June 26, 1934. J. PELLKOFER 1,964,406

SANDAL

Original Filed Jan. 10, 1931

Fig. 1

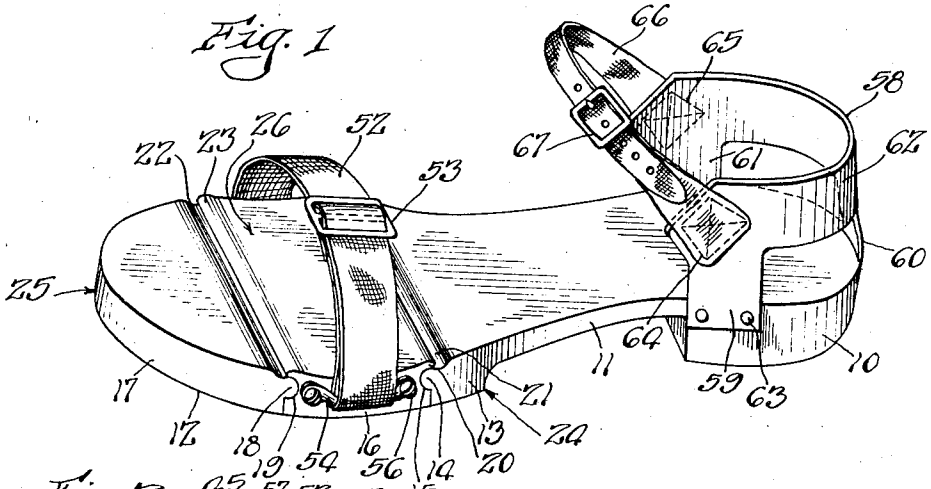


Fig. 2

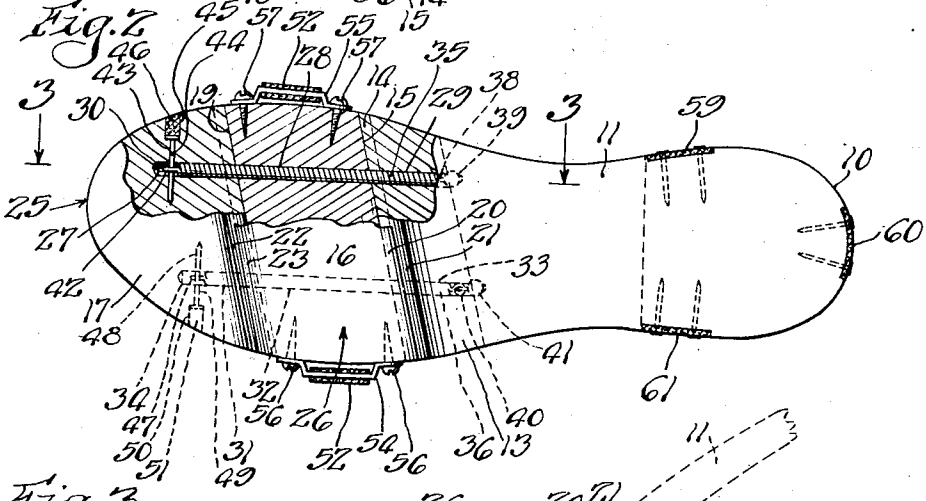
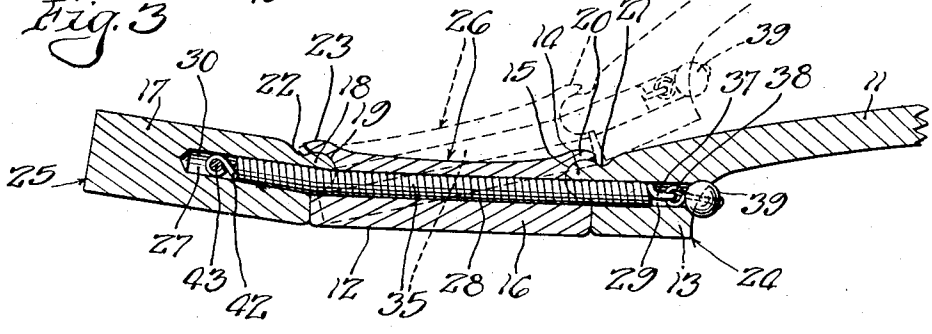


Fig. 3



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SANDAL

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Application January 10, 1931, Serial No. 507,953
Renewed February 15, 1934

3 Claims. (Cl. 36—11.5)

This invention relates to certain novel improvements in sandals, and has for its principal object the provision of an improved construction of this character which will be highly efficient in use and economical in manufacture.

The salient object of this invention is the provision of an improved sandal which is particularly adapted to be worn on a bathing beach or other similar place of outdoor recreation.

Another object of the invention is the provision of an improved sandal embodying an articulated toe portion which accommodates the sandal to the natural movement of the foot in walking.

A further object of the invention is the arrangement of the articulated sections of the toe portion of the sandal in such a manner that these articulated sections will not pinch or otherwise injure the foot of the wearer.

An additional object of the invention is the arrangement and construction of these articulated sections in such a manner that they are not injured by the action of water thereon.

Still another object of the invention is the provision of an improved sandal of the character described herein which embodies an improved harness which is light in construction, resistant to the action of water and exposure to the weather, while being comfortable and durable in use.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawing showing the preferred form of construction, and in which:

Fig. 1 is a perspective view depicting a preferred form of construction of my improved sandal;

Fig. 2 is a plan view partly in section of the invention as depicted in Fig. 1; and

Fig. 3 is a sectional view substantially on the line 3—3 of Fig. 2.

Referring to the drawing wherein a preferred form of construction of the invention is illustrated, indicated at 10 is the heel portion of my improved sandal, integral with which is the instep portion 11. My improved sandal is preferably made of a suitable wood and includes a sole generically indicated at 12 and the construction of which will now be described.

In this connection there is provided in the forward end portion 13 of the instep section 11 a tongue 14 which is adapted to fit into and articulate in a groove 15 which is provided in the middle section 16 of the sole 12. The sole 12 includes the toe portion 17 in the rear side of which is provided a tongue 18 that is adapted to fit into and articulate in a groove 19 that is provided in the front side of the middle section 16 of the sole 12, as shown in Fig. 3.

The groove 15 defines a lip 20 in the middle section 16 and this lip 20 in the use of the sandal is adapted to move over the upper surface of the tongue 14 and alternately into and out of a groove 21 that is provided in the portion 13 as the foot is flexed while walking. A groove 22, similar to the groove 21, is provided in the toe portion 17. The groove 19 defines a lip 23 that co-operates with the tongue 18 and groove 22 while the person wearing the sandal is walking and it is apparent that as my improved sandal is flexed as the wearer walks thereon the toe portion 17 and the middle section 16 of the sole conform to the movement of the toes and small bones of the foot while the lips 20 and 23 prevent pinching of the wearer's foot while walking.

As shown in Fig. 3, the normal position of the sole 12 when at rest is such as to describe a slightly concave curve in the bottom of the sole from the point 24 to the outer end of the toe portion 17 which is indicated at 25. Better to conform to the natural shape and movement of the foot the upper surface of the middle section 16 is formed slightly concave between the lips 20 and 23 as indicated at 26. Having now described in general the arrangement of the articulated sections of the sole of my improved sandal, the means providing flexure in these sections will now be described.

In this connection there are provided in the portions 17, 16, and 13 respectively aligned grooves 27, 28 and 29 which when referred to collectively hereinafter will be known as groove 30. A similar set of aligned grooves 31, 32, and 33 are provided in the portions 17, 16, and 13 respectively, and these grooves will be known collectively hereinafter as groove 34.

There is disposed in the groove 30 a coil spring 35 and a similar coil spring 36 is provided in the groove 34. As shown in Fig. 3, the groove 29 in the portion 13 of the sole opens rearwardly below the instep section 11 and the rear end portion 37 of the coil spring 35 is attached to the eyelet 38 of a button 39 which may be of any approved type, a suitable button being the round or ball type of button used on shoes. The rear end portion 41 of the coil spring 36 is attached to the eyelet of a button 41 which is similar to the button

39, it being understood, as shown in Fig. 2, that the button 41 is disposed at the outer end of the groove 33.

The front end portion 42 of the coil spring 35 is anchored to a nail 43 that is disposed in a recess 44 in the toe portion 17 of the sole. A plug 46 mounted in the recess 45 prevents water from attacking the nail 43, it being apparent, as shown in Fig. 2, that the recess 46 houses the head of the nail. A similar arrangement is provided for the forward end portion 47 of the coil spring 36 which is anchored by a nail 48 disposed in a recess 49 in the toe portion 17. The head portion of the nail 48 is mounted in a recess 50, similar to the recess 45, and the nail 48 is secured in position by a plug 51 that is mounted in this recess. It will be seen, therefore, that as the sole 12 and included articulated sections 16 and 17 move with the movement of the foot of the wearer the springs 35 and 36 are secured in position by means of the nails 43 and 48 and buttons 39 and 41.

Extending transversely across the middle section 16 is an adjustable strap 52 which is provided with a buckle structure 53. The strap 52 is secured in position by means of bars 54 and 55 which are attached to the sides of the middle section 16 by means of screws 56 and 57 or the like. A counter generically indicated at 58 is provided to accommodate the heel of the wearer, and this structure 58 is preferably though not necessarily of fibrous material. The counter 58 includes depending ear portions 59, 60, and 61 which are disposed at intervals about the body portion 62 of the counter. The ear portions 59, 60, and 61 are secured to the heel 10 of the sandal by means of suitable connecting elements 63.

Secured to the counter 58 in any suitable manner such as by stitching, as indicated at 64 and 65, is an adjustable strap 66, which is provided with a suitable buckle structure 67 for reasons well known in the art.

From the foregoing description of my invention it is apparent that I have provided an improved construction which while being simple and economical in manufacture is efficient and comfortable in use so as to accomplish the several objects pointed out hereinbefore.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

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

1. A sandal comprising an instep portion, and a sole including a toe portion, a middle section disposed between said toe portion and said instep portion, said middle section having concave grooves in the front and rear sides thereof, tongues on said toe portion and said instep portion co-operating with said grooves, said instep portion and said toe portion having transversely extending grooves therein on the upper surfaces thereof and parallel to said first mentioned grooves, lip portions on said middle section, said lip portions overhanging said first named grooves and adapted to co-operate with said second named grooves whereby to permit articulation between said toe portion, said middle section, and said instep portion, and means in said sole providing flexure between said toe portion, said middle section, and said instep portion.

2. A sandal comprising an instep portion and a sole including a toe portion, a middle section disposed between said toe portion and said instep portion, said middle section having concave grooves in the front and rear sides thereof, tongues on said toe portions and said instep portions co-operating with said grooves, said instep portion and said toe portion having transversely extending grooves therein on the upper surfaces thereof and parallel to said first mentioned grooves, lip portions on said middle section, said lip portions overhanging said first named grooves and adapted to co-operate with said second named grooves whereby to permit articulation between said toe portion, said middle section, and said instep portion, means in said sole providing flexure between said toe portion, said middle section, and said instep portion, said means including coil springs mounted in said sole, and means for anchoring said springs in said sole, said instep portion, said middle section and said toe portion having co-operating aligned grooves therein adapted to house said springs, said anchoring means including at the instep end buttons provided with eyelets connected to the inner end portions of said springs so that said buttons are disposed below said instep portion.

3. A sandal comprising an instep portion and a sole including a toe portion, a middle section disposed between said toe portion and said instep portion, said middle section having concave grooves in the front and rear sides thereof, tongues on said toe portions and said instep portions co-operating with said grooves, said instep portion and said toe portion having transversely extending grooves therein on the upper surfaces thereof and parallel to said first mentioned grooves, lip portions on said middle section, said lip portions overhanging said first named grooves and adapted to co-operate with said second named grooves whereby to permit articulation between said toe portion, said middle section, and said instep portion, means in said sole providing flexure between said toe portion, said middle section, and said instep portion, said means including coil springs mounted in said sole, and means for anchoring said springs in said sole, said instep portion, said middle section and said toe portion having co-operating aligned grooves therein adapted to house said springs, said anchoring means including at the instep end buttons provided with eyelets connected to the inner end portions of said springs so that said buttons are disposed below said instep portion, said anchoring means including at the toe end nails mounted in said toe portion, the front end portions of said coil springs being connected to said nails or the like.

JOSEPH PELLKOFER.