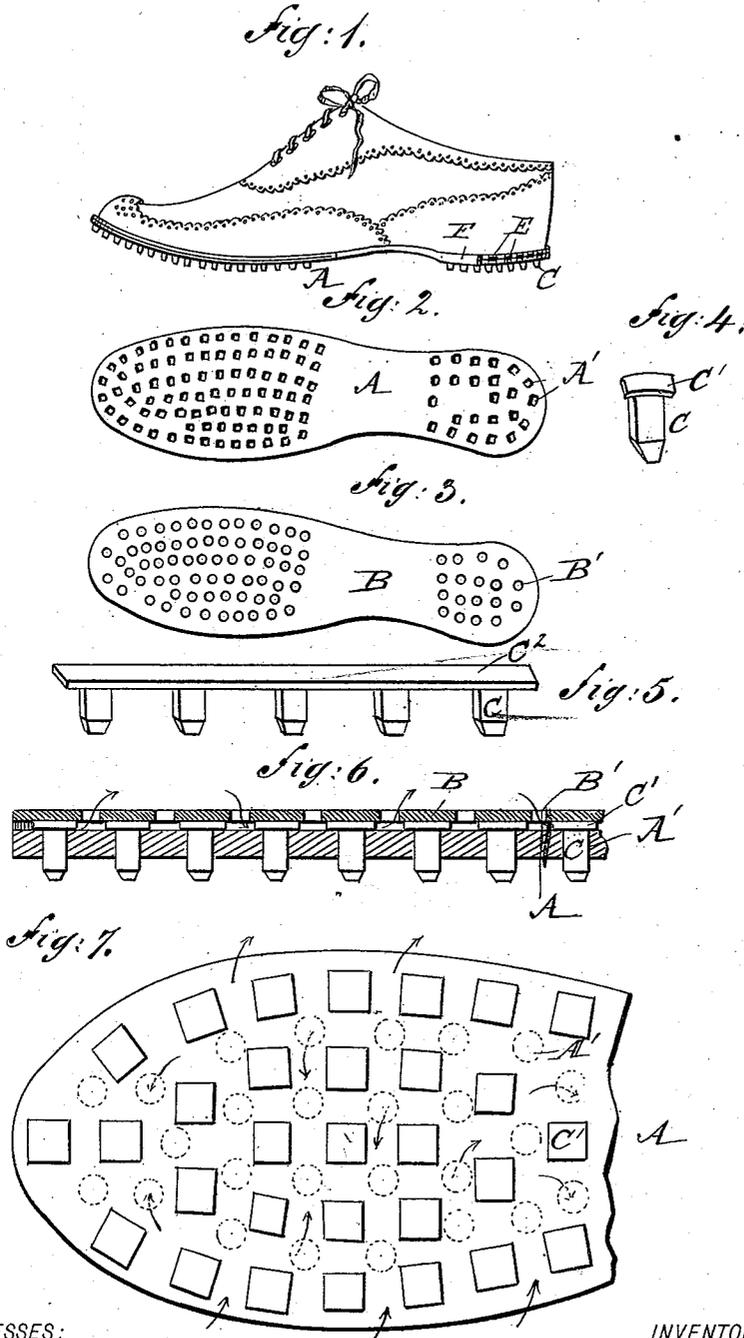


(No Model.)

L. ECKHARDT.
SHOE.

No. 429,429.

Patented June 3, 1890.



WITNESSES:

Edwin R. Kolsh
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UNITED STATES PATENT OFFICE.

LOUIS ECKHARDT, OF HOMBURG-VOR-DER-HÖHE, GERMANY.

SHOE.

SPECIFICATION forming part of Letters Patent No. 429,429, dated June 3, 1890.

Application filed December 20, 1889. Serial No. 334,386. (No model.) Patented in Germany January 29, 1889, No. 51,082, and in France June 28, 1889, No. 197,790.

To all whom it may concern:

Be it known that I, LOUIS ECKHARDT, a subject of the Emperor of Germany, and a resident of Homburg-vor-der-Höhe, have invented new and useful Improvements in Boots and Shoes, (for which I have obtained Letters Patent in Germany January 29, 1889, No. 51,082, and in France June 28, 1889, No. 197,790,) of which the following is a specification.

10 My invention relates to means for ventilating the soles of boots and shoes, and also for rendering the tread elastic and sure.

15 The invention consists of a novel construction and combination of parts, as hereinafter claimed; and in order that the invention may be clearly understood I shall, previous to claiming it, describe in detail the mode in which the same may be carried into effect.

20 Reference is to be had to the accompanying drawings, forming part of this specification, in which—

25 Figure 1 represents a finished shoe embodying my invention. Fig. 2 is a plan view of the outer or main sole of the said shoe detached. Fig. 3 is a similar view of the insole. Figs. 4 and 5 are detail views of parts hereinafter referred to. Fig. 6 is a sectional view of the complete sole. Fig. 7 is a plan view of the same.

30 Like letters of reference designate corresponding parts in the several figures.

35 The main sole A of the shoe thus illustrated and the insole B are perforated with holes A' and B', respectively, none of which are in register when the soles are superposed. The holes A' in the main sole A are made by preference square to receive tightly corresponding rubber or equivalent plugs C, which have square heads C', and may be independent, 40 as illustrated in Fig. 4, or the heads of adjoining plugs connected by integral strips C², as indicated in Fig. 5. The plugs C are passed

downward through the holes A in the main sole, so as to tightly close the same, and their heads C' or strips C² rest on the inside of the main sole, while their ends project downward below the same, so as to give a sure and elastic tread. The perforated insole B, resting on the heads C' or strips C² of the plug C, and its perforations coinciding with the spaces 50 between the heads C' or strips C², establishes communication between said spaces and the interior of the shoe, through which a complete circulation of air is obtained, perfectly ventilating the interior of the shoe.

55 The main sole A and insole B may be united near their edges by stitches, pegs, nails, or screws in the ordinary manner; but lateral openings E may be left between the said soles, if desired, to place the interior air-spaces and the interior of the shoe, in communication 60 with the external air, which openings may be closed against snow or water by an external porous but water-proof tape or band F, laid around the edges of the soles and secured thereto by any suitable means, as indicated 65 in Fig. 1, at the heel of the shoe.

I claim as my invention—

70 A boot or shoe provided with holes extending through the main sole, headed elastic plugs inserted in said holes in the main sole, their heads bearing on the inner surface thereof, and an insole superposed on the several heads of the said plugs, forming air-spaces 75 therebetween, and formed with perforations out of register with the plug-heads, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS ECKHARDT.

Witnesses:

JOSEPH PATRICK,
FRANZ HAPLASHER.