Nov. 4, 1941. T. G. YOUMANS 2,261,785

SHOE GRIP

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Fig. 1.

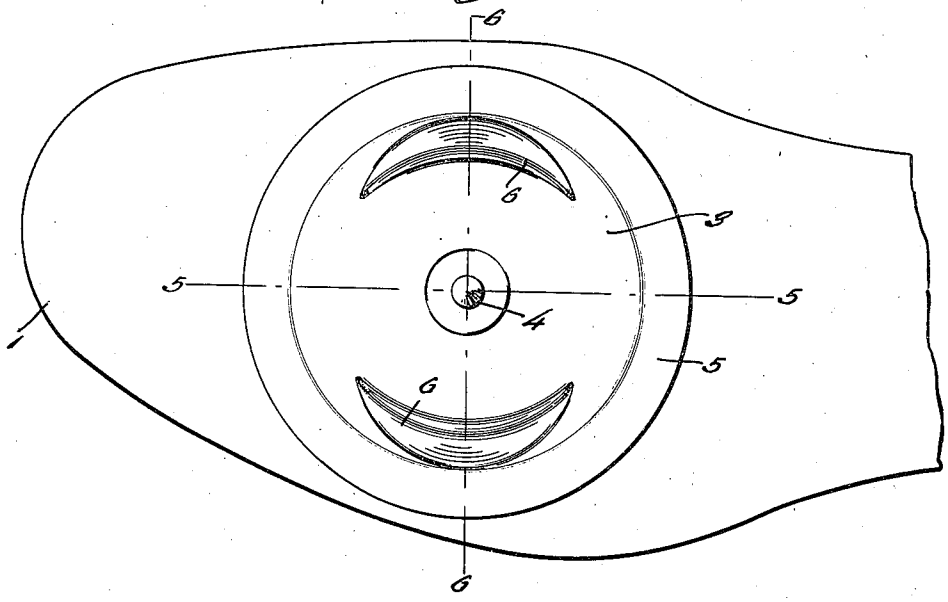
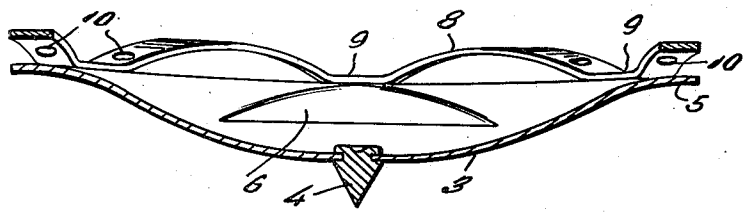


Fig. 3.



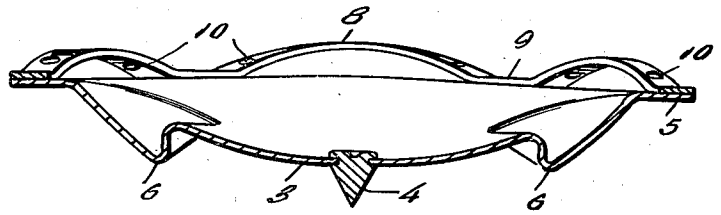


Fig. 4.

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Fig. 2.

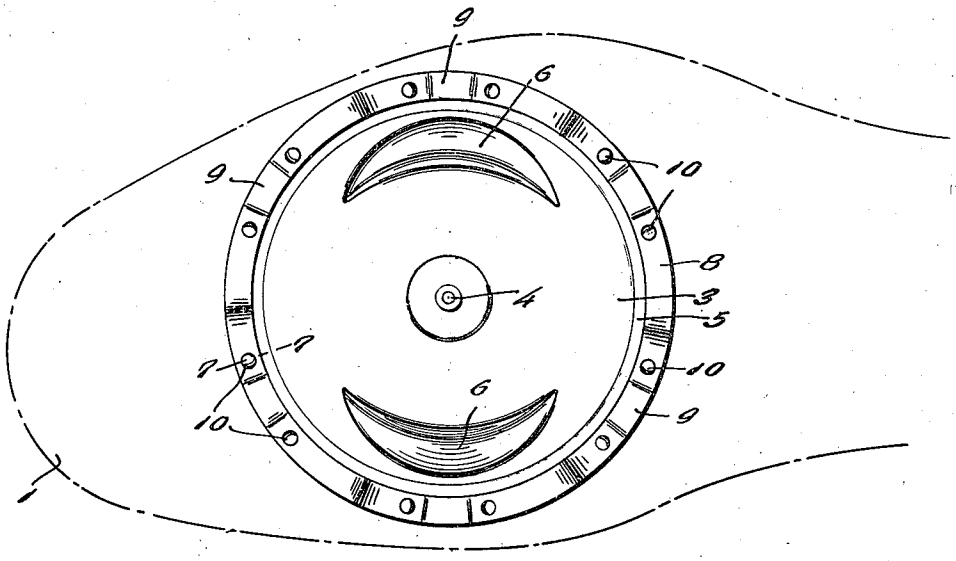


Fig. 5.

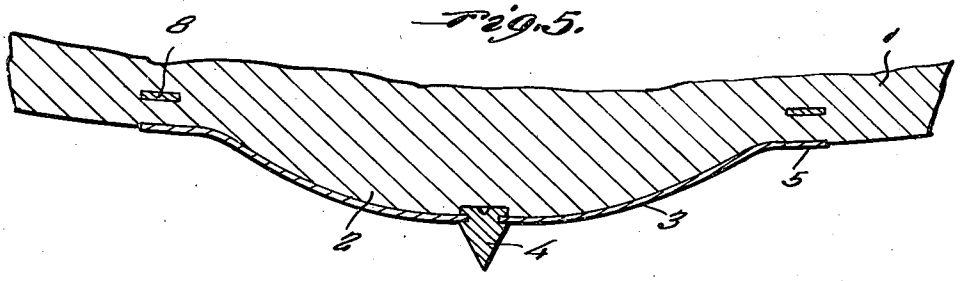


Fig. 6.

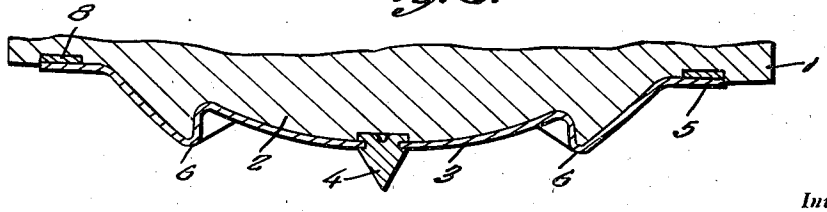
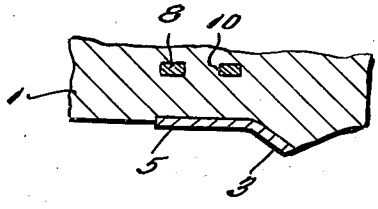


Fig. 7.



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UNITED STATES PATENT OFFICE

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SHOE GRIP

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Wilmington, Del.

Application May 31, 1941, Serial No. 396,210

4 Claims. (Cl. 36—59)

This invention relates to shoe grips of a generally similar nature to that constituting the subject matter of my United States Patent No. 1,876,195, issued on September 6, 1932, upon which the present device constitutes an improvement.

An important object of this invention is to provide a shoe grip of the character described comprising a plate which is particularly intended for use with molded shoe soles of various plastics.

Another very important object of the invention is to provide a shoe grip of the aforementioned character which includes unique means for firmly securing the plate in position on the sole.

Still another very important object of the invention is to provide an improved shoe grip of a construction which is such as to materially promote comfort at all times.

Other objects of the invention are to provide an improved shoe grip of the character set forth which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, light in weight, attractive in appearance and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a bottom plan view of a shoe grip constructed in accordance with the present invention.

Figure 2 is a top plan view thereof, the shoe sole beign indicated in broken lines.

Figure 3 is a view in vertical longitudinal section through the circular plate and the attaching means.

Figure 4 is a cross-sectional view through the plate and the attaching means.

Figure 5 is a fragmentary view in vertical longitudinal section, taken substantially on the line 5—5 of Figure 1.

Figure 6 is a fragmentary view in cross-section, taken substantially on the line 6—6 of Figure 1.

Figure 7 is a fragmentary view in section, taken substantially on the line 7—7 of Figure 2.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a molded sole 1 of plastic or other suitable material. The ball portion of the sole 1 is formed to provide, on the lower face of said sole, a convexity 2. This is illustrated to advantage in Figures 5 and 6 of the drawings.

Mounted on the convexity 2 of the molded sole 1 is a substantially concavo-convex circular plate 3 of stainless steel or other suitable metal. Rigidly secured in the circular plate 3 and projecting downwardly therefrom is an anchoring pivotal point 4 which is adapted to be driven into the ground. The plate 3 includes a substantially flat marginal flange 5 which preferably is slightly countersunk in the lower face of the sole 1.

The plate 3 further includes a pair of downwardly pressed arcuate ribs or the like 6 on opposite sides of the point 4 and concentric therewith. The ribs 6 are of substantially the cross-sectional shape showed to advantage in Figure 6 of the drawings. Further, the ribs 6 taper toward their ends and merge gradually into the plate 3. The spaces formed in the upper side of the plate 3 by the pressed ribs 6 are filled by the material of the sole 1.

Mounted on the flange 5 of the plate 3 is a substantially corrugated or undulated metallic ring 8 which is embedded in the sole 1. The ring 8 is spot welded at spaced points 9 to the flange 5. Openings 10 are provided in the ring 8 for the reception of the material of the sole 1. Thus, the plate 3 is firmly attached to the sole 1 at the time said sole is molded.

The construction and arrangement is such as to provide maximum comfort at all times. The invention is intended particularly for incorporation in golf and other sport shoes. When making a swing the player pivots on the point 4, the arrangement of the ribs 6 being such as to create comparatively little or no resistance to rotary or turning movement of the plate 3 while providing maximum grip or traction against slippage. The formation of the plate 3 and the ribs 6 is also such as to facilitate walking, the foot rocking on a line drawn transversely across said ribs and the central portion of said plate.

It is believed that the many advantages of a shoe grip constructed in accordance with the present invention will be readily understood and although a preferred embodiment of the improved device is as illustrated and described, it is to be understood that changes in the details of construction may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

1. An improved grip of the character described comprising a molded plastic shoe sole including

an integral convexity on its lower face, a substantially concavo-convex circular plate mounted on said convexity, a centrally located pivotal point depending from said plate, a plurality of arcuate ribs pressed downwardly from the plate on opposite sides of said pivotal point and concentric therewith, and means for securing the plate to the sole.

2. An improved grip of the character described comprising a molded plastic shoe sole including an integral convexity on its lower face, a substantially concavo-convex circular plate mounted on said convexity, a centrally located pivotal point depending from said plate, a plurality of arcuate ribs pressed downwardly from the plate on opposite sides of said pivotal point and concentric therewith, and means for securing the plate to the sole, said means including a substantially undulated metallic ring secured, at spaced points, to the plate and embedded in the sole.

3. A shoe grip of the class described comprising a sole, a substantially concavo-convex circular metallic plate mounted on the ball portion of the lower face of said sole, said plate including a substantially flat marginal flange, and a substantially undulated metallic ring fixed, at spaced points, to said flange and embedded in the sole for attaching the plate thereto.

4. A shoe grip of the class described comprising a molded sole including a convexity on the ball portion of its lower face, a substantially concavo-convex metallic plate mounted on said convexity and including a substantially flat marginal flange, a pivotal point mounted centrally on the plate and projecting downwardly therefrom, said plate further including a pair of arcuate, tapering downwardly pressed ribs on opposite sides of the pivotal point and concentric therewith, and a substantially undulated ring of metal fixed, at spaced points, to the flange and embedded in the sole for attaching the plate thereto.

THOMAS GRANT YOUMANS.