

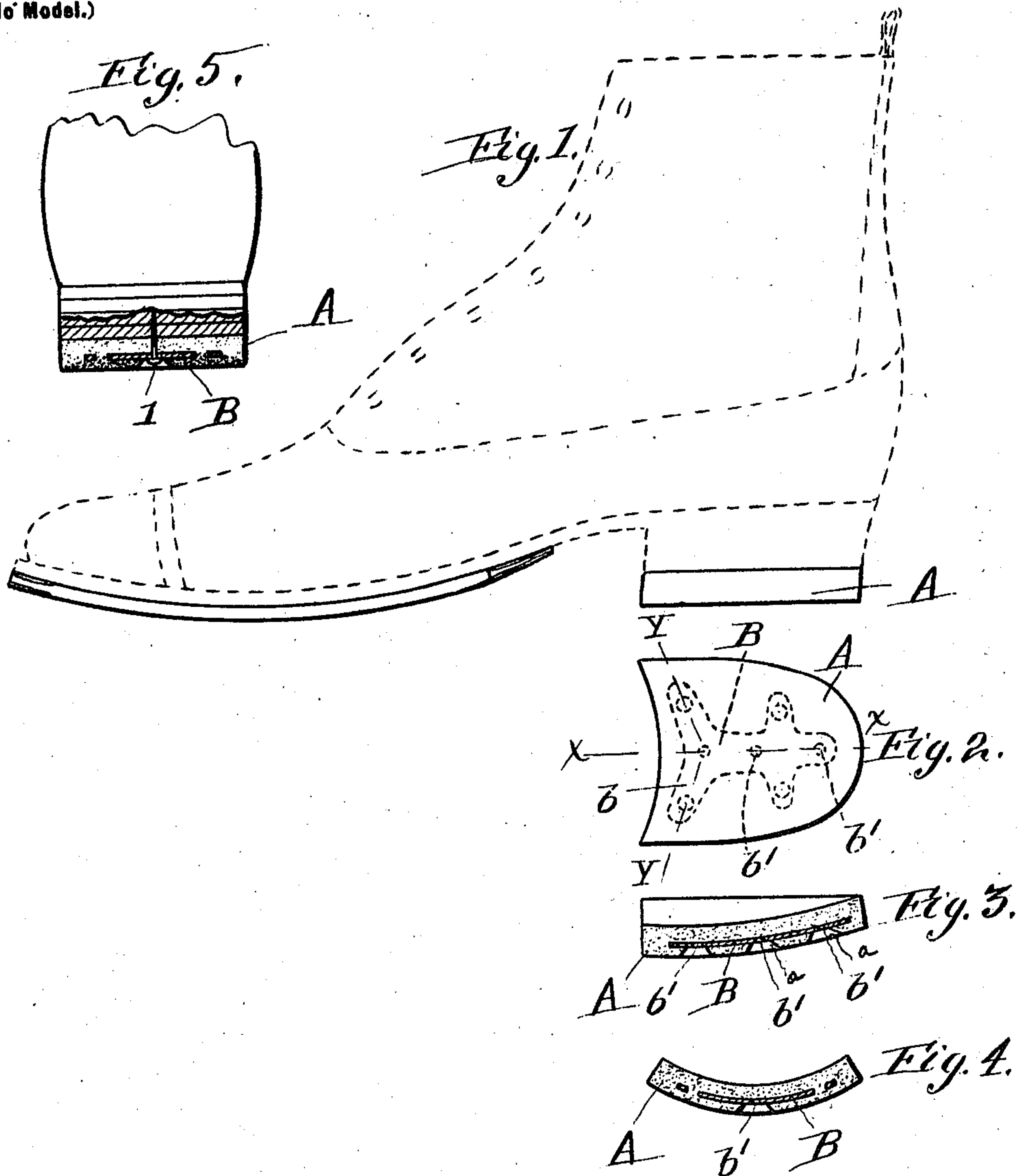
No. 661,129.

Patented Nov. 6, 1900.

F. NERGER.  
HEEL.

(Application filed Jan. 15, 1900.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## HEEL.

SPECIFICATION forming part of Letters Patent No. 661,129, dated November 6, 1900.

Application filed January 15, 1900. Serial No. 1,503. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRICK NERGER, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented a certain new and useful Improvement in Rubber Heel-Lifts, of which the following is a specification.

My invention relates to a construction of rubber heel-lift for boot and shoe heels involving a top or lift of concavo-convex form and attached to the boot or shoe by nails or screws passing through a spring-metal frame embodied in the rubber lift.

So far as I am aware the only rubber heel-lift involving the foregoing matters and proposed prior to my invention contemplates a concavo-convex rubber lift provided with a raised marginal portion on its concave side and a centrally open spring-metal frame embodied in the lift and practically forming a continuous spring-metal strip arranged near the edge or margin of the lift and provided with holes for the fastening nails or screws, in which way the lift is secured near its edge portions only.

The objects of my invention are to avoid such central bulging of the lift as will be incident to securing it near its edge portions only, to flatten down the concavo-convex lift from the center and centrally tack or screw it down, whereby it flattens down and at the same time leaves its edge portions free, and to further maintain such flattened condition of the lift by widening the central reinforcement to a suitable extent.

To the attainment of the foregoing and other useful ends my invention consists in matters hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 illustrates a shoe provided with a rubber heel-lift embodying the principles of my invention. Fig. 2 is a plan of the rubber heel-lift, showing the metal plate in dotted lines. Fig. 3 is a section on line *xx* in Fig. 2. Fig. 4 is a section on line *YY* in Fig. 2. Fig. 5 is a view similar to Fig. 4, but showing the lift attached to the heel of a boot or shoe.

The rubber heel-lift *A* is of sufficient thickness to provide a suitably elastic cushion and corresponds in outline to the outline of the usual boot or shoe heel. The upper surface

of said lift is concave and its under or tread surface is preferably convex. (See Figs 3 and 4.) As illustrated, the said heel-lift is provided with a metal plate *B*, which is embedded in the rubber and which is curved to conform to the curvature of the upper and lower surfaces of said lift. The said plate is preferably composed of some springy metal, is preferably formed with lateral arms *b*, and is provided with nail or tack openings *b'*. The under or tread side of the rubber heel-lift can be provided with countersinks *a*, which are coincident with the nail-openings *b'* and which receive the heads of the nails, as shown in Fig. 5. Thus formed the rubber heel-lift can be attached to the heel of a boot or shoe by applying its concave surface to such heel and driving nails or tacks through the centrally-arranged openings *b'* in the plate *B*. The nails or tacks when driven home will cause the rubber lift to flatten against the under side of the heel proper. Such flattening or flexing of the heel-lift will of course place both the rubber and metal plate under tension—that is to say, the lift will have a constant tendency to regain its normal shape—and its edges or marginal portions will therefore hug or press tightly against the under side of said heel. In this way the side portions of the heel-lift, though free or unattached, will be held in contact with the heel proper and there will be no danger of a falling away or splitting off of said lift at its edges. The central arrangement of the tack or screw holes *b'* permits the lift to be flattened out and securely attached at its central portion and, together with the dished or curved form of the steel and rubber, renders it unnecessary to make provision for attaching the side or marginal portions of the heel-lift.

From the foregoing it will be seen that the centrally and longitudinally arranged transversely-curved spring-plate *B* permits nails or screws to be applied along a central line, while at the same time when the nails or screws are forced into the heel the width of the plate at opposite sides of such line will provide a width of yielding spring clamping bearing of sufficient power to cause the lift to flatten down, the nails or screws, in con-



junction with a centrally-arranged bearing, serving to prevent the lift from bulging out along its longitudinal middle portion. The lateral extension of the spring-plate, as by its lateral arms *b*, serves to provide the normally concavo-convex lift with a central spring clamp or bearing portion having lateral spring clamping portions of less spring resistance, thereby providing a matter of further improvement. It will also be seen that the normally concavo-convex elastic or rubber lift is secured upon the boot or shoe heel by a set of nails or screws passing through the longitudinal middle portion of the lift and that such lift, broadly considered, has its longitudinal middle portion reinforced at points where the nails or screws are to be driven through the lift, thereby preventing the lift from breaking away from the nails or screws at the point where it tends to bulge out when flattened down in opposition to its general spring resistance; also, that the portions of the lift between its margin and such nails and screws inserted through its middle portion are free and unattached, although flattened down, and that owing to the springy nature of the rubber such portions will be flattened down and held in opposition to a general spring resistance.

What I claim as my invention is—

1. A normally concavo-convex rubber lift for boot and shoe heels, provided with a longitudinally and centrally arranged spring clamping-plate embedded in the lift and pro-

vided with openings for nails or screws, substantially as described.

2. A normally concavo-convex rubber lift for boot and shoe heels provided with a longitudinally and centrally arranged transversely-curved spring clamping-plate embedded in the lift and provided with holes for nails or screws, substantially as set forth.

3. A normally concavo-convex rubber lift for boot and shoe heels provided with a longitudinally and centrally arranged spring-plate having laterally-extending arms and embedded in the rubber lift, the plate being provided with suitable holes for nails or screws, substantially as described.

4. The combination with a boot or shoe heel of a normally concavo-convex rubber lift; a set of nails or screws securing the lift to the boot or shoe heel and passing through the longitudinal middle portion of the lift having its middle portion reinforced to prevent the lift from breaking away from the heads of the nails or screws, the lift thus secured being flattened down upon the boot-heel in opposition to spring resistance between its margin and the securing nails or screws and being unattached between said margin and its middle portion thus held down upon the heel by said nails or screws.

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