

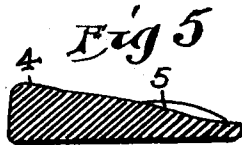
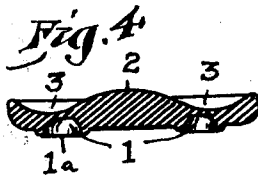
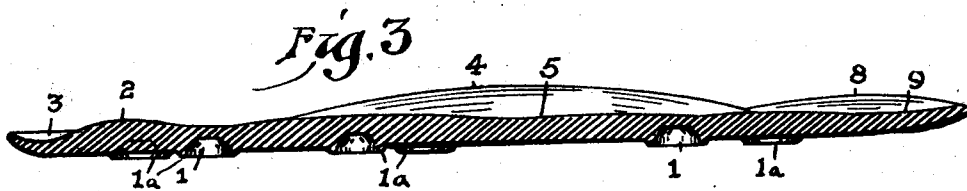
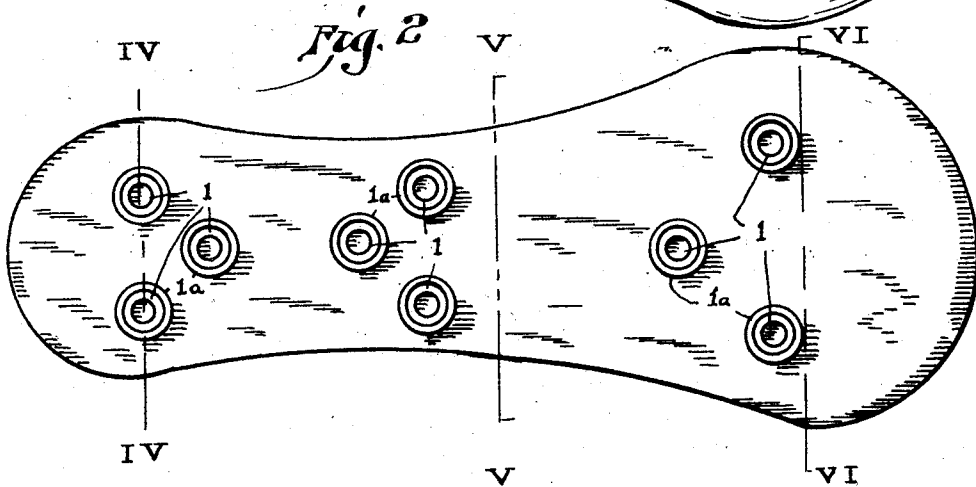
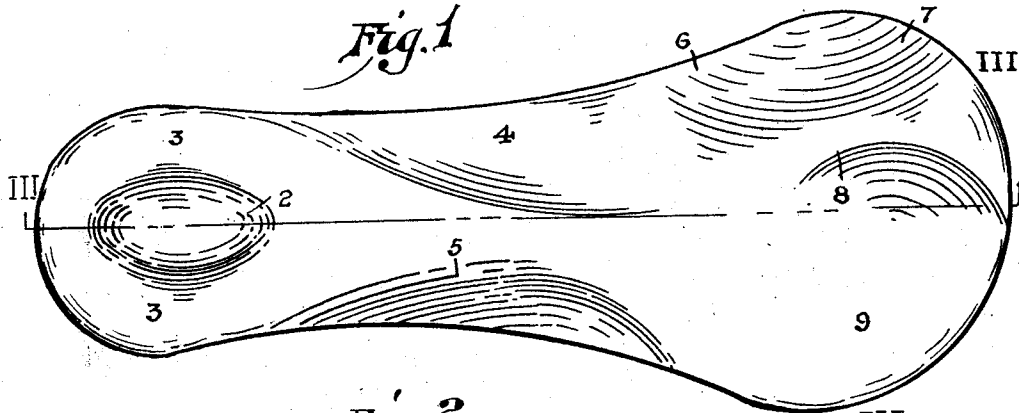
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H. P. AMBILL

ARCH SUPPORT

Filed July 23, 1927



INVENTOR

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UNITED STATES PATENT OFFICE.

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ARCH SUPPORT.

Application filed July 23, 1927. Serial No. 207,871.

The purpose which I have in view is the provision of a new and improved support for the longitudinal, longitudinal-lateral and transverse arches of the foot.

5 My support is formed of resilient material preferably of a porous character.

Thus I prefer to employ for the purpose sponge-rubber.

10 One novel feature of my present invention is the medication of the support, the material of the same being impregnated with chemicals having soothing antiseptic and deodorant properties.

15 Another novel feature is the provision of means for preventing the support from slipping or shifting in the shoe.

20 Other novel features are found in the contour of the upper surface of the support adapting it to properly fit and support the foot.

Other novel features of construction and also of relative arrangement will appear from the following description.

25 In the accompanying drawings, wherein I have illustrated the best embodiment of the principles of my invention now known to me, Fig. 1 is a plan view of the arch support; Fig. 2 is an inverted plan view of the same; Fig. 3 is a longitudinal section thereof taken 30 along the line III—III in Fig. 1, and Figs. 4, 5 and 6 are sectional views taken respectively along the lines IV—IV; V—V, and VI—VI in Fig. 2.

35 Referring to the drawings, the arch support is preferably molded of sponge-rubber and has the proper perimetral contour to be inserted in a shoe, the supports being made in "rights" and "lefts".

40 The underside of the support is provided with a plurality of sunken recesses 1 surrounded by a low beading 1^a by means of which the support obtains a suction grip on the inside of the shoe, thus preventing slipping or shifting.

45 This is an important improvement, since with the high heels now popular the insole of the shoe has a pronounced forward pitch. To keep the support at all times sweet and clean and also soothing to the sole of the foot, 50 I impregnate the porous material with medicating chemicals which have antiseptic, soothing and deodorizing properties.

For this purpose I prefer to use a mixture made up in volume of about 3% of zinc-stearate; 0.25% of chloride of lime; 1% of tannic 55 acid, 95.50% of bismuth-subnitrate, and 0.25% of a perfume such as powdered rose.

This mixture in powdered form may be blown by air into the pores of the material or may be made into an aqueous solution in 60 which the support may be dipped or soaked and then dried.

The contour of the top surface of the support will now be described.

The portion which supports the os calcis 65 bone comprises a low rounded boss 2 surrounded at the sides and rear by a shallow trough 3.

I find that the contour above described provides a much better and more comfortable 70 support for the lower end of the heel bone than the sunken seat which is characteristic of the prior art.

The inside of the longitudinal-lateral arch of the foot or the instep is supported by the 75 longitudinally disposed ridge 4 whose inner wall is arcuate to follow the hollow of the instep, from which a gradual incline or slope 5 extends to the outer side of the instep.

6 is a recess for the ball of the great toe and 80 in front of the same is a portion 7 which inclines downwardly toward the front and toward the inner side of the support to accommodate the great toe.

8 is a low gradual elevation which extends 85 longitudinally of the support between the great toe and the lesser toes and 9 is a gradual incline extending forwardly and toward the outer side edge of the support to accommodate the lesser toes. 90

It is evident from the foregoing that my arch support properly sustains the longitudinal and transverse arch of the foot and also the metatarsal bones.

It may be worn without discomfort or 95 cramping and will maintain its position in the shoe.

What I desire to claim is:—

An arch support having a heel portion comprising a central elevation surrounded at sides 100 and rear by a low trough, an instep portion inclined downwardly toward the outside edge of the support, in front of said inclined portion a depression for the ball of the great toe, in

front of said depression a forwardly inclined portion for supporting the toes, and an elevation between the great toe portion and the lesser toe portion, said arch support being
5 formed of elastic material and having suction cups on its under side arranged in groups with one group at the heel portion, one group at the portion beneath the arch of the foot and a third group at the toe portion, the portions intermediate said groups being free from suction cups. 10

Signed at Pittsburgh this 18th day of July, 1927.

HARRY P. AMBILL.