June 21, 1960 L. HACK 2,941,316

RESILIENT SHOE TAP

Original Filed Jan. 20, 1959

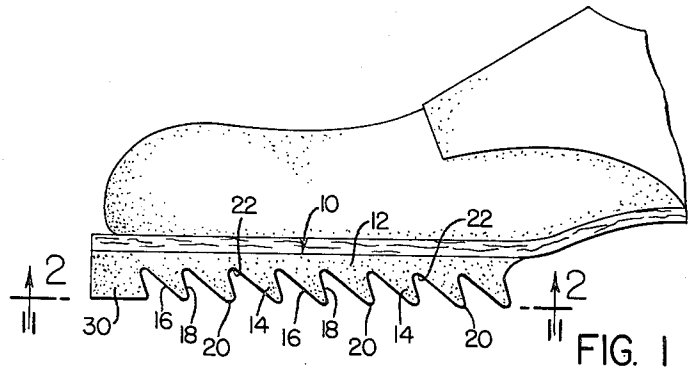


FIG. 1

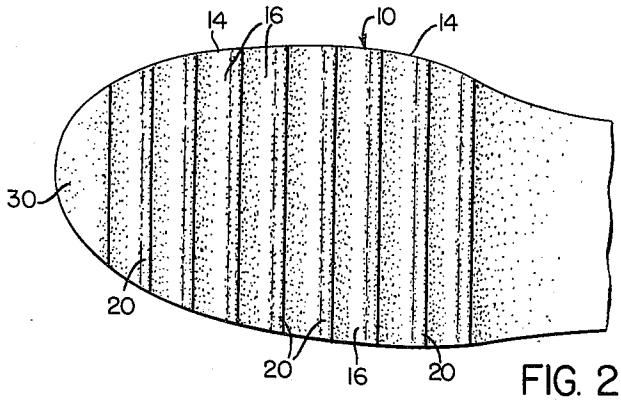


FIG. 2

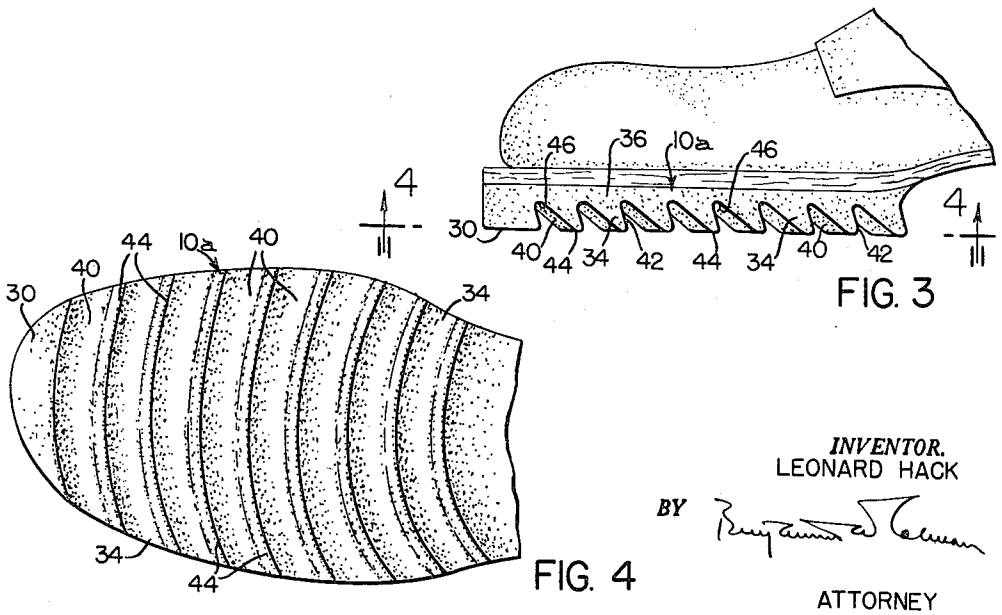


FIG. 3

FIG. 4

INVENTOR.
LEONARD HACK

BY Benjamin A. Lehman

ATTORNEY

United States Patent Office

2,941,316

Patented June 21, 1960

2,941,316

RESILIENT SHOE TAP

Leonard Hack, Detroit, Mich., assignor to Ripple Sole Corporation, Detroit, Mich., a corporation of Michigan

Original application Jan. 20, 1959, Ser. No. 787,887. Divided and this application Feb. 9, 1960, Ser. No. 7,642

2 Claims. (Cl. 36—59)

This invention relates to resilient shoe soles in the form of a partial sole provided at the forward end of the shoe and identified in the trade as a "tap."

This application is a division of Hack et al. application Ser. No. 787,887, filed January 20, 1959, and now pending.

In the instant invention, taps are made of resilient materials such as rubber, flexible plastics, or other suitable compositions well known in the art. Taps of this type of materials are usually made by the molding process. The tap comprises a platform portion secured to the forepart of the shoe by an adhesive, or other suitable fastening means, from which depend a longitudinally extending series of parallel transverse ribs having their front and rear faces rearwardly slanted. The tap of this invention is provided with a front toe pressure pad whereby added wear and a more substantial pivot for take-off in walking or running is achieved.

A separate tap provides simplicity in manufacture and can be used and secured to shoes or boots without wedges. There is economy in replacement costs over full length soles, and a separate tap further provides a stylized construction and a style factor in certain type of shoes.

Reference is made to the drawing annexed hereto forming an integral part of this specification, and in which:

Fig. 1 is a side elevational view of a tap embodying the inventive features heredisclosed.

Fig. 2 is a bottom plan view of the tap shown in Fig. 1.

Figs. 3 and 4 are similar to Figs. 1 and 2 respectively, showing curved rib members in the tap.

As shown in Figs. 1 and 2 of the drawing, the tip **10** comprises an upper platform portion **12** from which depend a longitudinally extending series of integrally formed parallel transverse rib members **14** having rearwardly and downwardly slanting front faces **16** and rear faces **18**. The lower rounded edges **20** of the ribs provide a conjunction of the front and rear faces, and the rear and front faces of adjacent rib members are conjoined by a blending radius **22** adjacent the platform **12**, whereby added flexibility is provided for the ribs.

A front toe pressure pad **30** is provided at the front tip end of the tap, which has the function of serving as a pad with which the shoe applies added push in leaving a ground plane, i.e. take-off in walking or running.

In Figs. 3 and 4 is shown a tap **10***a*, similar to the tap **10**, except that it is provided with transversely curved rib members **34** integrally formed with a tap platform portion **36** from which they depend. The rib members **34** have rearwardly and downwardly slanting front faces **40** and rear faces **42**, preferably conjoined at their lower extremities by a rounded, blended edge **44**. The rear faces **42** and front faces **40** of adjacent rib members are preferably conjoined by a smooth blending radius **46** at the platform portion **36**. The purpose and function of the curved rim members **34** is to provide resistance to sidewise slip or motion when the tap is engaged upon a supporting surface.

The flexibility of the above described resilient tap is a direct result of the rib construction in which rearwardly and downwardly slanted faces conjoined at their lower edges produce ribs that yield downwardly and forwardly under load, imparting a forward movement to the foot in walking or running. A sensation of gliding motion is achieved from the flexing of the ribs when the foot bears downwardly upon a base plane.

The economies of the instant tap construction involve savings in material, in the production of taps from molds that are substantially smaller and less expensive to produce and maintain, in replacement of the tap independently of any other portion of the sole, and in the use of the tap without a wedge. In addition, manufacture of shoes with the separate tap of this invention provides the benefits of simplicity and a very close relationship to current shoe manufacturing methods and processes.

Having described the invention in its simplest terms, it is to be understood that the features of construction may be changed and varied in greater or lesser degree without departing from the essence of the invention defined in the appended claims.

I claim:

1. In a ground plane contacting element for a shoe, a tap made of resilient material having a body secured to said shoe at the forepart thereof and a series of transversely extending, parallel, downwardly and rearwardly inclined rib members projecting from said body and spaced longitudinally along said tap, said rib members having front and rear forwardly inclined faces diverging upwardly from their lower edges and forming a rounded juncture with the body of said tap, whereby when said rib members are engaged upon a supporting surface, said rib members will flex forwardly under weight and produce a forward movement of said shoe relative to said surface, and a front toe plateau having the thickness of said tap, forward of the first of said rib members, said toe plateau providing a pressure pad at the toe of said shoe.

2. The construction defined in claim 1, and in which said rib members are curved transversely of said tap.

References Cited in the file of this patent

UNITED STATES PATENTS

485,459	Crocker	Nov. 1, 1892
2,570,949	Hoffenberg	Oct. 9, 1951
2,710,461	Hack	June 14, 1955
2,833,057	Hack	May 6, 1958