May 8, 1951 J. JOHNSON 2,552,096

GUARD

Filed Aug. 11, 1949

Fig. 1.

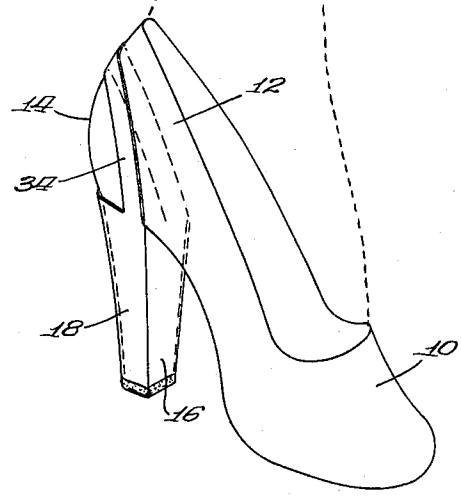


Fig. 2.

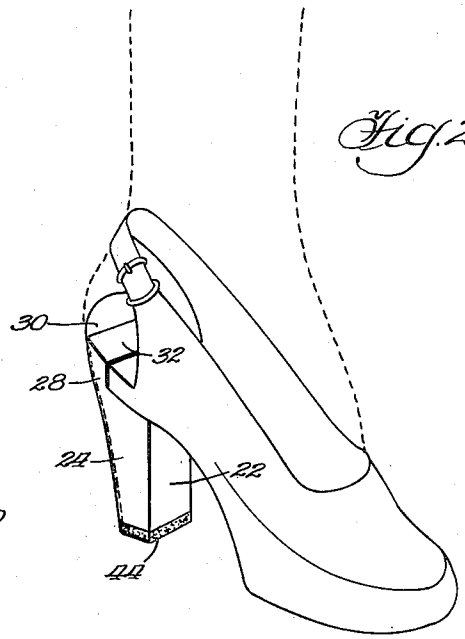


Fig. 3.

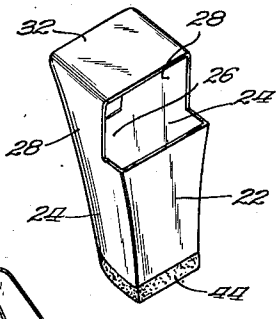


Fig. 4.

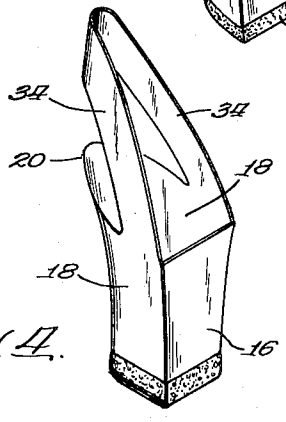


Fig. 6.

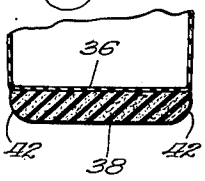
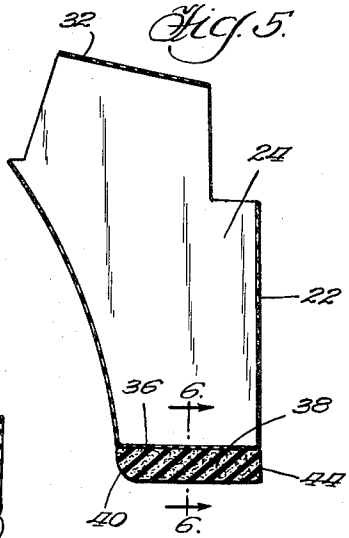


Fig. 5.



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GUARD

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4 Claims. (Cl. 36—70)

1

My invention relates to footwear and includes among its objects and advantages the providing of an effective and simple heel guard for women's shoes.

In the accompanying drawings,

Figure 1 is a perspective of an ordinary women's shoe indicating a guard according to the invention assembled therewith;

Figure 2 is a similar perspective of a woman's shoe having no upper at the rear and indicating the form of guard adapted for use with such a shoe;

Figure 3 is a perspective of the guard of Figure 2 by itself;

Figure 4 is a perspective of the guard of Figure 1 by itself;

Figure 5 is a longitudinal section of the guard of Figure 3; and

Figure 6 is a transverse partial section as on the line 6—6 of Figure 5.

In the embodiment of the invention selected for illustration, the shoe of Figure 1 includes the closed toe 10 and the conventional upper 12 defining a curved heel portion 14 at the back end. The guard for such a shoe includes a cup of thin wall elongatable elastic material such as rubber, defining a front or breast wall 16, side walls 18 and a curved rear wall 20 merging into the side walls. These parts are made of a size such that assembling the guard as shown in Figure 1 stretches the side walls at least a little but not enough to make it difficult for the wearer to slip the guard in place. Because of the taper of the shoe heel, it is easy to have the upper portion of such a cup large enough to slip freely over the lower end of the heel and only begin to grip after it has been slid partway up.

Referring to Figures 2 and 3, the front or breast wall 22 may or may not be a little shorter than the breast wall 16 and the same applies to the side walls 24 and the curved rear wall 26. Because the shoe of Figure 2 has no curved portion corresponding to the portion 14 of Figure 1, but that space is occupied by the heel of the foot of the wearer, I provide for the guard of Figures 2 and 3 a relatively short wide strap extending up at 28 past either side of the heel portion of the sole 30 and a horizontal top reach 32 which lies on top of the sole and under the heel of the user.

For similar support in the embodiment of Figures 1 and 4, I provide a longer narrower strap rising diagonally from the forward portions of

2

the side walls 18 to extend up on either side of the heel member 14 as indicated at 34.

Both guards would probably stay in place fairly well under most conditions without the holding straps, but the addition of the holding straps renders the assembly reliable under substantially all conditions.

Both cups have integral bottoms extending across under the bottom of the shoe heel. Referring to Figures 5 and 6 the bottom of the cup of Figures 2 and 3 is indicated at 36. To the bottom I affix a ground-engaging member. The ground-engaging member illustrated is a pad 38 of fairly stiff sponge rubber. At least the side and rear edges of the pad 38 are rounded off as indicated at the rear at 40 in Figure 5 and at the sides at 42 in Figure 6. The front or breast of the pad at 44 need not necessarily be thus rounded. The purpose of the rounding is to increase the action of the guard in avoiding spattering. Although one function of the guard is to protect the heel on which it is mounted from dirt and wet, an equally if not more important function is to avoid the spattering of wet and dirt. When either heel of an ordinary shoe is put down, the liquid trapped under the flat bottom of it squirts out, and drops fly outward, and some of the drops fly appreciably upward, and the other ankle and shoe of the wearer becomes bespattered with such drops. Because of the curvatures at 40 and 42, liquid issuing laterally from beneath the flat portion of the pad 38 will not acquire much velocity until a substantial body of liquid lies beside the pad in contact with the curved portion 40 and 42, and this relatively stagnant body of liquid receives the energy of the liquid squirting out from under the flat portion and retards it so much that spattering from one heel to the other ankle and shoe is substantially eliminated.

Because the breast 44 would sprinkle only the under surface of the heel of the same shoe, the necessity for rounding it is materially less, and I prefer to leave it as indicated in the drawings.

Others may readily adapt the invention for use under various conditions of service by employing one or more of the novel features involved, or equivalents thereof. It will be obvious that a lady wearing no stockings and a shoe according to Figure 2 could use either guard. The guard of Figure 1 can be worn with its strap 34 in contact with a stocking, but it tends to pull the stocking out of place a little. A reinforcement of thin plastic under the upper half of the strap 34 largely eliminates any tendency to pull out

of place. As at present advised with respect to the apparent scope of my invention, I desire to claim the following subject matter:

1. A heel sheath for use in combination with a conventional shoe having no upper at the rear end, comprising, in combination: a cup member of flexible, elongatable sheet material; said member, in undistorted condition, being slightly smaller than the heel to which it is to be applied; and a mechanical pad underlying the bottom wall of said cup member and affixed thereto; said pad having a flat bottom and vertical sides; the sideward and rearwardly facing sides of said pad having their lower portions curved inward at a substantial radius to merge tangentially with the flat bottom; the breast of said heel pad having a sharp lower corner; the upper side portions of said cup being extended and joined above the top of the cup; said extensions defining a resilient loop to overlie the heel portion of the sole of the shoe; said loop and cup being of rubber; said pad being of sponge rubber.

2. A heel sheath for use in combination with a conventional shoe having no upper at the rear end, comprising, in combination: a cup member of flexible, elongatable sheet material; said member, in undistorted condition, being slightly smaller than the heel to which it is to be applied; and a mechanical pad underlying the bottom wall of said cup member and affixed thereto; said pad having a flat bottom and vertical sides; the sideward and rearwardly facing sides of said pad having their lower portions curved inward at a substantial radius to merge tangentially with the flat bottom; the upper side portions of said cup being extended and joined above the top of the cup; said extensions defining a resilient loop to overlie the heel portion of the sole of the shoe; said loop and cup being of rubber; said pad being of sponge rubber.

3. A heel sheath for use in combination with a conventional shoe having no upper at the rear end, comprising, in combination: a cup member of flexible, elongatable sheet material; said member, in undistorted condition, being slightly smaller than the heel to which it is to be applied; and a mechanical pad at the bottom of said cup member and affixed thereto; the upper side portions of said cup being extended and joined above the top of the cup; said extensions defining a resilient loop to overlie the heel portion of the sole of the shoe and hold the sheath in place.

4. A heel sheath for use in combination with a conventional shoe having no upper at the rear end, comprising, in combination: a cup member having side walls of flexible, elongatable sheet material; said side walls, in undistorted condition, being slightly smaller than the heel to which they are to be applied; the upper side portions of said cup being extended and joined above the top of the cup; said extensions defining a resilient loop to overlie the heel portion of the sole of the shoe.

JOSEPH JOHNSON.

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