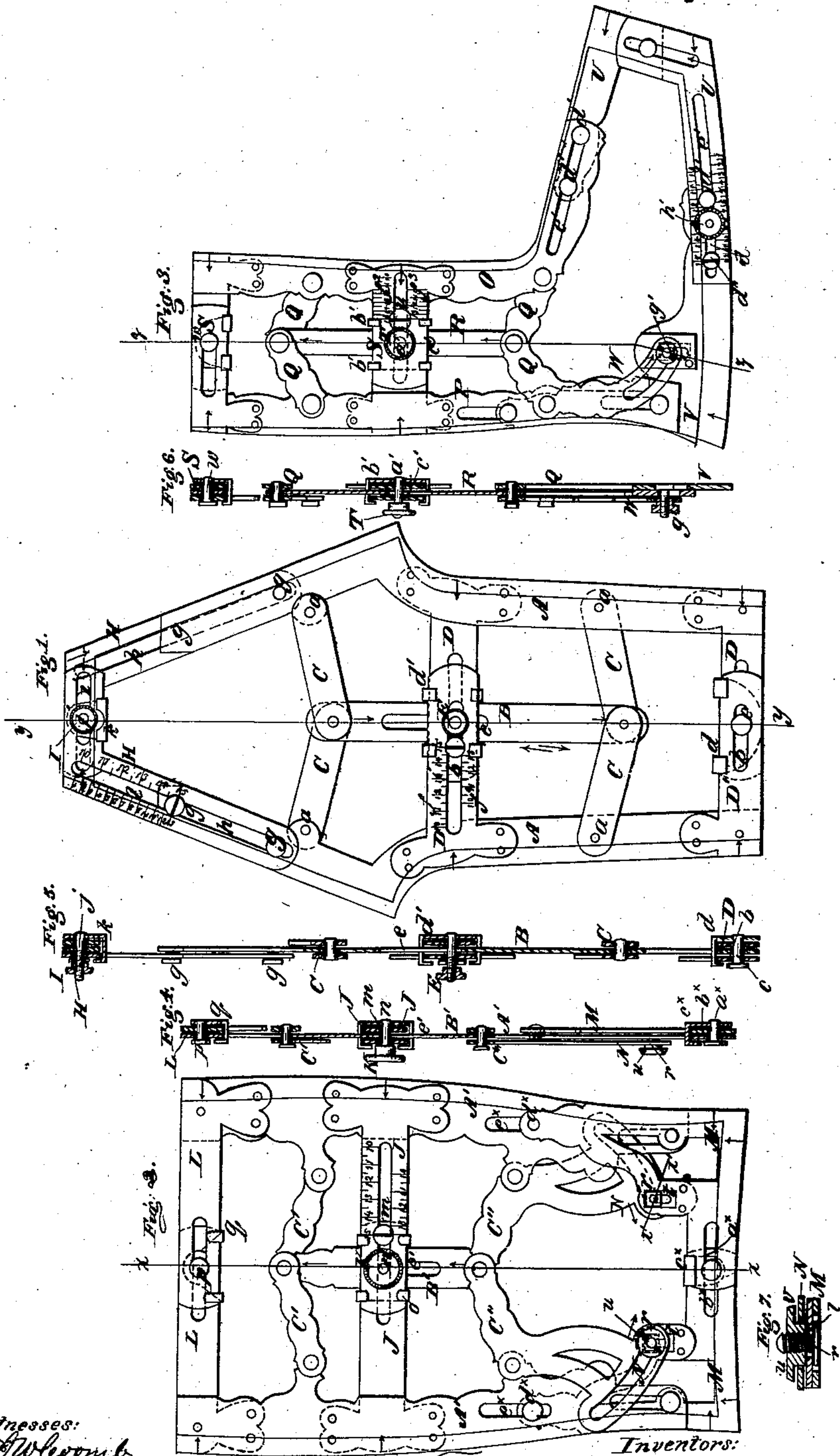


Forrist & Wheeler,

Shoemakers' Tool,

N^o 33,342.

Patented Sep. 24, 1861.



Witnesses:
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UNITED STATES PATENT OFFICE.

ASA FORRIST AND CHARLES ADERLY WHEELER, OF MOUNT VERNON, IOWA,
ASSIGNORS TO THEMSELVES, W. H. GOUDY, AND HENRY ROGERS, OF SAME
PLACE.

IMPROVEMENT IN BOOT-PATTERNS.

Specification forming part of Letters Patent No. 33,342, dated September 24, 1861.

To all whom it may concern:

Be it known that we, ASA FORRIST and CHARLES ADERLY WHEELER, both of Mount Vernon, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Extension Boot-Patterns; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a face view of the blocking-pattern; Fig. 2, a face view of the back pattern; Fig. 3, a face view of the front pattern; Fig. 4, a section of Fig. 2, taken on the line $x x$; Fig. 5, a section of Fig. 1, taken in the line $y y$; Fig. 6, a section of Fig. 3, taken in the line $z z$; and Fig. 7, a section of Fig. 2, taken in the line $x' x'$.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improvement in boot-patterns, which are so constructed as to be capable of being extended or expanded and contracted, and thereby rendered available for cutting out boot-leather of any and every required size.

The object of the invention is to obtain a set of patterns which may be more readily adjusted and in a more exact manner than those previously constructed and arranged, and also readily adapted for cutting out stock for both coarse and fine boots.

To enable those skilled in the art to fully understand and construct our invention, we will proceed to describe it.

A A, Fig. 1, represent the two side pieces of the blocking-pattern, the outer edges of which are made of a shape corresponding to any desired form for the front of a boot previous to crimping. The form of the inner edges of the side pieces is immaterial, so long as the interior of the pattern is left sufficiently open to enable the operator to see as much as possible of the leather included within the pattern, and thereby enable him to cut the stock economically and judiciously, and so as to avoid blemishes and imperfections, which would injure the manufactured article.

B is a sliding strip, which connects parallel arms C C C C, said strip being movable in

the direction indicated by the arrows 1. The arms C are attached to the side pieces A A by pivots a to keep the side pieces parallel with each other as the pattern is expanded or contracted to the required size.

D D D' D' are traverse pieces, which are riveted to the side pieces, as shown at a . These traverse pieces overlap and extend the whole width of the pattern when the latter is contracted to its smallest size, and they have slots b cut in them longitudinally, and through the slots of D' a button or pin c passes, said button or pin being riveted in a clasp d for the purpose of holding the pattern together at the top and at the same time allow an easy contraction and expansion of the same.

E is a nut which is fitted on a screw that passes through the slots b of the traverse pieces D D and also through a slot e in the sliding strip B, said screw being riveted in a clasp d' , which embraces the traverse pieces D D. By means of this nut E the pattern is fastened or secured when adjusted as desired. On one of the traverse pieces D two scales $f f'$ are made as guides for adjusting the pattern. These scales $f f'$ are numbered according to one half of the heel measure, one half of such measurement being indicated on this and the other half on the back pattern hereinafter described, so that when the pieces D are set to the number 10, for instance, and the back pattern to the same number the two parts of a boot may be cut from said patterns, which when made up will be ten inches through the heel. The scale f is for fine and the scale f' for coarse boots, it being proper to make that difference in the size of the heel and leg, while the instep is the same in both cases, owing to the shank of the coarse boot being made wider across the bottom than the shank of a fine boot.

H H are adjustable toe-pieces, which are movable in a longitudinal direction independent of the other parts of the pattern, said toe pieces being kept parallel with the side pieces A A by buttons g , passing through guide-slots h . The toe-pieces also have guide-slots i cut through them to allow them to expand laterally, a screw j passing through the latter-named slots, said screw being riveted in a clamp k and having a nut I upon it.

The object of the independent adjustable toe-pieces H H is to adapt the pattern to cutting any desired length of foot with any given size of leg or heel. The scale shown at *l* is numbered according to the divisions on the "size-stick." By means of the nut I the toe-pieces H may be fastened or secured when adjusted as described.

The back pattern shown in Figs. 2 and 4 has some parts which are common to the blocking-pattern just described. The side pieces A' A' are made to conform to any desired shape for cutting the back of a boot; but they are made as narrow as possible to economize in material.

C' C' C'' C'' are arms pivoted to the side pieces A' and connected at their inner ends to a sliding strip B', which has a longitudinal slot *e'* made in it, through which and slots *m* in traverse pieces J J a screw *n* passes, said screw being riveted in a clasp *o*, and having a nut K placed on it for fastening the pattern when adjusted as desired. The side pieces A' A' are connected at one end by traverse pieces L L, which are slotted longitudinally, and have a button or pin *p* fitted in the slots, said button or pin being riveted in a clasp *q*.

The parts above described as forming portions of the back measure correspond to those described in the blocking-pattern. The following-described parts, however, are different.

M M are movable counter-pieces, which are made to extend automatically by means of slotted cams N N, which may be described as being continuations of the pair of arms C' C''. These cams N are fitted on bolts *r*, attached to the counter-pieces. The object of these counter-pieces is to lengthen the "spring" in the side seams proportionably as the patterns are enlarged through the heel and leg, thereby retaining the proper shape through all the different sizes. The bolts *r* are movable or adjustable in short slots *t*, and are secured in their places by nuts *u*. The nuts are constructed with a flange, as shown at *v* in Fig. 7, so that when the nuts are tightened to hold the bolts firmly in their places the cams can work freely on the bolts. The object of these movable bolts *r*, slots *t*, and nuts *u* is this: By loosening the bolts and then extending the patterns to "10" on the scale *f'* the counter-pieces will not be extended by the cams N N, thus keeping the spring the same as though the change had not been made, which changes the proportion of the pattern, so as to adapt it to cutting a coarse boot. By again tightening the bolts *r* the cams N N will throw down the counter-pieces the same as before. These counter-pieces are connected by a button *a*^x, working in slots *b*^x, the button being riveted in a

clasp *c*^x, and the counter-pieces are connected to the side pieces A' by buttons *d*^x, working in slots *e*^x.

The front pattern (shown in Figs. 3 and 6) also contains parts common to the two previously-described patterns. The front piece O is made to conform at its outer edge to the front and "instep" curve of the leather after it has been "crimped" and folded together, while the piece P is made in such shape as may be desired to match the back pattern along the side seams, both being made narrow to save material in making the patterns. The two pieces O P are connected by arms Q Q Q Q, having a slide-strip R attached, and said pieces O P are provided with traverse pieces S S', through which buttons or pins *w* pass. A screw *a'*, which is riveted in a clasp *b'*, passes through a slot *c'* in the strip R, and has a nut T on it for fastening the clamp in the desired position. These parts are common to all the patterns.

U U are toe-pieces, which are attached, respectively, to a shank V and to the lower part of the piece O by buttons *d'*, passing through guide-slots *e' e'*. The use of these toe-pieces are the same as those described in the blocking-pattern. The scales *f*² *f*³ are divided into one-fourth inches, the leather being doubled when this pattern is used. One-fourth inch on this pattern and one-half inch on the back pattern give one inch through the heel and leg. These patterns may be made to any shape on their outer edges that may be thought proper by those manufacturing them. The shank-piece V, it will be perceived, is moved downward automatically by means of a slotted cam W, working on an adjustable bolt *g'*. The toe-pieces U U may be also adjusted independently of the pieces O P and are fastened by a nut *h'*.

We are aware that extension or adjustable boot-patterns have been previously used, and we do not claim such device irrespective of the construction and arrangement herein shown and described; but

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

The connecting of the pieces A A O P of the several patterns by means of the parallel arms C C' C'' Q, attached to sliding strips B B' R, in connection with the traverse guide-pieces D D' L S S', toe-pieces H, and counter-pieces M, the latter-named parts being arranged and applied to their respective patterns, as shown, the whole forming a new and improved combination of patterns, for the purpose specified.

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