Jan. 8, 1957 L. L. TAYLOR 2,776,502

FOOTWEAR CONSTRUCTION

Filed Feb. 25, 1954

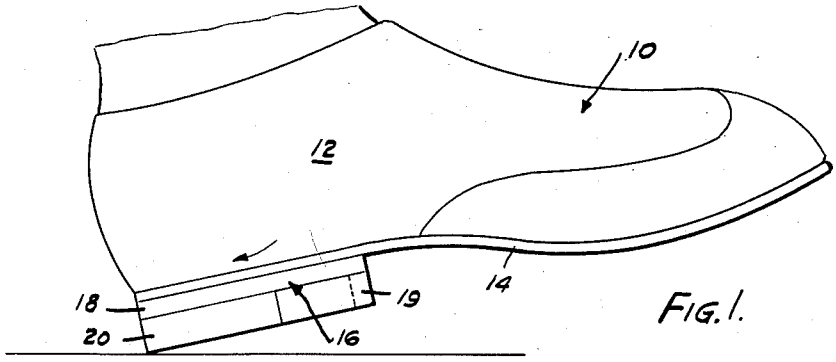


FIG. 1.

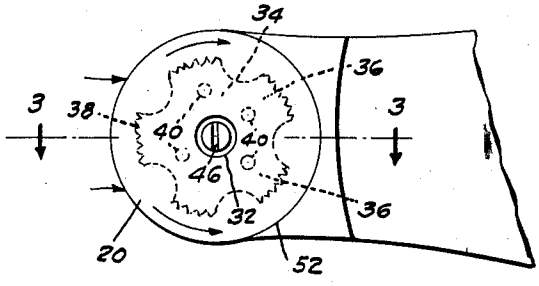


FIG. 2.

FIG. 3.

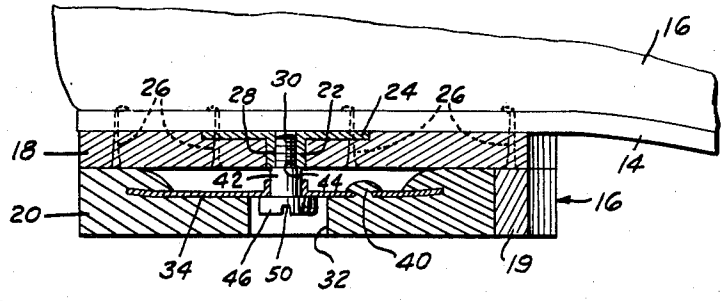


FIG. 4.

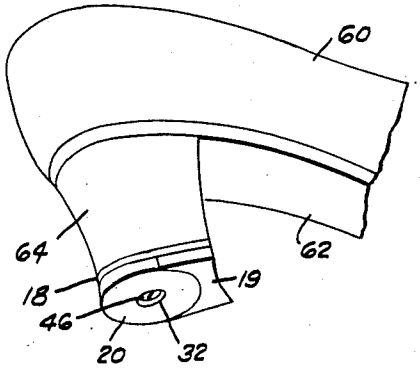
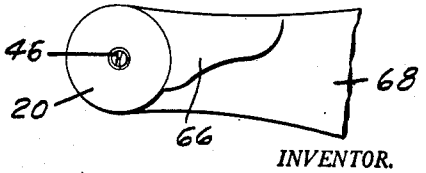


FIG. 5.



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FOOTWEAR CONSTRUCTION

Leonard L. Taylor, Chicago, Ill.

Application February 25, 1954, Serial No. 412,547
1 Claim. (Cl. 36—36)

My invention relates to improvements in footwear construction.

My invention relates more particularly to improvements in the construction of heels and is directed to heels which are rotatable so that the wear around the peripheral edge will be uniform, regardless of the walking habits of the individual wearer.

Various persons wear shoes or similar footwear in different ways, some people wearing out one side or the other of the heel due to a particular way of walking or to a handicap or deformity of one type or another. Thus, if it were possible for the wearer to easily and quickly replace a worn heel or the wearing portion thereof, he would get much more use out of the pair of shoes, and as a result each pair would have a longer useful life.

In addition, if it were possible for a user to buy an extra set of this particular type of heels when he bought a pair of shoes for a deformity of the feet or handicap of some kind, and the heels were such that he could easily remove the worn ones and replace them with the "spare" or additional heels he had purchased, he could quite easily double the life of the shoes he has purchased. This is especially desirable since it is often inconvenient for persons to get to shoe repair shops when the heels need replacement, and as a result either the shoes are worn until they are beyond repair or are thrown aside and a new pair must be purchased.

In addition thereto, the cost of specially made shoes of the orthopedic type for persons with handicaps or foot impediments, is usually comparatively expensive and large sums of money are spent for such shoes. With the simple expedient of a rotatable heel of the type described, a much longer life would result from the use of each such pair of shoes.

The principal object of the present invention is to provide a shoe or other article of footwear having a rotatable heel attached thereto.

A further object of the invention is to provide a rotatable heel of the type described which will automatically, from the action of the wearer in walking, tend to intermittently rotate the heel so that the wear on the peripheral edge of the same is maintained throughout the entire diameter of the heel.

A further object of the invention is to provide a heel for footwear of the type described that is easily attachable and one which may be removed and replaced when it becomes worn and no longer gives satisfactory performance.

Other objects and advantages will be more apparent from the following description wherein reference is had to the accompanying drawings, upon which

Fig. 1 is a side elevational view of a man's shoe equipped with my new type of rotatable heel;

Fig. 2 is a bottom fragmentary view of the same;

Fig. 3 is an enlarged cross-sectional view thereof taken generally on the line 3—3 of Fig. 2;

Fig. 4 is a fragmentary bottom perspective view showing my invention as applied to the heel of a lady's shoe; and

Fig. 5 is a fragmentary bottom plan view showing the same as applied to an orthopedic shoe.

In the embodiment of the invention which I have chosen to illustrate and describe the same, I have shown a typical man's shoe **10** which may have a body portion **12**, a sole **14** and a heel **16**. The heel **16** which I provide may be generally formed in three parts, a shallow or comparatively thin heel portion **18**, an inner portion **19**, and a rotatable member **20**.

The thin or shallow heel portion **18** may have a centrally located nut member **22** provided with a flange **24** which is adapted to be fastened on the inner face of the same by means of the usual fastening nails **26**. The nut member **22** may also have a boss **28** provided with a tapped central bore **30**.

The rotatable heel portion **20** may be formed with a central opening **32** terminating in an enlarged shallow circular opening in the upper face of the same. A flexible metal plate **34** is placed on the floor of said shallow opening, the plate **34** being provided with radially extending arms **36** which have serrations **38** about their periphery for engaging into the surface of the edge of the shallow opening so that the plate and the rotatable heel portion are connected together. If the rotatable heel portion is made of rubber, the same may be suitably embedded therein by extruding plugs **40** through suitable openings in the plate **34**.

The rotatable heel portion **20** may be fastened to the shallow heel portion **18** by means of a bolt member **42** which has a threaded portion **44** engaging in the tapped opening **30**, the bolt having a suitable shoulder to properly space the same against the nut **22** and a slotted head **46** for fastening the same down. The bolt extends through a central opening **50** in the spring plate member **34**.

The inner heel portion **19**, as can be seen, is provided with an arcuate end wall **52** of the same diameter as the rotatable heel portion **20**, so that in ordinary appearance the entire heel has a flat lower surface and is generally shaped to the contour of the rigidly secured heels. However, as can be seen in Fig. 1 of the drawings, there are persons who as they walk put more pressure on either the left or right side of the heel as it engages the walking surface, with the result that as each step is taken there is a tendency to rotate the heel portion **20** slightly. In this way, as a person walks, the rotatable heel portion **20** will intermittently move in a circle, and as a result the wear on the edge of the same be uniform about its entire diameter.

In Fig. 4 I have shown a lady's shoe **60** provided with the usual sole **62** and a high heel **64**. I have provided the same attachment of shallow heel portion **18**, inner heel portion **19** and rotatable heel portion **20**, as shown in Figs. 1, 2 and 3.

In Fig. 5 I have shown a similar attachment of a rotatable heel portion **20** fastened by the bolt **42** in association with an orthopedic attachment **66** applied to the sole **68** of a specially built shoe for persons who have a deformity and require the orthopedic build-up, as shown. With this construction of shoe the rotatable heel again is provided so that even though greater pressure is brought on the left or right side of the heel when walking, the heel portion **20** will intermittently move as steps are taken, thereby rotating the same continuously when the wearer is walking so that the peripheral edge of the same will be worn down in a uniform manner.

With the present attachment for shoes it can be seen that the health of the wearer can be greatly improved and the expense, especially of orthopedic or other specially built shoes can be greatly reduced.

I contemplate that changes and modifications may be made in the exact details shown and I do not wish to be limited in any particular; rather what I desire to secure and protect by Letters Patent of the United States is:

A three-part heel for shoes comprising a thin heel portion adapted to be fastened to a shoe, a centrally located nut member secured thereto, said nut member having an enlarged flange fastened on the inner surface of said thin heel portion and a tapped boss extending through the same, a flat rotatable heel portion cylindrical in shape and having a central opening therethrough terminating in an enlarged shallow opening in the face of the same, a flexible metal plate positioned in said opening and lying against the floor of said opening, said plate having radially extending arms, serrations on the outer edges of said arms for frictionally connecting said plate and said rotatable heel portion together, said plate having a central opening therethrough, a fastening bolt extending through said central opening and engaging

said tapped boss, a spacing shoulder on said bolt and an inner heel portion of the thickness of said rotatable heel portion fastened to the thin heel portion and having an arcuate end wall engaging the rotatable wall portion, said end wall being on the same radius as said rotatable heel portion, said flexible metal plate and bolt being fixedly attached to said thin heel portion and said rotatable heel portion capable of removal and replacement on said plate.

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