Jan. 8, 1957 H. L. GIUNTINI 2,776,499

FOOTWEAR

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Fig. 1

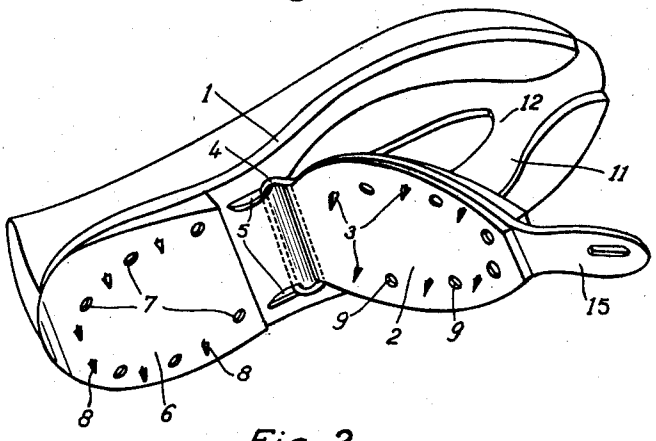



Fig. 2

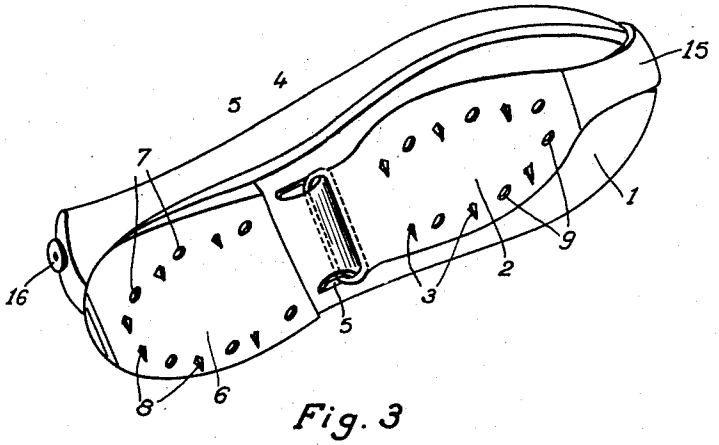
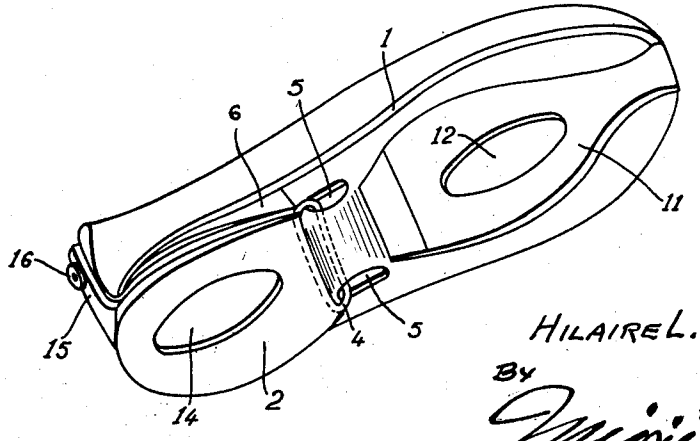



Fig. 3




INVENTOR

HILAIRE L. GIUNTINI

BY

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# FOOTWEAR

Hilaire Luciano Giuntini, Alger, Algeria

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6 Claims. (Cl. 36—2.5)

The present invention relates to an improvement in footwear which has for its object to render the footwear adapted to be used at will either on very slippery surfaces, for example on ice, or on normal ground or surfaces.

To this effect, the footwear comprises, according to the invention, non-skid elements, for example spikes, which are adapted to be either exposed in ground-engaging position for walking on slippery surfaces, or brought into an inoperative position for walking on ordinary surfaces.

According to a preferred emobdiment of the invention, the non-skid elements are carried on one face of a plate which is hinged to the underside of the sole of the footwear approximately midway or under the arch of the sole and is swingable about a transverse axis to either of two positions, namely, one position in which the plate overlies the front part of the sole with the non-skid elements exposed and a second position in which the plate underlies the heel with the non-skid elements preferably recessed within the heel. The heel may likewise be provided with non-skid elements which are recessed into the plate when the latter is in the second mentioned position. Fastening means are provided for retaining the plate in either of the positions. Preferably, the heel is inclined toward the rear to facilitate walking on slippery surfaces and the plate is similarly inclined or provided with an increasing thickness toward its free end to compensate for the inclination of the heel when the plate is in the second mentioned position. As the plate is approximately the same width as the heel, it is narrower than the front of the sole and the latter is preferably recessed to accommodate the plate when in the first mentioned position.

Other features and advantages of the invention will become apparent from the following description and the appended drawing which shows by way of example a non-limitative embodiment of the invention.

Fig. 1 is a perspective view of a footwear according to the invention, the plate carrying the non-skid elements being represented in an intermediate position, in view of a clear showing of its structure.

Figs. 2 and 3 are similar views of the same footwear, showing the latter respectively in the position for walking on slippery ground and in the position for walking on normal ground.

To the underside of the sole **1** of the footwear, about at mid-length thereof, is hingedly attached a plate **2**. The latter carries on one of its faces non-skid elements which are, for example, formed by spikes **3** whose heads are embedded in the hingedly attached plate **2**.

The axis of the hinged attachment of the plate **2** extends transversally of the footwear and is formed, for example, by a buckle **4** attached to the plate **2** and passing through two slots **5** formed in the sole **1**, near the side edges thereof. This disposition enables the plate **2** to be swung either against the front portion of the sole, as shown on Fig. 2, or folded against the heel **6**, as shown on Fig. 3. In this latter position, the spikes **3** on the plate **2** are accomodated in small cavities **7** (Fig. 1) formed in the heel **6** of the footwear, at corresponding



locations. The buckle **4** is longitudinally displaceable with respect to the sole **1** within the limits defined by the length of the slots **5**, whereby the plate **2**, when swung backward, covers the underside of the heel **6** as shown on Fig. 3, or, when swung forward, lies against the middle of the front portion of the sole **1**, as shown on Fig. 2.

In the illustrated embodiment, the heel **6** is also provided with non-skid elements **8**, similar to the spikes **3** on the plate **2**, and said elements **8** are accommodated in corresponding cavities **9** formed in the plate **2**, when the latter is folded against the heel.

The plate **2** has the same outline as the underside of the heel **6** and is consequently narrower than the front portion of the sole **1** of the footwear. Accordingly, the front portion of the sole is formed with a recess **11** of corresponding shape, adapted to receive the plate **2** (see Figs. 1 and 2). In order to compensate for this recess **11** when the plate **2** is in the position for walking on normal ground, there is provided, about in the middle of said recess, a portion **12** which projects from the bottom of the recess **11** and is substantially flush with the non-recessed portion of the sole **1**, while the face of the hingedly attached plate **2** adapted to be applied against the bottom of the recess **11** is formed with a recess **14** (Fig. 3) adapted to receive said projecting portion **12** when the plate **2** is in the position for walking on slippery ground. Instead of the recess **14**, the plate **2** may be formed with an aperture which traverses it completely. In this case, the heel may be formed with a projecting portion adapted to project into said aperture of the plate **2** in the position for walking on normal ground.

The hingedly attached plate **2** is provided with a flexible flap **15** which can be fastened by conventional means, for example by buttons **16**, either at the front end or tip of the footwear (Fig. 2), or at the rear end or heel of the footwear (Fig. 3).

It will be seen that in the position shown on Fig. 2 all the non-skid elements **3** of the plate **2** (applied against the front portion of the sole **1**) and the non-skid elements **8** of the heel **6** are exposed and make it possible to walk in complete safety on a very slippery ground, in particular on ice.

On the contrary, in the position shown on Fig. 3, all the non-skid elements are enclosed within the heel portion and the footwear is made similar to ordinary footwear for walking on normal ground.

As shown on the drawing, the heel **6** may be tapered so as to decrease in height towards the rear, in order to facilitate the walking on slippery ground. In this case, it will be advantageous to give the hingedly attached plate **2** a thickness which increases towards its free end, so as to compensate for the aforesaid decrease in the thickness of the heel when said plate is in the position for walking on normal ground. Furthermore, this structure of the plate **2** protects the flap **15** which will not bear on the ground, in neither of the two positions of use, when said flap is inserted at mid-thickness of the plate **2**.

It will understood that the invention is not limited to the embodiment which has been described and shown by way of example, but covers also modifications thereof, within the scope of the appended claims.

I claim:

1. A footwear comprising a sole having a front portion, a middle portion and a rear portion, said middle portion of the sole being formed with longitudinal slots, a heel on the underside of said rear portion of the sole, a plate having the same outline as the underside of said heel, a buckle attached to said plate and passing through said slots so that said plate is hingedly attached to said sole and is adapted to be swung either into a first position in which said plate is applied by one of its faces against the middle of the underside of said front por-

tion of the sole, or into a second position in which said plate is applied by its other face against the underside of said heel and covers said underside of the heel, non-skid elements on said other face of said plate, and means for maintaining said plate in each of said positions.

2. A footwear comprising a sole, a heel on the underside of the rear portion of said sole, a plate hingedly attached to the underside of said sole so as to be adapted to be swung about a transversal axis lying intermediate the length of said footwear, either into a first position in which said plate is applied by one of its faces against the underside of the front portion of said sole, or into a second position in which said plate is applied by its other face against the underside of said heel, non-skid elements on said other face of said plate, other non-skid elements on the underside of said heel, and means for maintaining said plate in each of said positions.

3. A footwear as claimed in claim 2, in which the underside of said heel is formed with cavities adapted to receive said non-skid elements when said plate is in said second position, and said other face of said plate is formed with other cavities adapted to receive said other non-skid elements when said plate is in said second position.

4. A footwear comprising a sole, a heel on the underside of the rear portion of said sole, a plate hingedly attached to the underside of said sole so as to be adapted to be swung about a transversal axis lying intermediate the length of said footwear, either into a first position in which said plate is applied by one of its faces against the underside of the front portion of said sole, or into a second position in which said plate is applied by its other face against the underside of said heel, non-skid elements on said other face of said plate, the thickness of said heel decreasing towards the rear end of said footwear, the thickness of said plate increasing towards its free end, and means for maintaining said plate in each of said positions.



5. A footwear comprising a sole, a heel on the underside of the rear portion of said sole, a plate hingedly attached to the underside of said sole so as to be adapted to be swung about a transversal axis lying intermediate the length of said footwear, either into a first position in which said plate is applied by one of its faces against the underside of the front portion of said sole, or into a second position in which said plate is applied by its other face against the underside of said heel, non-skid elements on said other face of said plate, said plate being less wide than said front portion of said sole, the underside of said front portion of said sole being formed with a recess adapted to receive said plate when it is in said first position, and means for maintaining said plate in each of said positions.

6. A footwear as claimed in claim 5, comprising a projecting portion on the bottom of said recess, said projecting portion being substantially flush with the underside of the non-recessed part of said front portion of said sole, and said first-mentioned face of said plate being formed with another recess adapted to receive said projecting portion when said plate is in said first position.

**References Cited** in the file of this patent

UNITED STATES PATENTS

997,055 Gilowitz ---------- July 4, 1911