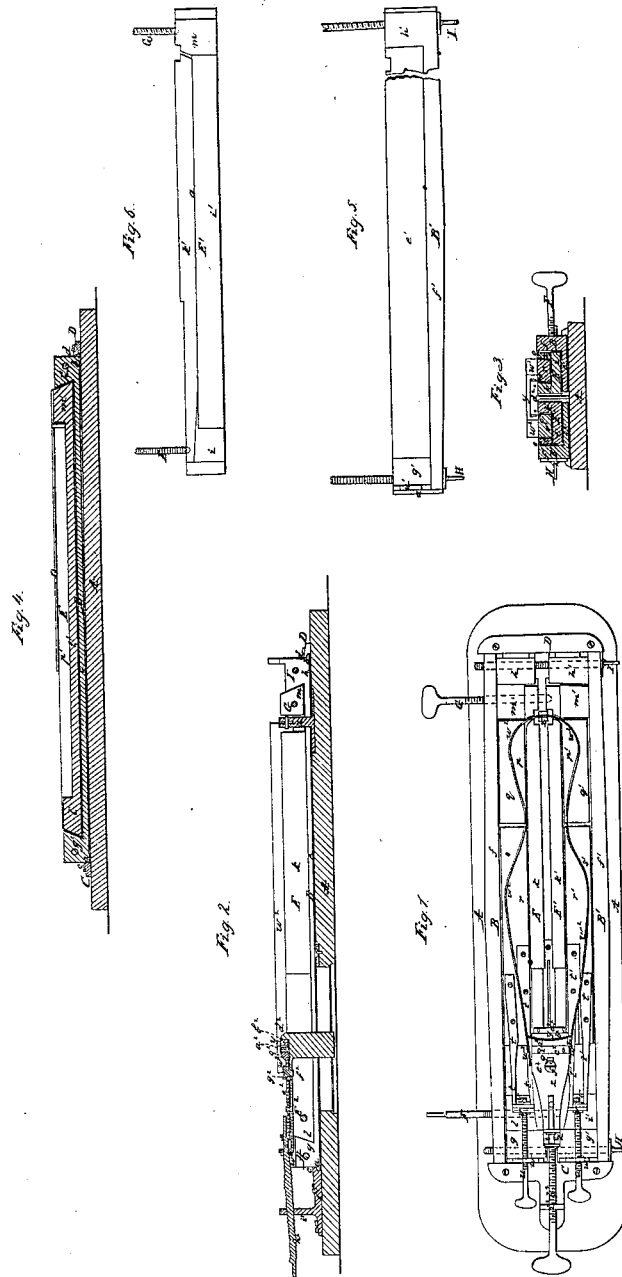


A. D. Boynton,
Shoe-Sole Machine,

N^o 6,444,

Patented May 8, 1849.



UNITED STATES PATENT OFFICE.

ABRAM D. BOYNTON, OF HAVERHILL, MASSACHUSETTS.

MACHINERY FOR CUTTING SOLES OF BOOTS AND SHOES.

Specification of Letters Patent No. 6,444, dated May 8, 1849.

To all whom it may concern:

Be it known that I, ABRAHAM D. BOYNTON, of Haverhill, in the county of Essex and State of Massachusetts, have invented
5 a new or Improved Machine for Cutting Soles for Shoes or Boots from Leather or other Suitable Material; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and
10 references thereof.

Of the said drawings Figure 1, denotes a top view of my improved sole cutting machine. Fig. 2, a central longitudinal and
15 vertical section of it. Fig. 3, a transverse vertical and central section. Fig. 4, is a longitudinal vertical and central section of one of the movable series of lateral frames and the tablet or board on which the same
20 are supported.

In the above A, exhibits the tablet or board which sustains the mechanism. Two iron or metallic frames B, B', are placed on the said board, and sustained thereon by two
25 projecting ledges a, b, Fig. 4, from each one, being made to pass respectively underneath the overlapping projections c, d, of two guides C, D, disposed on and fixed to the board or base A, as seen in the drawings.

Fig. 5, is a top view of one of the frames B, B', as removed from the machine. Fig. 6, is a similar view of one of the metallic frames E, E', which rest and move respectively on the said frames B, B'. Each of the said
35 frames is made of a bottom plate, one vertical side, and two end pieces or solid ends e, e', being the bottom plates of the frames B, B', f, f', their vertical sides, g, g', h, h', their ends, while i, i', are the horizontal bottom plates of the frames E, E', k, k', their side plates, and l, l', m, m' their ends, the same being arranged as seen in the drawings. The outer sides of the ends of each of the frames E, E', are beveled down or inclined,
45 and made to pass under counter levels of the inner sides of the ends of the frame B or B', on which it may rest, the bottom plates of the two frames E, E', being made simply to rest on the bottom plates of the two frames
50 B, B'. A projecting flange or ledge o, is cast or made on the inner side and upper edge of each vertical side of the frames B, B', as seen in section in Fig. 3.

Two thumb screws F, G, are made to pass
55 through holes made through the side of the

frame B, and to screw respectively into and through the ends of the frame E, and against the ends of the frame E'. Two other thumb screws H, I, are made to pass through the ends of the frame B', and be screwed respectively into the ends of the frame B.
60

The former two screws are forcing screws while the latter are drawing screws, that is to say while the two screws F, G, serve to force the two frames B and E, away from
65 the two frames B', and E' the other two screws can be made to operate so as to draw them together.

Within the space formed between the two upright sides of the two frames B, E, four
70 pieces of wood or other proper material (p, q, r, s,) shaped as seen in the drawings, are placed. There are also four similar pieces p', q', r', s', disposed in the space formed between the corresponding sides of the
75 frames B', E'. The two pieces r, s, as well as the two pieces r', s', are respectively connected to two rods t, t, or t', t', which are forked and bent at right angles at their outer ends, and made to clasp one end of a thumb
80 screw u, or u', having two collars v, v, fixed upon it, as seen in Fig. 1. The said thumb screw is made to pass and screw through an upright ear or projection w, or w', fixed to the frame B, or B', as seen in the drawings.
85 Each of the screws u, or u', is made to operate in such manner as either to draw its two pieces r, s, or r' s', away from the two pieces p, q or p' q', or to force them toward the same, as occasion may require.
90

A long and thin strip of steel w², whose upper edge is made sharp so as to cut like a knife is bent around and laid or inserted between the pieces p, q, r, s, p' q', r' s', as seen
95 in the drawings, and when so bent and placed, it approximately takes the band or shape of the exterior edge of a sole. The heel or middle part of the said strip of steel or knife w², is supported in a notch made in a piece of metal x, which rises vertically
100 from and is firmly fixed to the tablet or base board A.

A small curved vertical knife y, is made to extend transversely between the two ends of the knife w², and is fixed to a movable frame
105 z, by being inserted between two blocks a², b², which are held in position between and by two jaws c², d², one of said jaws (c²) being made to extend upward from the frame h, and the other from a slide plate e², placed
110

on the upper surface of the frame z , and fixed to the same by a set screw f^2 , which passes through a slot g^2 , (made through the plate e^2 ;) and is screwed into the frame z .
 5 The said frame z , is moved longitudinally either in one direction or the opposite by means of a screw h^2 , screwed through a stud i^2 , which is made to project upward from the tablet A.
 10 By means of the contrivances above described for holding the cutting knives, the long knife w^2 , may be varied in its form so as to cut what is termed a straight sole of any desirable width or length, the distance
 15 of the curves of the ball of the sole, from the extremity of the heel of it, can also be adjusted, or the two blocks or pieces r , s , may be drawn away at a greater distance from the pieces or blocks p , q , than the two
 20 pieces r , s , are from the pieces p' , q' , and vice versa, whereby the cutting knife w^2 , may be so changed in form as to be made to cut what are termed right and left soles, the
 25 cutting operation whether a straight or a right or left sole is formed, being carried on by pressing the leather down upon the edges of the knives, or the knives down upon

said leather in any convenient manner or by any proper means.

What I claim as my invention is as follows, that is to say—

1. I claim the combination of the four frames B, B', E, E', and the moving toe knife frame, for receiving and holding the shaping blocks of the cutting knives, the said
 35 frames being connected and operated by screws in manner and for the purpose as above specified.

2. I also claim the combination of two sets p , q , and r , s , or p' , q' , r' , s' , of holding and
 40 shaping blocks, operated as above specified, and whether used on either or both sides of the machine and for the purpose of shaping the knife w^2 , so as to cut a right or left sole, of what are termed "rights and lefts," all
 45 as above set forth.

In testimony whereof I have hereto set my signature this twenty seventh day of May A D 1848.

ABRM. D. BOYNTON.

Witnesses:

E. H. SAFFORD,
 E. G. WOODWARD.