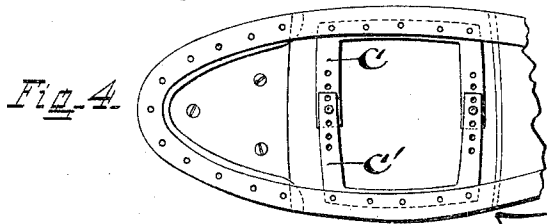
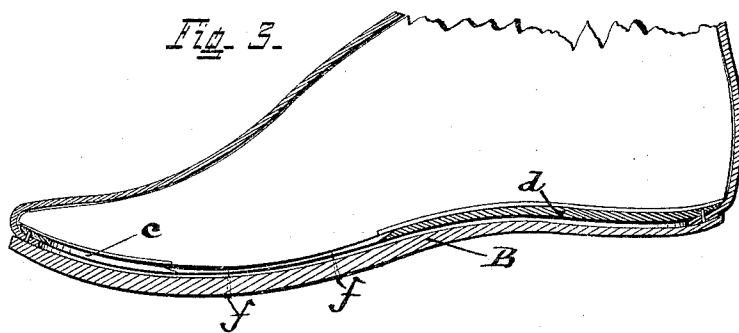
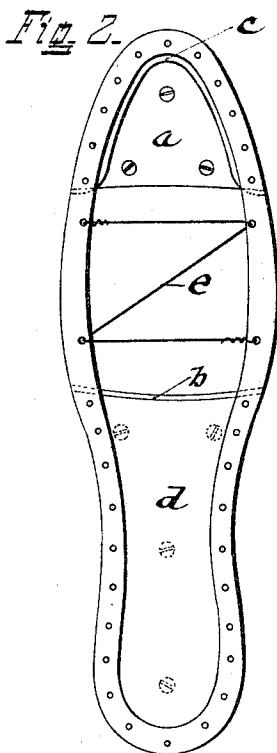
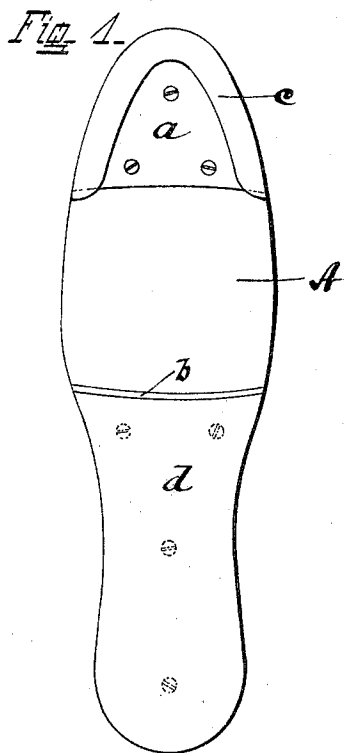


(No Model.)

F. KEARNEY.
MANUFACTURE OF SHOES.

No. 286,204.

Patented Oct. 9, 1883.



Attest
Carl Spengel,
Notary, Hamilton,

Inventor

Frank Kearney
by Heloise A. A. A.

UNITED STATES PATENT OFFICE.

FRANK KEARNEY, OF CINCINNATI, OHIO, ASSIGNOR OF ONE-TENTH TO
LEWIS M. HOSEA, OF SAME PLACE.

MANUFACTURE OF SHOES.

SPECIFICATION forming part of Letters Patent No. 283,204, dated October 9, 1882.

Application filed June 12, 1883. (No model.)

To all whom it may concern:

Be it known that I, FRANK KEARNEY, a citizen of the United States, residing at Cincinnati, Ohio, have invented new and useful Improvements in the Manufacture of Shoes, of which the following is a specification.

My invention relates to the manufacture of shoes, its object being the production of a machine-sewed shoe in which the upper or vamp is sewed directly to the outer sole without the intervention of an insole, except at the toe and shank, as hereinafter described, thus leaving the shoe flexible and durable, and at the same time preserving its proper stiffness and form at the shank and toe.

My invention consists in the shoe so constituted, and in the method of and apparatus for its manufacture, as herein more fully set forth.

Drawings illustrating my invention are attached hereto, in which Figure 1 represents the bottom face of a last, showing the toe-piece and shank-piece applied thereto preparatory to lasting the "upper." Fig. 2 is a similar view after the upper has been placed in position and its edges drawn over and lasted preparatory to the application of the outer sole. Fig. 3 is a longitudinal vertical section through the upper and the outer sole and insole pieces in position for the sewing operation; and Fig. 4, a partial face view similar to Fig. 2, showing a form of adjustable connecting-piece for the edges of the upper, used across the ball of the foot as an alternative means for such connection.

The parts referred to herein are designated on the drawings by letters of reference.

A in the drawings is a last of the ordinary form, which may be entirely faced upon its lower surface with sheet-iron, in the usual manner, or preferably faced at the toe and heel with plates *a b*, as shown.

In preparing the shoe a toe-piece, *c*, of thin insole leather, formed to the proper contour of the toe of the shoe and extending back only a limited distance, and a shank-piece, *d*, of similar material, covering the heel of the last and extending forward only over the shank, are first provided and placed upon the last, as shown in Fig. 1. Then the upper is placed

in position and its edges drawn over upon and lasted to the insole-pieces *c d* by nails, in the usual manner, as indicated in Fig. 2, leaving the space occupied by the ball of the foot without an insole. The opposite edges of the upper at this portion may be secured in position for the application of the outer sole, and the sewing of the vamp to the latter by any suitable means. The toe-piece and shank-piece, being formed to the contour of the sole, preserve the general form and position of the upper, leaving but little if any strain upon the upper at the unattached central portion at the ball of the foot. The opposite edges of the upper, therefore, may be held in position by a few stitches of thread, *e*, as indicated in Fig. 2; or when the sole *B* is applied, as shown in Fig. 3, short tacks *ff* may be driven through from the outside into the upper, for temporary holding purposes, and afterward withdrawn. I prefer, however, to use two narrow plates of metal, each approximating in form a rectangle cut in at one side, as shown at *C C'*, Fig. 4. The longer side or base of each of these pieces is provided with a series of perforations along the outer edge, and the short arms with a similar series of perforations extending inward from the ends. The latter perforations register when the pieces *C C'* are placed together, with their ends overlapping, as shown in the figure, and by the insertion of a small nail through corresponding perforations these pieces are held together adjustably.

In use the plates *C C'* are placed upon the last at the central portion referred to, being secured together by lasting-nails inserted through corresponding perforations from below, the heads of the nails resting upon the face of the last and projecting upward. The plates being adjusted in such position upon the last that the edge of the upper at each side of the last will lap over the series of holes in the outer edges of the plates, small tacks are inserted through the said outer holes from below, with their heads resting upon the face of the last. The edges of the upper are then drawn over and forced down upon and over the points of these tacks. The sole is then placed in position and secured by being forced

down upon the tacks last referred to, and the central nail securing the two plates C, and by such other nails as may be necessary in the shank-piece and toe-piece. The last is then
 5 withdrawn, and the shoe thus lasted is placed upon the horn of the machine, and a seam is sewed, uniting the shank-piece, upper, and outer sole together, and uniting the vamp directly to the outer sole forward of the shank-
 10 piece up to the toe-piece, where the seam is continued around the toe through the toe-piece, insole, vamp, and outer sole. After sewing, the thread *e* is cut out, or the plates CC' pried up from within, withdrawing also the nails
 15 which hold them.

A still further method for holding the edges of the upper together at the central portion is to use a small piece of cloth, leather, or similar substance, cut to proper form the width
 20 of the last, and laid thereon, with paste or glue applied to its edges, the upper being drawn over and pressed down upon the adhesive edges; or a similar piece of leather may be used instead of the cloth, with a projecting
 25 row of tacks for holding the upper, instead of paste or glue.

The toe-piece, instead of being cut to the horseshoe form shown, may be cut straight across at the rear. It will also be obvious that
 30 the plates C C' may be of rectangular form, or approximately so, without being cut away at one side, and may be made of leather or other material, instead of metal. The feature

of adjustability is intended to obviate the necessity of requiring separate plates for vary- 35
 ing sizes of shoes.

I claim as my invention and desire to secure by Letters Patent—

1. The improvement in the manufacture of shoes, consisting in lasting the upper to sectional insoles constituting toe and shank pieces, as described, and securing the opposite edges of the vamp between the shank and toe in-
 40 soles by removable means, securing the outer sole in position, and sewing the parts together
 45 by a seam uniting the outer sole, the sectional insoles, and upper together, and uniting the vamp directly to the outer sole between the sectional insoles, and then removing the de-
 50 vices holding the edges of the vamp between the sectional insoles, substantially as set forth.

2. As an improved article of manufacture, a boot or shoe having permanent sectional toe and shank insoles sewed with the upper to the
 55 outer sole, with a space between over the ball of the foot devoid of an insole, in which the upper or vamp is stitched directly to the outer sole, substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing wit- 60
 nesses.

FRANK KEARNEY.

Witnesses:

L. M. HOSEA,

ALEX. HAMILTON.