Oct. 7, 1941. F. SCHWARTZ 2,258,265

SHOE

Filed Sept. 17, 1940

Fig. 9.

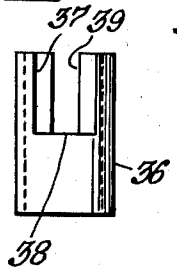


Fig. 10.

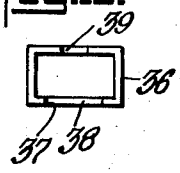


Fig. 1.

Fig. 2.

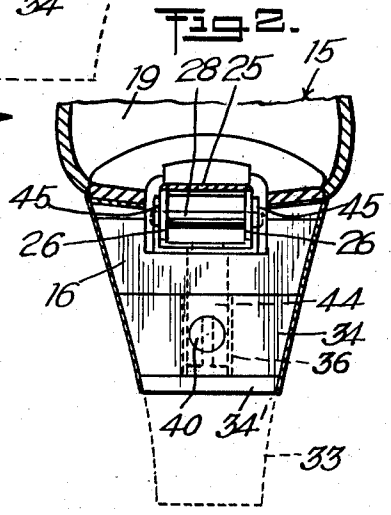


Fig. 3.

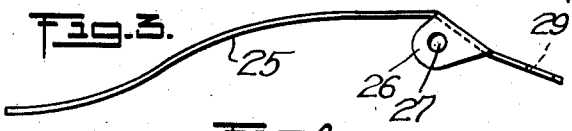


Fig. 4.

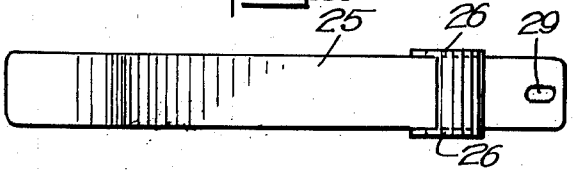


Fig. 5.

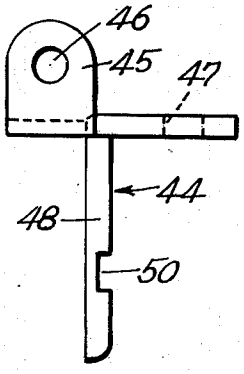


Fig. 6.

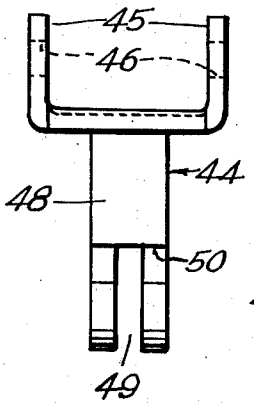


Fig. 7.

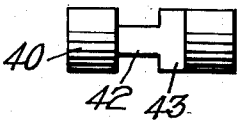


Fig. 11.

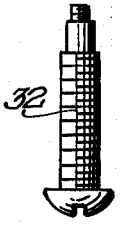
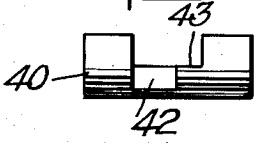


Fig. 8.



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2,258,265

SHOE

Frederick Schwartz, Brooklyn, N. Y.

Application September 17, 1940, Serial No. 357,078

7 Claims. (Cl. 36—2.5)

This invention relates to improvements in shoes, and more particularly to detachable heels.

Objects

Among the principal objects which the present invention has in view are: to provide an improved shoe construction whereby varying heights of heels may be removably attached and detached from a fixed heel portion thereof; to provide means for securely attaching a secondary heel to the heel portion of a shoe; to utilize means for detaching a secondary heel from the heel portion of a shoe; to provide means for adjusting the forward part of a shoe in accordance with the height of heel removably attached to a heel portion of the shoe; to be enabled to use any height heel on a shoe without distorting the shoe construction; to secure simplicity of construction and operation; and to obtain other advantages and results as may be brought out in the following description.

Drawing

Figure 1 is a longitudinal section of part of a shoe embodying my invention;

Figure 2 is a vertical sectional view shown as taken on line 2—2 of Figure 1;

Figures 3 and 4 are side elevation and top plan views of one of the operating parts used in connection with the invention; and

Figures 5 to 11 inclusive are elevations of several other parts used in connection with the invention.

Description

As will be seen from the drawing, the several figures are particularly directed to a heel construction of a shoe 15 and the parts utilized for operating when desiring to removably attach or detach secondary heels of varying heights to a fixed heel portion 16. As will be readily seen the portion of a shoe illustrated may be adapted for use by women, though it is to be understood that the invention is not necessarily restricted to women's shoes, as the invention very conveniently can be used in the construction of shoes for men, as well and for many purposes. The showing of the shoe 15 and fixed heel portion 16 includes the usual insole 17, outer sole 18 and back portion 19.

In carrying out the invention the fixed heel portion 16 may be conveniently attached to the back of the shoe in accordance with methods employed in manufacturing shoes and as will be understood by those skilled in the art. Said fixed heel may conveniently be provided with a recess 20 and as providing a shoulder 21 which extends from the inside part thereof and outwardly towards the back part with the recess extending all the way to the top of the heel thereby providing an open front and top for substantially the width of said heel. Said heel may preferably be provided with an angularly disposed opening 22 extending upwardly from the bottom of the heel to the shoulder portion 21 and towards the outer part thereof, the purpose of which will hereinafter be described. Other openings 23 and 24 likewise are provided in said fixed heel, with the one said opening 23 being towards the inner side of the heel and the other said opening approximately centrally of said heel. In the construction of the shoe and fixed heel there may be provided a shank iron 25 with its forward part imbedded between the inner sole 17 and outer sole 18. The said shank iron towards its other end is shaped to provide a pair of downwardly bent ears 26, 26 along the edges thereof with each said ear having a hole 27, through which is inserted a pin 28 thereby allowing the shank to be pivoted and adjusted as desired. Adjacent the outer end of the said shank iron an elongated opening 29 is provided. The shank iron protruding away from the ears 26, 26 towards the outer end may normally be angularly disposed so as to engage a metal or the like plate 30 held fast with respect to the shoulder 21 by virtue of a bolt 31 extending upwardly through the opening 23.

A bolt 32 is loosely inserted in the opening 22 of the fixed heel 16 and threaded upwardly through the plate 30. The upper end of said bolt 32 preferably is of a diameter slightly less than the body portion with said part passing through the opening 29 of the shank iron and providing a further reduced portion to which a collar 33 may be securely attached. Since the portion of the bolt passing through the elongated opening 29 is of a reduced diameter there will be sufficient clearance on either side whereby when the shank is adjusted to a raised position by virtue of adjusting the threaded bolt 32, the clearance will allow proper adjustment.

As shown in Figure 1 a low heel 34 is illustrated as removably attached to the fixed heel 16 and which may be considered an important feature of the present invention. The showing is of a low heel or "cuban" heel and is provided with a lift 34' on the bottom thereof. An opening 35 extends centrally and inwardly from the inner wall towards the back part of the heel and a vertically disposed rectangular opening 36' ex-

tends upwardly from the bottom of the heel to the top and preferably bisects the horizontal opening 35. Said rectangular opening 36' in practice is in registration with the opening 24 of the fixed heel 16. A hollow rectangular shaped tubular member 36 is secured within the vertically disposed opening 36' and preferably extends the entire thickness of said heel, but not including the lift 34'. Said member preferably may be provided with a cut-away portion 37 substantially the width of said member and terminating approximately midway of the member and providing a shoulder 38 with said shoulder centrally of the opening 35. Another opening 39 is provided on the side opposite to the opening 37 and may be of a size approximately one-half that of the said opening 37. This second opening likewise preferably terminates about midway of the member and as providing a shoulder in registration with the shoulder 38. The said member 36 is held fast with respect to the opening 36' with the larger opening 37 preferably facing towards the inner side of the heel and the smaller opening 39 facing the back of the heel.

Another feature of the present invention resides in the means utilized in removably locking a low or high heel to the fixed heel 16 of the shoe 15. Such means preferably comprises a locking member or plunger 40 of a length less than the length of the horizontal opening 35 and preferably engages a coil spring 41 placed in the said opening. This said plunger 40 approximately midway may be provided with a notch 42 which extends substantially the diametrical thickness of the plunger and a second notch 43 adjacent the said first notch of a depth approximately one-half the diameter of the plunger. Both said notches in actual practice engage the respective openings 37 and 39 of the member 36 when desiring to attach or detach the heel 34 from the shoe.

Other means extend downwardly from the fixed heel 16 through the vertical opening 24 and the opening 36' of the removable heel. Said means preferably comprises a T-shaped member 44, clearly shown in Figures 5 and 6, and at one end of the top part thereof is bent upwardly to form a pair of ears 45 having openings 46. These ears and openings as shown in Figure 2 register with the ears 26 and openings 27 of the shank 25 and preferably support the shank iron by virtue of the pin 28 which allows a swinging movement of the shank when the bolt 32 is adjusting said shank in either upward or downward direction. The end opposite to the ears 45 is flat and is provided with a hole 47 and is juxtaposed to the shoulder 21 with the plate 30 overlying a portion thereof. The hole 47 is in registration with the opening 23 and held fast to the shoulder and plate 30 by the bolt 24 thereby preventing any lateral or other movement of the T-shaped member when the shank iron 25 is being adjusted.

A stem 48 integral with the top portion of the T-shaped member 44 extends downwardly into the opening 36 and is of a width substantially that of the inside diameter of the tubular member 36. Said stem at its lower end is provided with an open slot 49, the top of which protrudes slightly beyond the notches 42 and 43 and openings 37 and 39 and thereby prevents dislodgement or removal of the plunger 40 from the heel. A notch 50 may be provided on the one side of the stem and extending cross-wise of the slot 49 and functions as a stop for the inward and outward thrust of the plunger 40 when under the influence of the coil spring 41.

In carrying out the invention and when desiring to attach heels of varying sizes, the forward portion of the shoe may first be adjusted to accommodate such heels. If a high heel is to be attached, as shown in dotted lines of Figures 1 and 2, the bolt 32 is screwed upwardly which will raise the rear end of the shank iron 25 to its uppermost position. When the rear end of the shank iron is thus raised, the forward portion of the shoe will be lowered by virtue of the pivoted connection and will assume the position as shown by the dotted lines of Figure 1. Since the forward part of the shoe has been properly adjusted the heel may now be attached. The plunger 40 is pressed inwardly so that the larger notch 42 will be past the larger opening 37 of the tubular member 36 and at the same time be in engagement with the notch 50 of the T-shaped member 44. Upon releasing the inwardly directed pressure of the plunger, the said plunger under influence of the spring 41 will snap back into normal position and the smaller notch 43 will then engage the smaller opening 39 of the member 36 thereby securely locking the heel to the fixed heel 16 of the shoe. When desiring to remove either the high or low heel from the fixed heel portion, the same procedure as that for attaching the heel may very conveniently be followed and proper adjustment of the forward part of the shoe be carried out before attaching another heel.

Obviously detail changes and modifications may be made in the construction and use of my improved shoe without departing from the spirit and scope of the invention, and I do not wish to be understood as limiting myself to the exact construction or operation shown or described except as set forth in the following claims when construed in the light of the prior art.

I claim:

1. A shoe of the character described comprising a fixed heel portion having a cut-away portion, a shank iron pivotally secured therein, and means for adjusting said shank iron for accommodating removable heels of varying sizes to said fixed heel portion.

2. A shoe of the character described comprising a fixed heel portion having a cut-away portion, a shank iron pivotally secured therein, a T-shaped member attached in said cut-away portion, said T-shaped member having a part extending downwardly through and beyond the fixed heel portion adapted to removably secure a heel of varying sizes to the fixed heel portion.

3. A shoe of the character described comprising a fixed heel portion having a cut-away portion, a shank iron pivotally secured therein, a T-shaped member attached in said cut-away portion, said T-shaped member having a part extending downwardly through and beyond the fixed heel portion adapted to removably secure a heel of varying sizes to the fixed heel portion, and said heel providing means for locking the removable heel with respect to the fixed heel portion.

4. A shoe of the character described comprising a fixed heel portion having a cut-away portion, a shank iron pivotally secured therein, a T-shaped member attached in said cut-away portion, said T-shaped member having a part extending downwardly through and beyond the fixed heel portion adapted to removably secure a heel of varying sizes to the fixed heel portion, said

heel providing means for locking the removable heel with respect to the fixed heel portion, and adjusting means whereby the shank iron may be raised and lowered when accommodating the heels of varying sizes.

5. A shoe of the character described comprising a fixed heel portion having a cut-away portion, a shank iron pivotally secured therein, a T-shaped member attached in said cut-away portion, said T-shaped member having a part extending downwardly through and beyond the fixed heel portion adapted to removably secure a heel of varying sizes to the fixed heel portion, and said heel providing an inwardly directed plunger having means for engaging the downwardly extending part of the T-shaped member for securely locking the heel to the fixed heel portion.

6. A shoe of the character described comprising a fixed heel portion having a cut-away portion, a shank iron pivotally secured therein, a T-shaped member attached in said cut-away portion, said T-shaped member having a part extending downwardly through and beyond the fixed heel portion adapted to removably secure a heel of varying sizes to the fixed heel portion, said heel providing an inwardly directed plunger having means for engaging the downwardly extending part of the T-shaped member for securely locking the heel to the fixed heel portion, and another part of the T-shaped member extending upwardly into the cut-away portion and held fast with respect to the pivoted shank iron.

7. A shoe of the character described comprising a fixed heel portion having a cut-away portion, a shank iron pivotally secured therein, a T-shaped member attached in said cut-away portion, said T-shaped member having a part extending downwardly through and beyond the fixed heel portion adapted to removably secure a heel of varying sizes to the fixed heel portion, said heel providing an inwardly directed plunger having means for engaging the downwardly extending part of the T-shaped member for securely locking the heel to the fixed heel portion, and another part of the T-shaped member extending upwardly into the cut-away portion and held fast with respect to the pivoted shank iron, and adjusting means extending upwardly from the fixed heel portion attached to an end of the shank iron whereby said shank iron may be adjusted dependent upon the size of heel removably attached to the shoe.

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