June 3, 1930. W. H. NUTT 1,761,359

HEEL AND METHOD OF COVERING THE SAME

Filed Oct. 16, 1929

Fig.1.

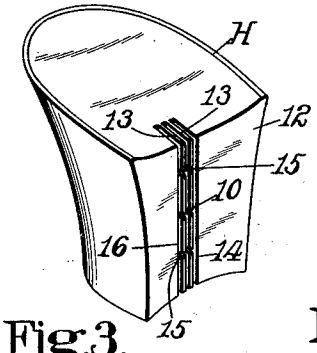


Fig.2.

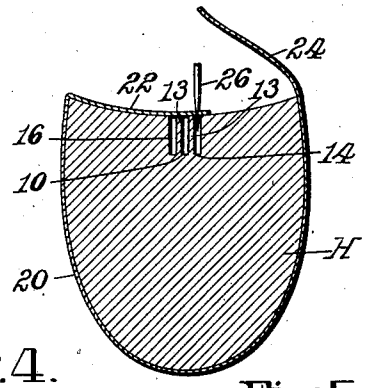


Fig.3.

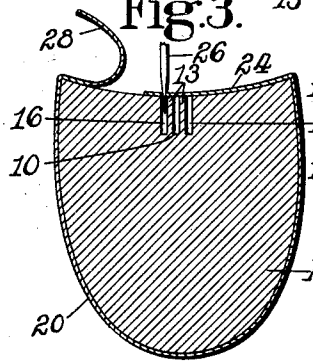


Fig.4.

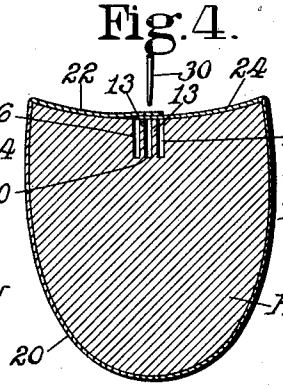


Fig.5.

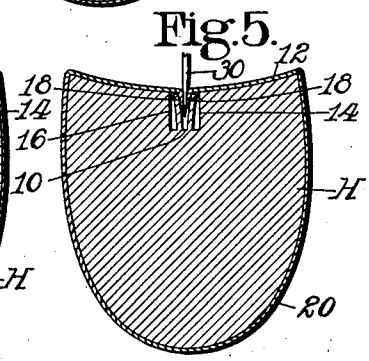


Fig.6.

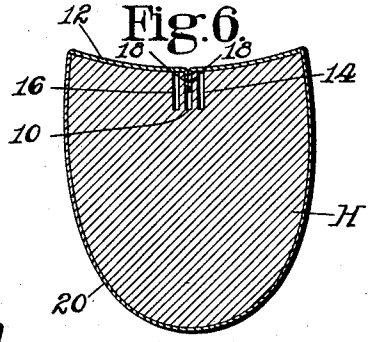


Fig.7.

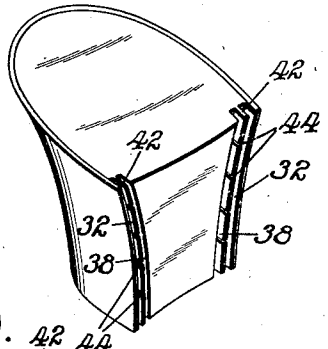


Fig.8.

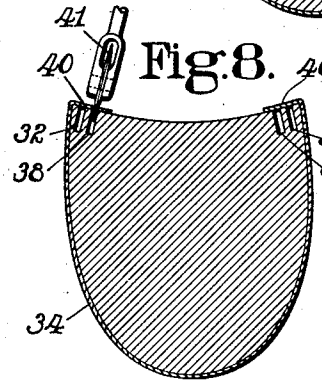
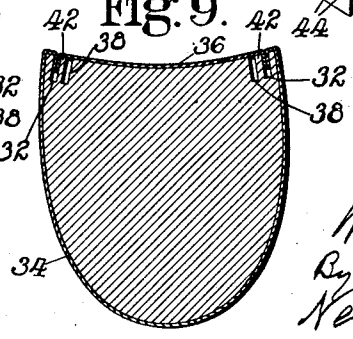


Fig.9.



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1,761,359

UNITED STATES PATENT OFFICE

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HEEL AND METHOD OF COVERING THE SAME

Application filed October 16, 1929. Serial No. 400,114.

This invention relates to improvements in heels of the type wherein a groove is provided in the body of the heel to receive one or more marginal portions of material employed to cover the heel, and to improvements in methods of covering heels.

In United States Letters Patent No. 1,718,177, granted June 18, 1929, upon my application, there is disclosed a heel having a single straight groove extending heightwise of the heel along the middle of its breast and provided with a one-piece cover extending around the rear, side and breast faces of the heel and having its opposite lateral margins tucked into and secured within the groove.

One object of the present invention is to provide an improved heel of the type above referred to in which provision is made for facilitating the operation of tucking the cover margins into the groove without risk of injuring the cover and for insuring that the portions of the cover which extend into the groove shall fit therein in such a manner as to form an exceptionally tight joint.

With this object in view and in accordance with one feature of the invention there has been provided a heel having a groove therein for receiving a marginal portion of heel covering material applied to the heel, said groove being formed with an outwardly yielding side wall constructed and arranged to facilitate the tucking of said portion of the heel covering material into the groove.

In one embodiment of the invention herein illustrated a single straight groove is formed in the middle of the breast of a heel to receive the opposite lateral margins of a one-piece cover extending around the rear, side and breast surfaces of the heel and both side walls of the groove are made yielding by the provision of additional grooves arranged one closely adjacent to each side wall of the cover-receiving groove to provide relatively thin resilient strips of material at each side of the latter capable of yielding outwardly to permit expansion of the cover-receiving groove, and thereby to facilitate the tucking of the cover margins therein, and tending thereafter to return to normal position after the tucking operation has been completed and the tucking implement withdrawn, and thus to close the space formerly occupied by the tucking implement and firmly to secure the cover margins therein and provide an exceptionally tight joint between them. Considered in another aspect, therefore, invention is to be recognized in a heel having an expansible groove therein, and a piece of covering material on the heel having a marginal portion tucked into and secured within the expansible groove.

In its method aspect the invention comprises applying a cover member to a heel having an expansible groove therein, expanding the groove, and tucking a marginal portion of the cover member into the groove, while the latter is expanded, thereby insuring that the marginal portion of the cover member will be firmly held in the groove.

In covering a heel having a groove for receiving one or more cover margins and having also one or more additional grooves arranged to permit expansion of the cover-receiving groove, as herein illustrated, the additional groove or grooves are conveniently, in accordance with another feature of the invention, employed as gaging means during the trimming of the cover margins to locate the trimming cuts so as to provide the desired amount of surplus for tucking into the cover-receiving groove.

The provision of one or more grooves arranged to permit expansion of a cover-receiving groove in a heel makes it practicable in covering the heel to lay two cover margins in overlapping relation with the overlapped portions of the cover margins overlying the grooves and tucking the overlapped cover margins into the cover-receiving groove by a single operation, such a method of tucking constituting a part of the invention.

The invention will be explained with reference to the accompanying drawings, in which

Fig. 1 is a perspective view of an uncovered heel constructed in accordance with the present invention;

Figs. 2 to 5, inclusive, are cross-sectional views of the heel illustrating different operations performed in covering the heel;

Fig. 6 is a cross-sectional view of the heel as

it appears after a cover has been applied to the heel;

Fig. 7 is a perspective view of an uncovered heel showing a modification of the present invention;

Fig. 8 is a cross-sectional view of the modified heel shown in Fig. 7 illustrating the method of trimming the cover margins preparatory to tucking them into the grooves in the heel breast; and

Fig. 9 is a cross-sectional view of the modified heel showing the heel as it appears after it has been covered.

Referring to Figs. 1 to 6 of the drawings, a wooden Cuban heel H is provided with a straight groove 10 which extends heightwise of the heel along the middle of the breast face 12 and which is formed with yielding resilient side walls thereby permitting widthwise expansion and contraction of the groove. As shown, the side walls of the groove 10 are made resilient by the formation in the heel breast of two additional grooves 14 and 16 which are similar to the groove 10 and are arranged closely adjacent and parallel to the latter so as to form thin strips 13 of heel material at each side of the groove 10. The groove 10 is adapted to receive the opposite end portions 18, 18 of a one-piece cover 20 which extends around the rear, side and breast faces of the heel. The grooves 14 and 16 are made close enough to the groove 10 to lessen materially the resistance offered by the side walls of the groove 10 to the introduction of a tucking implement into the groove and thus to permit the side walls of the groove to yield outwardly, as shown in Fig. 5, to allow for the thickness of the tucking implement and thus to facilitate the tucking in of the cover margins. The outward yielding of the side walls of the groove 10, in addition to making it easier to tuck the cover margins into the groove, will also insure against any injury to the cover by means of the tucking implement. Furthermore, inasmuch as the narrow strips of material between the groove 10 and the grooves 14 and 16 are necessarily put under tension, as shown in Fig. 5, by the action of the tucking tool these strips will, upon the withdrawal of the tool, resume their original positions, as shown in Fig. 6, closing up the gap between the margins of the covering and thus securely holding the cover margins in place and producing a tight joint where they enter the groove 10. As shown, the strips 13 which define the opposite side walls of the groove 10 are provided with a series of transverse slits 15 which facilitate yielding of the side walls of the groove.

In covering a heel of the type shown in Fig. 1 a one-piece cover, such as the cover 20, is applied to the rear and side faces of the heel with the end portions 22 and 24 extending beyond the breast corners of the heel. One of the end portions, for example, the portion 22, is first laid against the heel breast with its margin extending across all of the grooves 10, 14 and 16. While the end portion 22 remains in this position its lateral edge is trimmed by means of a suitable trimming tool, such as the knife 26 (Fig. 2), while the groove 14 is utilized as a gage to locate the trimming cut so that the proper amount of surplus will be provided at the edge of the cover portion 22 for tucking into the groove 10. As shown in Fig. 2 the gaging of the trimming cut is effected by projecting the trimming knife 26 into the groove 14 at one end of the latter and drawing the knife along the groove. In this way not only is the trimming cut gaged at the proper distance from the groove 10 and guided in a straight path parallel with said groove but the trimming knife cooperates with one of the side walls of the groove to trim the cover margin by a shearing action. After the cover portion 22 has been laid and trimmed as above described, it is stripped from the grooved portion of the heel breast and temporarily turned backwardly, as indicated at 28 in Fig. 3. Thereafter the opposite end portion 24 of the cover is laid against the heel breast in position to overlap all three of the grooves, as shown in Fig. 3. The portion 24 of the cover is then trimmed by the trimming knife 26 while the groove 16 is utilized in gaging the trimming cut. To this end, the knife 26 is projected into the groove 16 and drawn lengthwise of the groove across that part of the cover portion 24 which overlies the groove, thereby trimming the cover portion 24 along the line of the groove 16 and allowing a surplus for tucking into the groove 10 of the same width as the surplus previously allowed on the cover portion 28 for tucking into the groove 10. Both cover margins having been trimmed as described, the first trimmed margin 22 is superposed upon the last trimmed margin 24, as shown in Fig. 4. The overlapped cover margins 22 and 24 are then tucked into the groove 10 by means of a tucking tool, such as the tucking blade 30 shown in Figs. 4 and 5, the tucking blade being merely brought into engagement with the overlapped cover margins above the groove 10 and forced downwardly into the groove carrying the cover margins with it. As shown in Fig. 5, the opposite side walls of the groove 10 will yield outwardly as the tucking blade 30, together with the cover margins 22 and 24, enter the groove 10, the narrow portions of the heel between the middle groove 10 and the outer grooves 14 and 16 being displaced outwardly, as indicated in Fig. 5, to accommodate the thickness of the tucking blade and the cover margins. Upon withdrawal of the tucking blade 30 the resilience of the displaced portions of the heel at opposite sides of the groove 10 will

cause them to return to their normal positions, thereby closing up the space formerly occupied by the tucking tool and providing the desired tight joint between the tucked-in cover margins, as shown in Fig. 6.

In the heels shown in Figs. 1 to 6, inclusive, two grooves have been provided in addition to the groove for receiving the cover margins for permitting expansion of the center groove, but it will be apparent that the groove will be permitted to expand if only one of its side walls is made yielding by the presence of only a single additional groove beside the cover-receiving groove. A construction in which only one additional groove is provided adjacent to a cover-receiving groove is shown in Figs. 7, 8 and 9, wherein the invention is shown as embodied in a heel of the type disclosed in United States Letters Patent No. 1,704,204, granted March 5, 1929 upon application of the present inventor. The heel shown in Figs. 7 to 9 is characterized by having a groove 32 located adjacent to each lateral edge of the heel breast for the reception of the end portions of a side covering 34 (Fig. 9) and also the lateral margins of a separate covering 36 for the heel breast. As shown in these figures, the inner side walls of the grooves 32 are made yielding by the provision adjacent to each of said side wall of a second groove 38 which is parallel to the respective groove 32.

In covering a heel of the type shown in Figs. 7 to 9, the side covering 34 is wrapped around the rear and sides of the heel and the end portions 40 of the cover are laid over the grooved lateral margins of the heel breast after which they are trimmed by means of a trimming tool, as illustrated at 41 in Fig. 8, the trimming tool being guided by the inner grooves 38 so that the desired amount of surplus will be provided for tucking into the grooves 32. The trimmed edges of the cover 34 are then tucked into the grooves 32 after which the breast cover 36 is applied, the edges trimmed if necessary and then tucked into the grooves 32 beside the tucked-in portions of the cover 34. The presence of the grooves 38 permits expansion of the grooves 32 to facilitate the tucking in of the cover margins and subsequent contraction of the grooves 32 to facilitate the production of tight joints between the tucked-in portions of the side and breast coverings. The grooves 32 and 38 are curved to correspond to the curvature of the lateral edges of the heel breast and the thin strips 42 formed between these grooves are similarly curved and in order to insure that the curved strips 42 shall be sufficiently yielding and resilient to facilitate the tucking of the cover margins into the grooves 32 the strips 42 have a series of transverse slits 44 (Fig. 7) formed therein. These slits 44, which extend throughout the width of the strips 42, facilitate yielding of the strips 42 and make it practical to produce tight joints between the adjacent tucked-in cover margins even though the thin strips 42 are curved lengthwise to a substantial extent.

While the invention is herein illustrated in relation to Cuban heels it is not necessarily restricted thereto but is useful also in relation to other types of heels such as Louis heels.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A heel having a groove therein to receive a marginal portion of heel covering material applied to the heel, said groove being formed with an outwardly yielding side wall constructed and arranged to facilitate the tucking of said portion of the heel covering material into the groove.

2. A heel having a groove therein to receive a marginal portion of heel covering material applied to the heel, said groove having its opposite side walls resilient to permit widthwise expansion and contraction of the groove to facilitate the securing of one or more marginal portions of said heel covering material therein.

3. A heel having a groove therein to receive a marginal portion of heel covering material applied to the heel, and a second groove arranged closely adjacent to one of the side walls of the first groove to permit substantial yielding of said side wall to facilitate tucking of said marginal cover portion into said first groove.

4. A heel having a groove therein to receive a marginal portion of heel covering material applied to the heel, and additional grooves arranged one adjacent to each of the side walls of the first groove to permit substantial yielding of said side walls to facilitate tucking of said marginal cover portion into the first-mentioned groove.

5. A heel having three grooves extending heightwise of the heel along the middle portion of the heel breast, and a one-piece covering extending around the rear, side and breast faces of the heel and having its opposite end portions received in the middle groove.

6. A heel having two parallel grooves extending heightwise of the heel in closely adjacent relation, and a one-piece cover extending around the heel and having its opposite end portions tucked into one of said grooves.

7. A heel having a groove extending heightwise thereof, and a second groove arranged closely adjacent to one of the side walls of the first groove to permit substantial yielding of said side wall, and a covering for the portion of the heel adjacent to said grooves, the covering extending across the mouth of the second groove and having a marginal portion extending into the first groove.

8. The method of covering a heel having an expansible groove therein which comprises

applying a cover member to the heel, expanding the groove, and tucking said marginal portion of the cover member into said groove while the latter is expanded.

9. The method of covering a heel having an expansible groove therein which comprises applying a covering to the heel with opposite marginal portions of the covering overlapping and overlying said groove, expanding the groove, and simultaneously tucking said overlapping marginal portions of the covering into the expanded groove.

10. The method of covering a heel having an expansible groove therein which comprises applying a covering to the heel with opposite marginal portions of the covering overlapping and overlying said groove, and simultaneously expanding the groove and tucking both said marginal portions of the covering into the groove.

11. The method of covering a heel having a groove therein to receive one marginal portion of a heel cover member, and a second groove closely adjacent to the first groove which comprises applying a covering to the heel with one marginal portion of the covering overlying both of said grooves, and trimming said cover margin while utilizing said second groove as a gage to locate the trimming cut to provide a predetermined amount of surplus for tucking into said first groove.

12. The method of covering a heel having a groove therein to receive the marginal portions of a heel cover member, and two additional grooves arranged one closely adjacent to each side wall of the first groove which comprises applying to the rear and sides of the heel a covering having opposite end portions extending beyond the breast corners of the heel, laying one of said end portions against the heel breast and across all of said grooves, utilizing one of said additional grooves as a gage in trimming said cover margin to provide a predetermined surplus for tucking into the first groove, stripping said trimmed cover margin from the grooved portion of the heel breast and laying the opposite cover margin against the breast and across all of said grooves, trimming said last-mentioned cover margin to provide a predetermined amount of surplus for tucking into the middle groove, and thereafter tucking both of said cover margins into said middle groove.

13. The method of covering a heel having a groove therein to receive one marginal portion of a heel covering, and a second groove closely adjacent and parallel to the first groove which comprises applying a covering to the heel with one marginal portion of the covering overlying both of said grooves, and trimming the covering to provide sufficient surplus for tucking into the first groove by drawing a cutter along the second groove and across the portion of the covering which overlies said groove.

14. The method of covering a heel having a groove therein to receive one marginal portion of a heel covering, and a second groove closely adjacent and parallel to the first groove which comprises applying a covering to the heel with one marginal portion of the covering overlying both of said grooves, and utilizing a cutter in co-operation with one edge of the second groove to trim the cover by a shearing action to provide sufficient surplus for tucking into the first groove.

15. The method of covering a heel having a groove therein to receive one marginal portion of a heel covering, and two additional grooves arranged one closely adjacent to each side wall of the first groove which consists in applying a covering to the heel with one end portion of the covering overlying all of said grooves, utilizing a cutter in co-operation with one of said additional grooves to trim said marginal portion of the covering to provide sufficient surplus for tucking into the first groove, removing said trimmed portion of the cover from engagement with the surface of the heel in the vicinity of the grooves, laying the opposite end portion of the cover against the heel surface in position to overlie all of said grooves, utilizing a cutter in co-operation with the other of said additional grooves to trim said marginal portion of the cover to provide sufficient surplus for tucking into the first groove, and tucking both of said trimmed marginal portions into said first groove.

16. The method of covering a heel having a groove therein to receive one marginal portion of a heel covering, and two additional grooves arranged one closely adjacent to each side wall of the first groove which consists in applying a covering to the heel with one marginal portion of the covering overlying all of said grooves, utilizing a cutter in cooperation with one of said additional grooves to trim said marginal portion of the covering to provide sufficient surplus for tucking into the first groove, removing said trimmed portion of the cover from engagement with the surface of the heel in the vicinity of the grooves, laying the opposite end portion of the cover against the heel surface in position to overlie all of said grooves, utilizing a cutter in co-operation with the other of said additional grooves to trim said marginal portion of the cover to provide sufficient surplus for tucking into the first groove, laying the first trimmed end portion of the cover over the last trimmed end portion, and simultaneously tucking both said marginal portions of the cover into the first groove.

17. The method of covering a heel having a groove therein to receive the opposite end portions of the cover, and two additional grooves arranged one closely adjacent to each

side wall of the first groove which comprises laying one end portion of the cover against the heel in position to overlie all of said grooves, laying the opposite end portion of the cover over the first end portion in position to overlie all of said grooves, and tucking said overlapped end portions into the first groove by a single operation of a tucking tool.

18. A heel having a groove therein to receive a marginal portion of heel covering material applied to the heel and having a second groove arranged closely adjacent to the first groove thus forming a thin strip of heel material between the grooves, said strip being provided with transverse slits arranged to facilitate yielding of the strip to permit expansion and contraction of the first-mentioned groove.

In testimony whereof I have signed my name to this specification.

WILLIAM H. NUTT.