Jan. 5, 1943. K. R. MOEN 2,307,699

BOWLING FOOTWEAR

Filed Dec. 2, 1940

Fig. 1

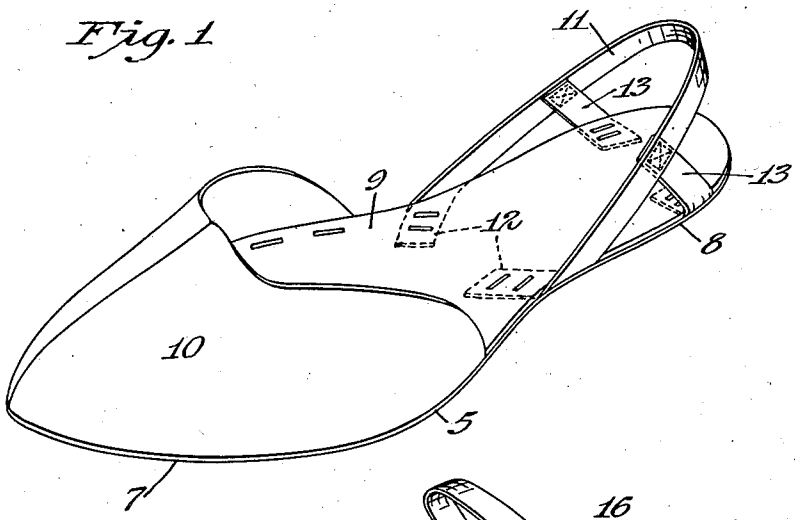


Fig. 2

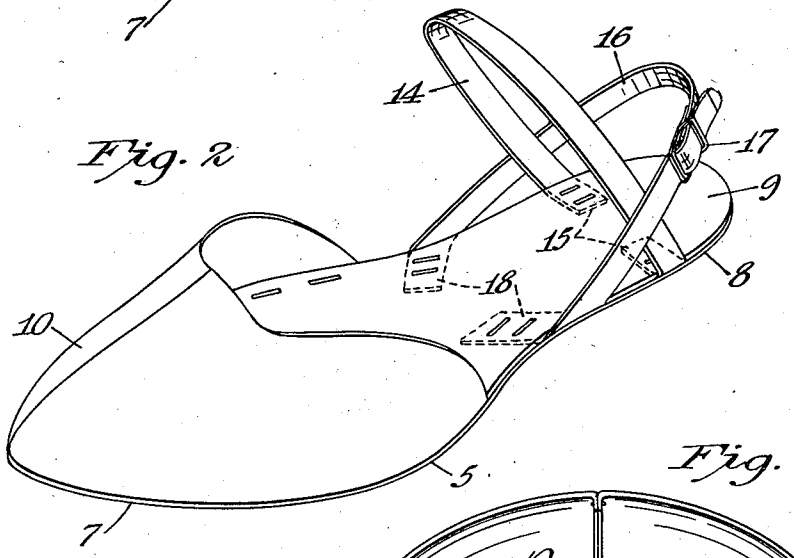


Fig. 3

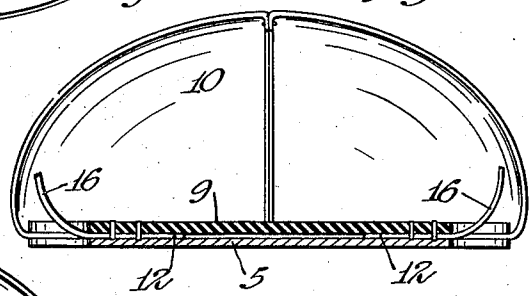
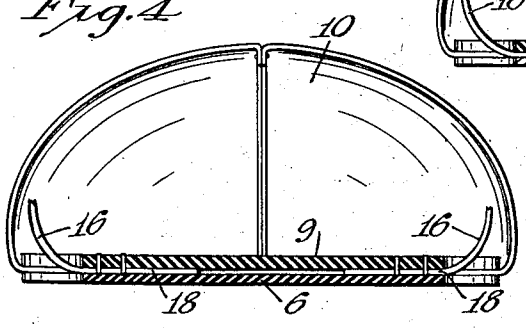


Fig. 4



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UNITED STATES PATENT OFFICE

2,307,699

BOWLING FOOTWEAR

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2 Claims. (Cl. 36—7.5)

Much damage is done to public bowling alleys where the players are permitted to wear ordinary shoes because many players wear shoes having nails, metal plates or the like on the soles which gouge and roughen the floors to such an extent that the smooth surface required for accurate play is destroyed. The owners of alleys cannot prevent players from sliding out onto the crowned portions of the alleys and it has also been found impractical to prevent the damage cause by improper footwear by requiring players to wear expensive bowling shoes.

It is an object of this invention to provide an inexpensive, light weight and highly efficient substitute for expensive bowling shoes.

A particular object is to provide sandle-like footwear adapted to be worn over ordinary shoes and provided with flexible inner and outer soles, the inner soles being constructed from material adapted to adhere to and prevent slipping of the soles of the ordinary shoes within the sandals and the bottom or outer soles of my improved sandals being constructed from such materials as to allow ready sliding on the alley with one foot, while the other has an adherent rubber or rubber-like sole adapted to minimize slipping.

A further object is to provide novel toe and heel bindings for sandal-like bowling footwear adapted to be worn over ordinary shoes and whereby the slipping of the shoes in the sandals under the severe shearing forces exerted in playing this particular game is prevented.

The invention will be best understood by reference to the accompanying drawing in which:

Figure 1 is a perspective view of one of my improved sandals showing bindings of one suitable type;

Fig. 2 is a similar view illustrating another and somewhat stronger form of heel binding, and

Figs. 3 and 4 are cross sections through the instep portions of the sandals respectively of a pair.

It will be understood that bowling shoes should be so constructed that one foot of the wearer slides easily and the other foot should adhere to the floor to afford control. To meet this requirement, I construct one of the sandals of each pair with an outer sole 5 of suitable soft leather, such as elk hide, which will slide readily on the hardwood floors of bowling alleys (see Fig. 3). As shown in Fig. 4, the other sandal of a pair is provided with an outer sole 6 of soft, flexible rubber having a much higher coefficient of friction on the wood floors. Both soles extend the entire length of the foot, being provided with toe portions 7, heel portions 8 and intermediate instep portions. Registering with the outer soles 5 and 6 are inner soles 9 which may be fastened to the outer soles either by adhesive or by sewing. These inner soles are constructed from soft rubber or other gum material, either natural or artificial, adapted to firmly adhere to the soles of the ordinary shoes worn by the players.

Flexible toe caps 10 are fastened to the margins of the toe portions 7 of the soles and extend a considerable distance along the side edges of the latter toward the instep portion thereof. The toe portions of the soles and toe caps 10 are preferably formed to converge substantially to a point at the front so that shoes of various sizes, within certain limits, may be firmly held by wedge action in the toe of the sandal. Heel bindings are provided to not only hold the heel of the sandal in firm contact with the heel of the shoe, but also to force the shoe of the wearer firmly into the toe cap of the sandal. As illustrated in Fig. 1, the heel binding comprises an elastic heel band 11, forming a loop, with its ends 12 secured between the inner and outer soles at opposite sides of the instep portion thereof, and extending obliquely upward and to the rear for embracing the heel of the shoe of the wearer. At each side of the heel I provide an elastic band 13 which is fastened at one end to the band 11 and at the other end to the heel portion of the sole.

The heel binding illustrated in Fig. 2 comprises an elastic band 14 forming a loop and having its ends 15 secured to the heel portion of the sole at opposite sides. This band normally extends obliquely forward and upward from the sole portion of the heel to embrace the instep of the wearer and thereby resiliently retain the heel of the sandal in firm contact with the heel of the shoe of the wearer. A relatively inelastic strap 16 is arranged to extend obliquely to the rear and upwardly from the instep portion of the sole and is provided with a buckle 17 to permit it to be fastened around the heel of the wearer. Ends 18 of the strap 16 are fastened at opposite sides of the instep portion of the sole as in the case of the band 11.

My improved sandals are constructed throughout from light, flexible material. They are furnished in three sizes, small, medium and large. Due to the ready adjustability of the bindings and construction described, the great majority of bowlers may be properly fitted from these three sizes. For a right handed bowler the sandal having the slidable sole 5 is shaped to be worn on the left foot, while the sandal having the relatively adherent sole 6 is shaped for and worn on the

right foot of such a player. For a left handed bowler the sandal having the sole **5** is worn on the right foot while that with the sole **6** is worn on the left foot.

It is important that the sandals shall be held securely against movement relative to the shoe of the wearer under the shearing forces incident to the rather strenuous foot work required. By providing the inner soles **9** of soft rubber or similarly adherent material in combination with the toe caps **10** and secure heel bindings, my improved sandals are adapted to meet this requirement. The bindings have the further advantage of permitting quick and easy attachment to the shoes. The sandals are so light that they are peculiarly comfortable to wear and their cost is so low that all players can afford to wear them.

They are much in demand by public bowling alleys where, due to their low cost, they can be loaned to bowlers with resulting large savings in wear and tear on the alley floors.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A bowling sandal comprising, flexible inner and outer soles secured together in registry with each other, and having toe, instep and heel portions, a flexible toe cap adapted to engage shoes of various sizes, said cap extending continuously along opposite edges of the soles substantially to the instep portion thereof and a heel binding including a flexible, elastic member having its ends secured to opposite sides of said instep portion of the sole and extending obliquely to the rear and upward therefrom and short elastic members connecting opposite sides respectively of the heel portion to said first mentioned member for adjustably embracing the heel of the wearer.

2. A bowling sandal adapted to be worn over a conventional shoe comprising: a sole having a forward portion the side edges of which converge toward each other, a substantially inelastic, flexible cap for said portion of the sole adapted to receive the toe of a shoe, said cap extending continuously along and being fastened to the converging edges of the sole substantially to the widest part of said sole whereby forward sliding movement of a shoe relative to the cap and sole is prevented by wedging action and heel binding means secured to said sole and arranged to maintain the toe of the shoe in engagement with said cap and to retain the inner surface of said sole in engagement with the heel of said shoe.

KENNETH R. MOEN.