C. P. MAHER AND E. J. FETHERSTONHAUGH.

DETACHABLE HEEL.

APPLICATION FILED JUNE 7, 1918.

1,313,400. Patented Aug. 19, 1919.

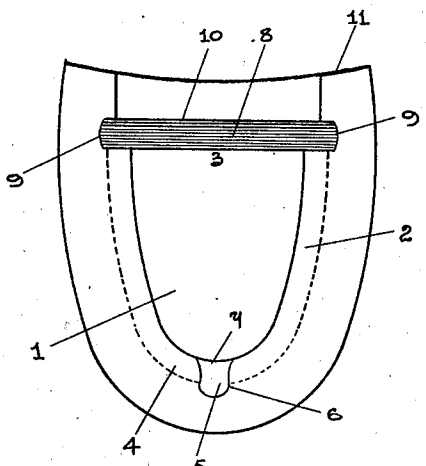


Fig 1

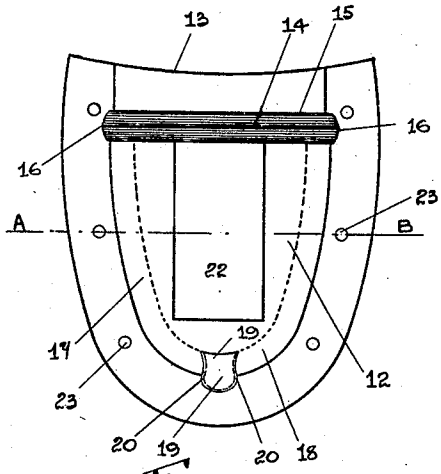


Fig 2

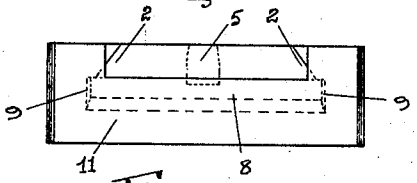


Fig 3

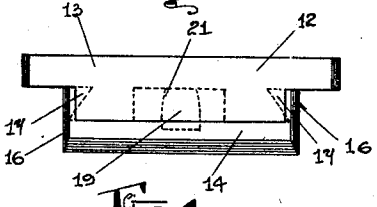


Fig 4

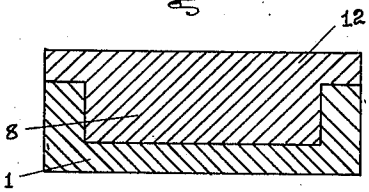


Fig 5

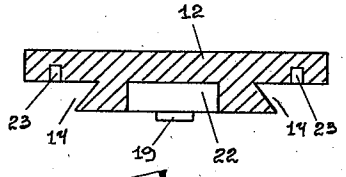


Fig 6

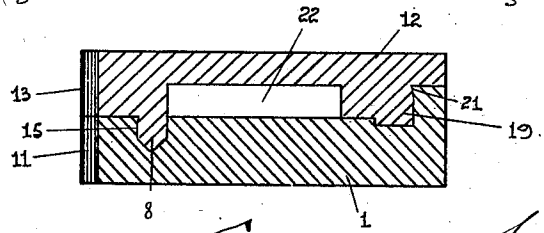


Fig 7

Inventor
C. P. Maher
by E. J. Fetherstonhaugh
Atty
E. J. Fetherstonhaugh
for himself
Attorney.

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CHARLES PATRICK MAHER AND EDWARD JOHN FETHERSTONHAUGH, OF MONTREAL, QUEBEC, CANADA.

DETACHABLE HEEL.

1,313,400. Specification of Letters Patent. Patented Aug. 19, 1919.

Application filed June 7, 1918. Serial No. 238,757.

To all whom it may concern:

Be it known that we, CHARLES PATRICK MAHER and EDWARD JOHN FETHERSTONHAUGH, subjects of the King of Great Britain, and residents of 1836 Hutchison street and 166ª Mansfield street, respectively, in the city and district of Montreal, in the Province of Quebec, in the Dominion of Canada, have invented certain new and useful Improvements in Detachable Heels, of which the following is the specification.

The invention relates to the improvements in detachable heels as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel formation of the two parts of the heel, whereby they may be readily joined together in a secure fashion and easily separated.

The objects of the invention are to devise a new form of heel, particularly suitable for cushion heels, though the material employed is only incidental to the invention, to insure great comfort to the wearer, to facilitate the interchange of the heels between the boots, so that the wear may be evenly distributed, to furnish a heel at a very low cost that will give all the advantages of the most expensive detachable heels and generally to provide a serviceable and durable heel for shoes that may be renewed from time to time without trouble by the wearer.

In the drawings, Figure 1 is a plan view of the tread piece of the heel showing the upper side.

Fig. 2 is a plan view of the underside of the upper lift of the heel.

Fig. 3 is a front elevation of the tread piece.

Fig. 4 is a front elevation of the upper lift.

Fig. 5 is a cross sectional view through the transverse fastening tongue, showing the pieces assembled.

Fig. 6 is a cross sectional view of the upper lift through the dovetail tongue.

Fig. 7 is a longitudinal sectional view through the pieces assembled.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, the tread piece 1 is formed with the dovetail groove 2 which narrows from the front 3 in semi-oval shape to the end 4 and terminates in the recess 5, said recess extending farther into the body of the tread piece and having a slight shoulder 6 behind the flaring mouth 7.

At the front end, the dovetail groove 2 terminates at the transverse groove 8, said transverse groove 8 extending slightly beyond the dovetail groove on each side and terminating in broad curved ends 9, the front wall 10 of said transverse groove 8 being slightly undercut to form additional fastening for a tongue.

The tread piece 1 in front of the transverse groove 8 is a solid wall of rubber 11, which may be pared or shaped to fit any shoe of the approximate size.

It may also be mentioned that the recess 5 at the rear end of the heel is also slightly undercut to increase the stability of the fastening.

The numeral 12 indicates the upper lift of the heel, both the tread and the upper lift being preferably made of rubber, though, they may be made of any suitable material.

The front of the upper lift 12 is made of a solid wall 13 of rubber for the full width of the heel to fit on top of the solid wall 11.

This wall 13 is in front of the transverse tongue 14, which fits into the groove 8 and is slightly bulged on the front wall 15 to shape itself into the undercut 10, said transverse tongue 14 terminating at each end 16 in the slightly sharper curves 16 than the broader curves 9 of the groove 8, thereby producing a binding effect in the groove when the tongue is forced therein.

The dovetail tongue 17 extends rearwardly from the transverse tongue 14 and narrows in semi-oval form to the end 18 terminating at the lug 19, said lug being slightly bulged at 20 on each side to fasten behind the shoulders 6 of the recess 5, said lug 19 tapering slightly toward the upper end 21, thereby producing, when inserted in the recess 5, the dovetail effect.

The recess 22 is here shown as rectangular, though it may be of any shape, said recess being in the central portion of the dovetail tongue 17 thereby providing centrally between the two pieces of the heel a space for an air cushion or a vacuum, as the case may be during the exercise of walking.

The nail holes 23 are shown around the edge portion of the upper lift 12 and

through these by means of nails, the said lift is attached to the heel portion of the boot and remains a permanent part of the boot or shoe, until the said shoe is worn out.

The tread piece is the part which is removed, interchanged and renewed, as it is simply slipped on to the upper lift 12 and fastened as shown.

The dovetail tongue 14 fits into the dovetail groove 2 and as soon as the lug 19 reaches the recess 5, the flaring mouth 7 of said recess 5 facilitates the forcing of the said lug 19 into the said recess which it enters beyond the shoulders 6 and once in, it remains there until forcibly removed.

While the lug 19 is being forced into the recess 5, the transverse tongue 14 is being carried over the wall 11, until it reaches the groove 8, then the said tread piece 1 is forced by the hand, until the said tongue 14 enters and is firmly pressed into the said groove 8, binding itself therein by means of the sharper ends 16 and undercut front wall 15.

To remove the tread piece from the upper lift is a very simple matter as the pliability of the rubber or other material used is sufficient to bring the front wall of the tread piece over the tongue of the permanent piece at the same time that the lug 19 is entering the recess 5, consequently the same pliability permits the removal of said tongue and lug in a similar manner.

It is not intended that these pieces shall be separated with the greatest ease, because in that event they would not remain fastened, but it is intended that any unskilled person can separate them with great facility, for it only requires a certain amount of force to pull them apart and there can be no damage to the pieces in the proportion to the necessary force employed.

Various changes may be made as to the uses and construction of this device without departing from the spirit of the invention, so long as they are within the scope of the claims for novelty following.

What we claim is:—

1. In a detachable heel, an upper permanent piece formed with a flat dovetail tongue formed around a cushion recess and a vertical tongue between said recess and the front of the heel, a dovetail lug projecting rearwardly from said flat tongue, and a tread piece having corresponding grooves and adapted to fit to said permanent piece, both of said pieces being of resilient material and all the parts thereof.

2. In a detachable heel, an upper permanent piece having a dovetail tongue in semi-oval shape, said tongue having a lug projecting from the rear curved end and a transverse tongue at the front end, and a tread piece having a corresponding dovetail groove and recesses for said lug and said transverse tongue, said recesses being slightly undercut in the walls thereof and otherwise formed in relation to said transverse tongue and lug to hold them in said grooves.

Signed at the city of Montreal, Quebec, Canada, this 21st day of May 1918.

CHARLES PATRICK MAHER.
EDWARD JOHN FETHERSTONHAUGH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."