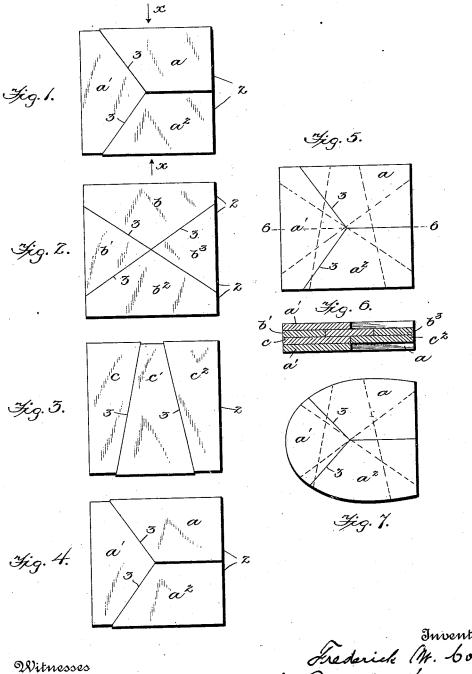
## F. W. COY.

BOOT OR SHOE HEEL. (Application filed July 5, 1899.)

(No Model.)



Enventor Erederick Mr. boy By arthur M. Harrison

## UNITED STATES PATENT OFFICE.

FREDERICK W. COY, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE AMERICAN HEEL MANUFACTURING COMPANY, OF PORTLAND, MAINE.

## BOOT OR SHOE HEEL.

SPECIFICATION forming part of Letters Patent No. 648,727, dated May 1, 1900.

Application filed July 5, 1899. Serial No. 722,864. (No model.)

To all whom it may concern:

Be it known that I. FREDERICK W. Coy, of Beston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Boot or Shoe Heels, of which the following is a specifica-

This invention relates to pieced heels for boots and shoes, each lift of the heel being 10 composed of a plurality of sections.

The invention has for its object to provide a heel of this class the lifts of which shall be free from cracks at the joints between the sections of the lifts; and to this end the in-15 vention consists in the improvements hereinafter described in this specification, illustrated upon the accompanying drawings, and particularized in the appended claim.

Of the drawings, in which similar reference 20 letters and numerals indicate like parts or features, Figures 1, 2, 3, and 4 represent plan views of a series of pieced lifts which when assembled, compressed, and trimmed form a heel embodying my invention. Fig. 5 repre-25 sents a plan view of a heel-block formed by assembling and compressing said lifts. Fig. 6 represents a section on line 6 6 of Fig. 5. Fig. 7 represents a plan view of a heel formed by trimming the block shown in Fig. 6.

Each lift of my improved heel is composed of a series of pieces or sections which are formed so that when assembled in their operative relation to each other each series will form a substantially-rectangular lift, as shown in Figs. 1, 2, 3, and 4. The breast of the heel is composed of the edges 2 of the lifts, and each section has one or more edges 3, arranged obliquely to the breast, so that when pressure is exerted on the lifts in lines parallel with the line of the breast, as indicated by the arrows xx in Fig. 1, the sections which are subjected to such pressure will act as wedges, tending to increase the length of the lift from the breast to the back. It will .45 be seen, therefore, that when the lifts are assembled between two relatively-fixed abut-

ments, one bearing on the breast edge of the

block of lifts and the other on the opposite edge, and two relatively-movable pressing edges of the block, as indicated by the arrows x x, the result is the formation of extremely close and tight joints at the meeting edges of the sections of each lift, thus preventing cracks or fissures between said edges, 55 the said pressure causing the meeting edges to fit and conform accurately to each other.

I have here shown four lifts, two of which are of the same construction, each being composed of the sections a a'  $a^2$ . These are 6c placed at opposite sides of the other two lifts, one of which is composed of the sections b b' b2 b3, while the other is composed of the sections c c' c2. When the said lifts are assembled, as shown in Figs. 6 and 7, and sub- 65 jected to pressure, as above described, they form a heel-block which may be trimmed to heel shape, as shown in Fig. 7, by means of suitable dies or otherwise. The lifts and sections are glued or cemented together.

The sections of each lift are formed so that each section extends across the joints between the sections of the adjoining lift or lifts, so that the sections are firmly interlocked.

I do not limit myself to the particular shapes of the sections shown in the drawings, as the sections may be made in other shapes without departing from the spirit of my invention.

The cement connection between the lifts is made by applying fresh cement to the sections when they are being assembled, pressure being maintained on the sectional lifts while the cement is setting. It will be seen 85 that the cement connection holds the sections in the relative positions which they occupy after the compression of the heel, so that the joints are not liable to open or crack after the pressure is removed.

The cement connection enables nails to be dispensed with as a means for holding the lifts together. Hence there are no nails in the heel until it is secured to the shoe, and the various objections which are caused by 95 the presence of lift-connecting nails are obviated.

The incipient heel or block, (shown in Figs. 5 and 6,) composed of substantially rectan-50 abutments are forced against the other two | gular pieced lifts, the margins of which form 100 bearings for suitable confining and pressing devices, is a distinct improvement in the art and is new so far as I am aware.

I claim—

A heel composed of a series of lifts each comprising a plurality of pieces or sections each of which has all of its edges substantially at a right angle to its surface to form butt-joints between the pieces, and each piece or section in each lift being wedge-shaped and having an edge obliquely arranged rela-

tively to the breast of the heel, each joint of each lift crossing a joint of an adjoining lift, the several lifts and the edges of the pieces or sections being cemented and pressed together.

In testimony whereof I have affixed my signature in presence of two witnesses.

FREDERICK W. COY.

Witnesses:

C. F. BROWN, II. JOSEPH DOYLE.