

May 17, 1927.

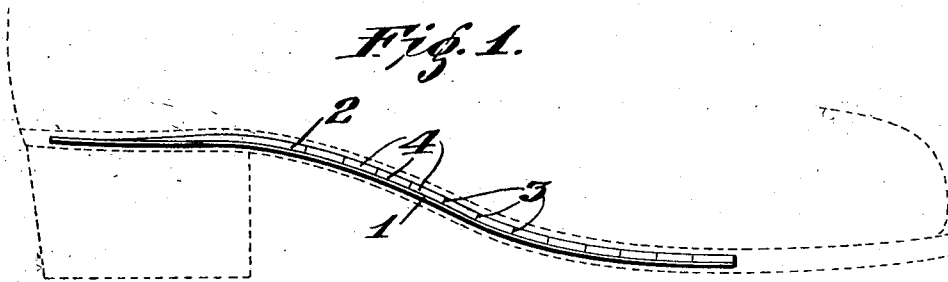
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R. J. GRIESEDIECK

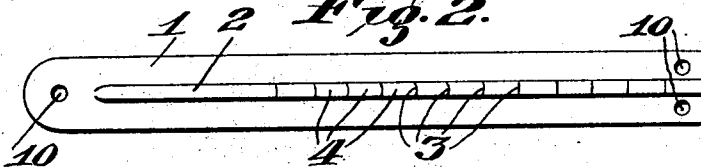
SHANK REINFORCEMENT

Filed Aug. 21, 1922

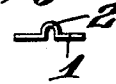
*Fig. 1.*



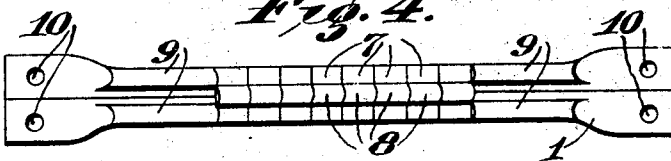
*Fig. 2.*



*Fig. 3.*



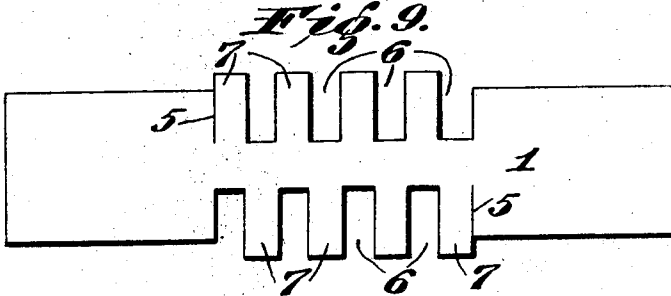
*Fig. 4.*



*Fig. 5.*



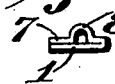
*Fig. 9.*



*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



*Fig. 10.*



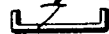
*Fig. 11.*



*Fig. 12.*



*Fig. 13.*



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## UNITED STATES PATENT OFFICE.

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## SHANK REENFORCEMENT.

Application filed August 21, 1922. Serial No. 583,384.

This invention relates to shoes and has to do particularly with a shank reenforcement. It has for its object to produce a simple, efficient and practical device which will function to effectively support the shank portion of the shoe sole or bottom so as to resist downward pressure thereon and yet be sufficiently yieldable in the opposite direction to give the proper flexibility and elasticity to afford comfort to the wearer in walking.

The invention consists in the novel construction and arrangement and in the combinations hereinafter described and afterwards pointed out with particularity in the appended claims.

In the accompanying drawings illustrating certain practical adaptations of the invention and forming part of this specification,—

Figure 1 is a side edge view of the reenforcement it being shown in full lines and the heel and sole portion of the shoe being shown conventionally in dotted lines to illustrate generally its application;

Figure 2 is a top face view of the reenforcement detached from the shoe;

Figure 3 is an end edge view showing the general cross section of the reenforcement illustrated in Figures 1 and 2;

Figure 4 is a top face view of a modification of the reenforcement;

Figure 5 is an end edge view of the reenforcement illustrated in Figure 4, showing the cross section of the end portions of the reenforcement;

Figure 6 is a view showing the cross section of the portions of the reenforcement between the middle and end portions.

Figures 7 and 8 are views showing cross sections of the middle portion of the reenforcement where the folds are made alternately from opposite sides;

Figure 9 is a plan view of an approximate formation of the blank from which the reenforcement illustrated in Figures 4 to 8, inclusive, is constructed; and

Figures 10 to 13, inclusive, are views illustrating cross sections of further modifications of the reenforcement.

Referring now to the drawings, the numeral 1 designates generally the shank reenforcement which is preferably formed from sheet metal and possessing more or less resiliency in the character of the metal.

As shown in Figures 1, 2 and 3, the re-

enforcement comprises a strip having a crimped or ribbed stiffening portion 2 extending longitudinally and medially of its upper face. At intervals this crimped or ribbed portion is cut crosswise, as at 3, to face of the flat body portion, the severed ribbed or stiffening portions or segments 4 abutting when the support is in its normal set. This affords a substantial support under the weight of the wearer's foot so as to prevent breaking down of the shank of the shoe, yet it is yieldable in the opposite direction. That is to say, the middle portion of the support may be raised or the end portions may be moved downward.

In Figures 4 to 9, inclusive, a modification of the shank reenforcement is shown. In this modification the reenforcement is formed from a blank substantially as shown in Figure 9. At about midway between its ends the blank is slitted, as at 5, and notched, as at 6, to afford tongues 7 in alternate or staggered relation on opposite sides of the blank, the tongues being somewhat wider than the notches so that when folded over upon the base portion and between each other with their edges abutting the reenforcement is given an arched shape and serve to prevent the arch from collapsing or breaking downward under the weight of the wearer's foot as in the structure first described. To afford a more substantial support the tongues 7 are provided with raised formations 8 which constitute a stiffening rib in effect when the support is in normal shape. In some cases, however, the formations 8 may be eliminated and the folded tongues 7 alone depended upon to maintain the arch.

Between the ends of the rib formed by the portions 8 and the extreme end portions of the support the marginal portions of the body are rolled, as at 9, to afford rigidity to that portion of the reenforcement. This, however, may be eliminated in some cases.

The reenforcement may be secured in place in the shoe structure in any desirable manner. As shown, it is provided with apertures 10 at its ends to receive rivets or other fastening devices or means.

The device is also subject to further modification in cross section as indicated by Figures 10 to 13, inclusive, as well as in other obvious shapes; and it admits of considerable modification in other respects without

departing from the spirit and scope of the invention as defined by the appended claims. It is, therefore, not limited to the specific constructions and arrangements shown in the drawings.

What is claimed is:

1. In a device of the character described, a sheet-like body having a longitudinal stiffening rib on its upper side, said rib being

severed transversely and the segments thereof normally abutting each other.

2. In a device of the character described, a multiplicity of upstanding, abutting, stiffening elements arranged in longitudinal alignment and being flexibly joined at their bases, whereby to resist downward pressure but permitting upward flexion of said device.

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