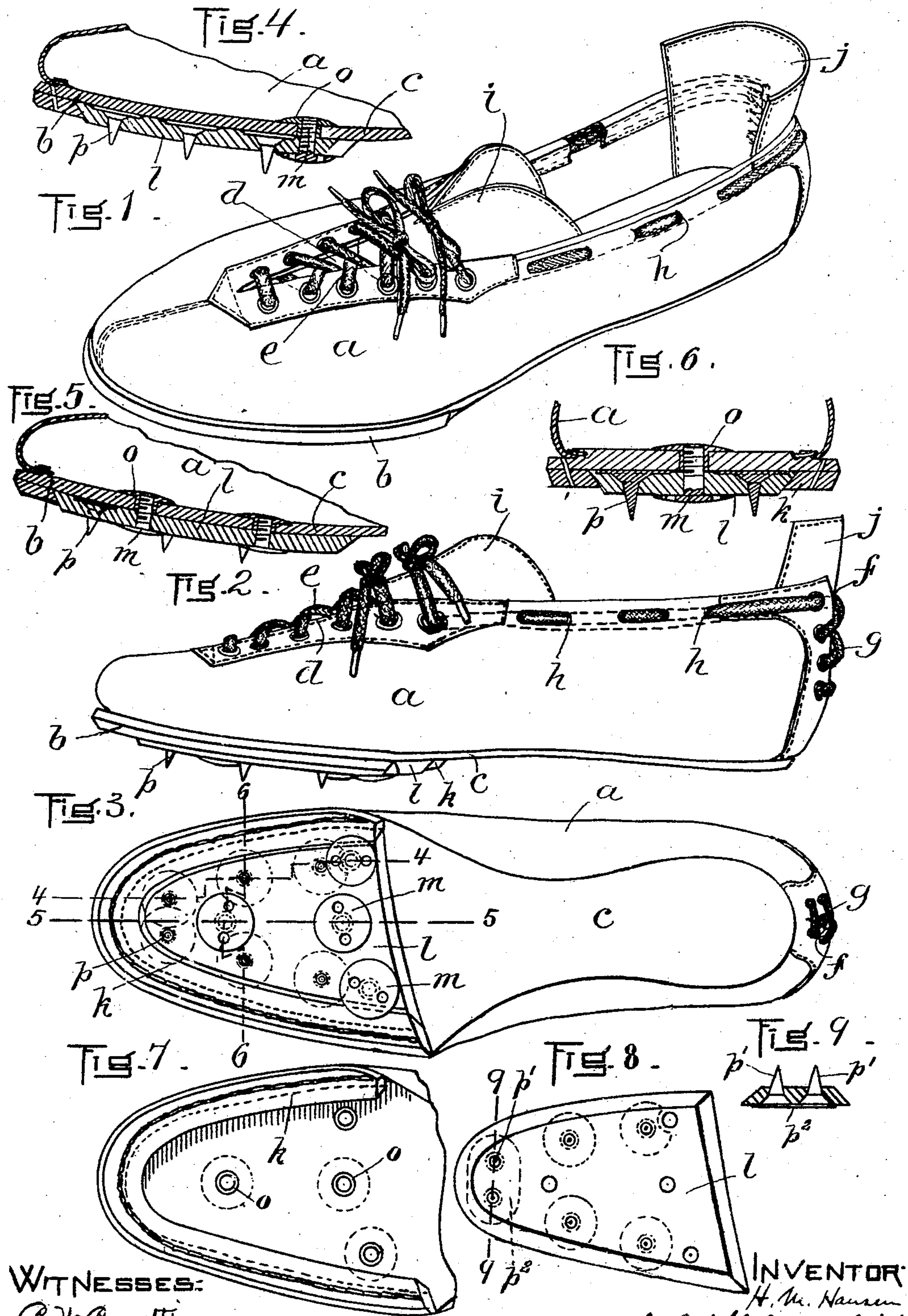


No. 859,382.

PATENTED JULY 9, 1907.

H. M. HANSEN.  
RUNNING SHOE.

APPLICATION FILED MAR. 22, 1906.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HANS M. HANSEN, OF QUINCY, MASSACHUSETTS.

## RUNNING-SHOE.

No. 859,382.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed March 22, 1905. Serial No. 251,432.

*To all whom it may concern:*

Be it known that I, HANS M. HANSEN, of Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Running-Shoes, of which the following is a specification.

The present invention relates to sprinting or running shoes which have a stiff sole at the ball portion in which are held spikes for obtaining a firm grip upon the running track, and a flexible shank and heel portion. Hitherto with shoes of this character in which the only lacing opening is at the front of the shoe near the instep, it has been difficult to make the shoes fit closely enough upon the foot of the wearer when the foot is flexed in the act of running. There has been further objection to shoes of this character in that when once a spike becomes broken or worn it has been necessary to take the sole off and dissect the whole fore-part of the shoe in order to remove the broken or worn spike and substitute a new one, this necessitating at the shortest a delay of some hours before the shoe would be in condition to wear again.

By my invention I have overcome both these difficulties by providing a shoe which can be made to fit more closely about the foot of the wearer and providing means by which a broken or worn spike may be replaced without requiring the loss of more than a few minutes of time.

The improvements constituting the invention will now be described. They are illustrated in the drawings accompanying this specification, in which,—

Figure 1 represents a perspective view of a shoe constructed according to my invention. Figs. 2 and 3 represent respectively an elevation and an under plan view of the same. Figs. 4 and 5 represent sections taken on lines 4—4 and 5—5 of Fig. 9, respectively. Fig. 6 represents a cross-section on line 6—6 of Fig. 3. Fig. 7 represents an under plan view of the forward portion of the sole with the removable section disconnected therefrom. Fig. 8 shows the removable section of the sole displaced. Fig. 9 represents a section on line 9—9 of Fig. 8.

The same reference characters indicate the same parts in all the figures.

The shoe has an upper *a* and a sole *b* extending from the toe to the shank of the shoe and being very stiff and unyielding. The rear part of the shoe including the shank and heel portions is relatively flexible as it consists only of the rear portion of the insole *c* which is skived down so as to be comparatively thin, and the upper which is brought around beneath and stitched to the insole. The shoe has the usual lacing opening *d* at the instep portion which may be drawn more or less closely together by a lacing *e*, and in addition to this opening and lacing there is provided at the rear of the shoe a second lacing opening *f*, the edges of

which are held together by a lacing *g*. The ends of this lacing are led forward, one on each side of the shoe, through guides in the shoe-upper, such guides preferably being holes *h* formed in the upper, and the lacing being woven in and out through the holes and so carried forward to the top of the instep lacing-slit *d* where its ends may be tied together.

Preferably the shoe is made with a low upper which extends just above the heel of the wearer and below the ankle-bone, this upper edge being thus located at the narrowest part of the foot and the lacing *g* is guided about the foot at that portion so that when it is drawn tight and tied the edge of the upper will be caused to engage closely all around the foot and will be held securely and smoothly when the foot is bent while running as well as when extended. Both the instep and heel lacing openings are provided with tongues *i* and *j* respectively, which are secured to the inside of the shoe upper and extend across the openings, each of the tongues extending above the top of the upper so that its edge will not cut or chafe the wearer's foot, while the instep tongue extends upward a sufficient distance to enable it to support the tied ends of the rear lacing *g*.

The outer sole *b* is made in two portions, a peripheral portion or rim *k* which extends around the outer edge of the sole and is formed outside and inside with an undercut edge which receives the flaring edges of the central portion *l* of the sole, the members of the sole being thus held together by a dovetail connection and the central member being prevented from slipping out of engagement with the peripheral member by fastening means consisting of wide, flat headed screws *m*, the shanks of which engage nuts *n* mounted upon the inner sole *c*, the peripheral member *k* of the sole being securely united as by stitching or other means to the inner sole. The sole section *l* is provided with the running spikes *p* which are driven through from the inner surface and of which the points project on the bottom of the sole piece. Whenever it becomes necessary to remove a spike and replace it by a new one, all that is necessary to be done is to remove the bolts *m*, when the central sole member *l* will be free to slide toward the heel of the shoe out of engagement with the peripheral member *k*, and when so moved it will be wholly disconnected from the shoe. Then the broken or worn spike may be removed, a new one substituted, and the sole member replaced and secured by the bolts *m* again in a brief space of time. In fact the substitution of a new spike may be made upon the athletic field by the wearer of the shoe himself without even requiring removal of the shoe from his foot.

It will be evident that this construction constitutes a great improvement over the hitherto-known forms of shoe in its saving of time, expense and trouble neces-

sary for making repairs of the character specified. In case the shoe is to be used without spikes they may be removed and plugs inserted in the holes where the spikes originally were. This can be done and the  
5 spikes can be replaced so as to make a running shoe either provided or unprovided with spikes in the manner just above described in a very short period of time. Or the spiked sole  $l$  may be removed and  
10 shoe may be used by bicycle riders, and in gymnasiums, etc.

The removable sole  $l$  may be provided with cleats or flanges such as are used by base-ball players. The removability of the sole  $l$  enables the player to remove  
15 the cleats or spikes when he desires to leave the field and walk on a floor which would be injured by the cleats or spikes. This may be done without inserting another sole in place of the flanged or spiked sole.

The spikes  $p$  have wide, flat heads to prevent them

from being pulled, or dropping out from the sole. At 20 the toe end of the removable sole  $l$ , where if two spikes were inserted their heads would overlap, I may use the double spike shown in Figs. 8 and 9, where two spike points  $p'$  are connected side by side to a single  
25 head consisting of the elongated plate  $p^2$ .

I claim:—

A running shoe having provisions for causing it to fit closely all around the foot, comprising slits at the instep and counter of the upper, a lacing for the instep slit, guides in the top edge of the upper, and a lacing for the  
30 counter slit having its ends led forward through said guides and adapted to be tied over the instep of the wearer's foot.

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

HANS M. HANSEN.

Witnesses:

C. F. BROWN,  
E. BATCHELDER.