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2,940,184

MUSICAL SHOE HEEL

Filed Sept. 18, 1959

FIG-1

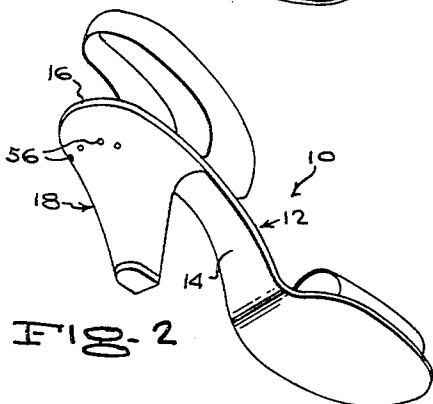
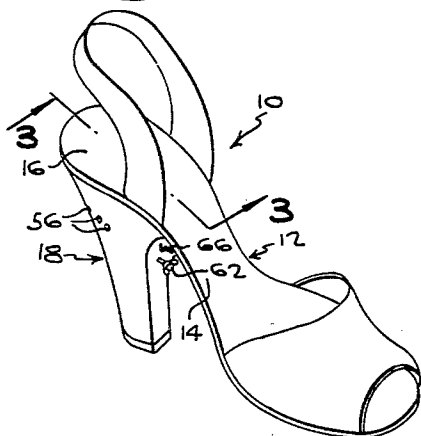


FIG-2

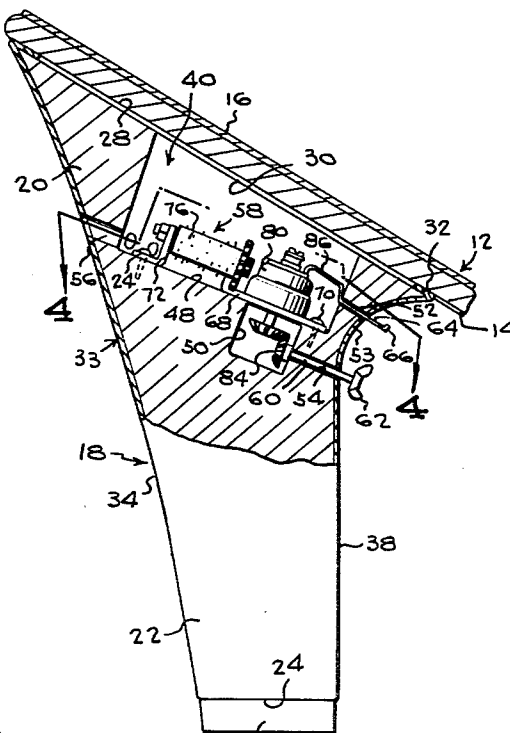


FIG-3

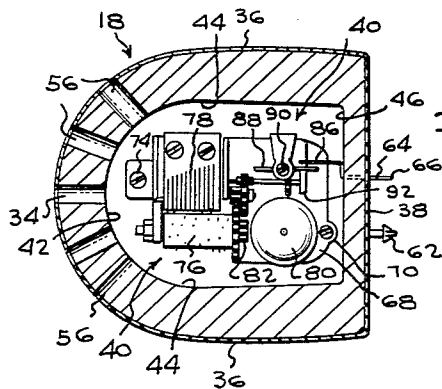


FIG-4

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MUSICAL SHOE HEEL

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3 Claims. (Cl. 36—1)

This invention relates to a musical shoe heel.

The primary object of the invention is to provide an amusing and diverting device of this kind wherein a spring-driven music box mechanism is enclosed within a lady's tapered high heel, and has winding means and shut-off means, which are readily accessible from outside of the heel, and which are protectively located at the front side of the heel and beneath the shank of the shoe, whereby the wearer of the shoe can easily and conveniently wind the mechanism, and shut the same on and off whenever desired.

Another object of the invention is to provide a device of the character indicated above which is practical and feasible from the standpoints of easy manufacture and of secure attachment to a shoe, and which does not detract materially from the normal strength and stability of the heel, and wherein the mechanism is enclosed within the heel in a manner to exclude dirt and moisture therefrom.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only, a specific form of the invention is set forth in detail.

In the drawings:

Figure 1 is a front perspective view of a lady's shoe having a musical heel in accordance with the present invention;

Figure 2 is a rear perspective view of the shoe;

Figure 3 is an enlarged fragmentary vertical longitudinal section taken on the line 3—3 of Figure 1; and

Figure 4 is a horizontal section taken on the line 4—4 of Figure 3.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, the illustrated shoe, generally designated 10, comprises a sole 12, having a shank portion 14, and a heel portion 16 to the underside of which is secured, in suitable manner, a tapered musical heel 18.

The heel 18 comprises an upwardly flared upper portion 20, which is larger in cross section, than the downwardly tapered lower portion 22, which has a lower end 24 to which a lift 26 may be secured. The upper heel portion 20 has a forwardly canted or declining upper end or surface 28, which is secured, in suitable manner, to the underside 30 of the heel portion 16 of the sole 12, as with the upper edge 32 of a heel cover 33, engaged between the surface 28 and the heel portion, as shown in Figure 3.

Formed in the upper end 28 of the heel 18, preferably centrally therein and in spaced relation to the back 34, the sides 36, and the heel breast 38, of the heel, is a recess 40, which opens to the upper end 38. As seen in Figure 4, the recess 40 is preferably of truncated oval or elliptical shape, which provides an arcuate rear wall 42 which conforms to the curvature of the heel back 34, straight side walls 44 which conform generally to the

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shape of the heel sides 36, and a straight front wall 46 which parallels the heel breast 38 of the heel. These walls are preferably at right angles to a recess bottom 48, which is preferably forwardly canted, substantially like the upper end 28 of the heel. In the recess bottom 48 a relatively small area sub-recess 50 is provided, which is displaced toward one side of the recess 48 and is located near the front recess wall 46. Leading forwardly from the recess 48, at a level spaced the bottom 48 is an upper bore 52 which opens to the concave upper portion 53 of the heel breast 38. Leading forwardly from the sub-recess and opening to the heel breast 38 on a level spaced below the upper bore 52, is a lower bore 54. The underside 30 of the sole heel portion 16 is in closing relation to the open top of the recess 40.

Leading rearwardly and laterally from the recess 40, from its arcuate rear wall 42 and opening to the back 34, is a plurality of radial, circumferentially spaced sound holes or bores 56, for carrying musical sounds from the recess 40 to the atmosphere outside of the heel 18, so that it may be clearly audible to the wearer of the shoe 10 and to other persons nearby.

Located within the recess 40 is music-producing means, generally designated 58, which can suitably comprise a spring-driven Swiss music box mechanism, which has a winding shaft 60 which extends through the lower bore 54 and has a manual key 62 on its forward end, which is located close to the heel front 38; and a push-pull starting and stopping bar 64, which works through the upper bore 52, and has a manual knob 66 on its forward end, which is exposed close to the heel breast 38, specifically at the concave upper portion 53 thereof. This arrangement of the winding means and the start-and-stop means places these components protectively close to the underside of the sole shank, and to the heel breast 38, and at an elevated level above the lower end of the heel 18, so that objects usually encountered in walking surfaces cannot reach and injure or vagrantly operate these components. The bores receive the components sufficiently snugly to prevent the entrance of dirt and moisture into the recess 40 and the sub-recess 50.

The music mechanism 58 can comprise a forwardly located base plate 68, secured as indicated at 70, to the recess bottom 48, and a rearwardly located bracket 72, secured as at 74 to the recess bottom 48. A toothed rotor 76 and flexible sounding bars 78 are mounted on the bracket 72, in cooperative relation, and a driving opening assembly 80 is mounted on the base plate 68 and is geared, as indicated at 82, to the rotor 76. The winding shaft 60 is geared to the assembly 80, within the sub-recess 50, as indicated at 84, and the start-and-stop bar 64 has on its rear end, within the recess 40, an offset element 86 which is operatively engageable, in endwise movement of the bar 64, with a brake 88 pivoted at 90, on the base and which is engageable with a brake wheel 92, of the gearing 82, by the element 86, in the pushed-in position of the bars 64, to stop operation of the mechanism 58.

To decorate the heel 18 and to disguise the sound holes 56, such as rhinestones can be secured to the heel back 34, in the regions of these holes.

Although there has been shown and described herein a preferred form of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structure of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. A musical shoe heel comprising a tapered heel body having an enlarged upper end portion, a recess formed in said upper end portion and spaced from the exterior of

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the heel body, sound holes in said body leading from said recess to the exterior of the body, and music mechanism mounted within said recess, said mechanism being spring-driven and have winding and stopping means at the exterior of heel body.

2. A musical shoe comprising a sole having a shank portion and a heel portion, a tapered heel having a larger cross section upper portion and a smaller cross section lower portion, said larger heel portion having an upper end secured to the underside of said heel portion of the sole, said upper end being formed with a centered recess opening to said upper end and spaced from the exterior of the heel, said recess being closed by said heel portion, sound holes leading from said recess to the exterior of the heel, first and second bores leading from said recess to the exterior of the heel, a winding shaft extending through said first bore to the exterior of the heel, a start-and-stop bar extending through said second bore to the exterior of the heel, and spring-driven music mechanism mounted within said recess to which the winding shaft and the said bar are severally operatively connected.

3. A musical shoe comprising a sole having a shank portion and a heel portion, a tapered heel having a larger cross section upper portion and a smaller cross section

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lower portion, said larger heel portion having an upper end secured to the underside of said heel portion of the sole, said upper end being formed with a centered recess opening to said upper end and spaced from the exterior of the heel, said recess being closed by said heel portion, sound holes leading from said recess to the exterior of the heel, first and second bores leading from said recess to the exterior of the heel, a winding shaft extending through said first bore to the exterior of the heel, a start-and-stop bar extending through said second bore to the exterior of the heel, and spring-driven music mechanism mounted within said recess to which the winding shaft and the said bar are severally operatively connected, said heel having a back through which said sound holes open, said heel having a heel breast through which said first and second bores open, the winding shaft and the start-and-stop bar being located close to the underside of the shank portion of the sole.

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