

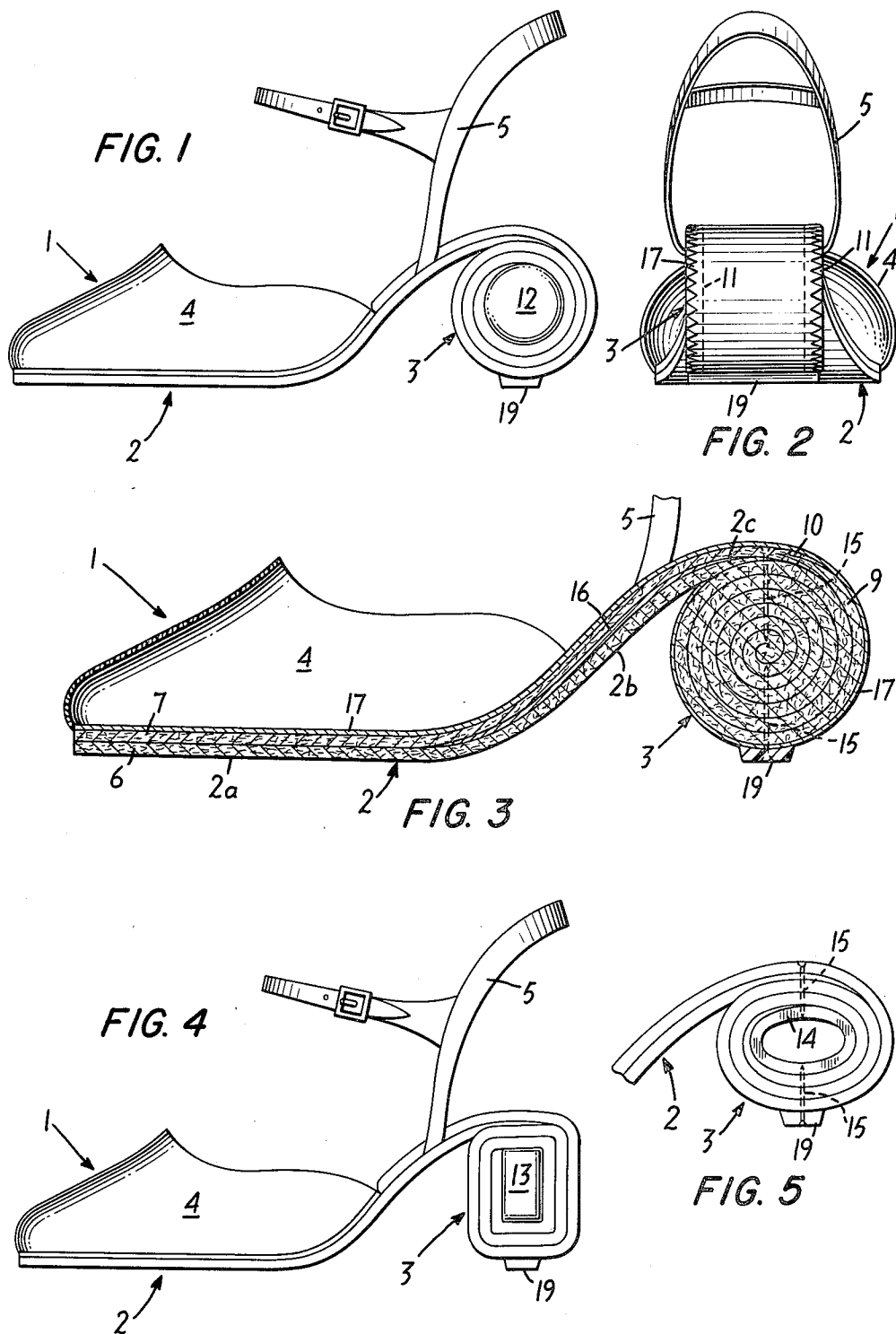
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SHOE HEEL CONSTRUCTION

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SHOE HEEL CONSTRUCTION
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The present invention relates to footwear and in particular to a new heel construction.

In accordance with the invention, there is provided a heel construction which is of novel and attractive appearance provides a cushioning effect and is convenient and inexpensive to manufacture.

The invention will be more fully understood from the following description in conjunction with the accompanying drawings which illustrate preferred embodiments of the invention and in which:

FIGURE 1 is a side view of a shoe in accordance with the present invention,

FIG. 2 is a rear view,

FIG. 3 is a longitudinal section of a shoe which is similar to that shown in FIGS. 1 and 2,

FIG. 4 is a side view of another embodiment of the invention, and

FIG. 5 is a side view of the heel portion only of a further embodiment.

In the drawings there is shown a shoe having an upper 1, sole 2, and a heel 3 in accordance with the present invention.

The upper may be of any desired style and construction and is shown by way of example as comprising a vamp 4 and ankle strap 5. The sole 2 comprises a forward or ball portion 2a, a shank portion 2b and a heel seat portion 2c. The sole 2 is shown in FIG. 3 as comprising an outsole 6 and an insole 7. The outsole 6 is preferably formed of firm, strong wear-resisting material such as leather, rubber or plastic. Since the insole 7 is not subjected to abrasion, it is preferably of a somewhat less dense and softer material such as leather or felt. The outsole, insole and upper are suitably united, for example, by cementing or stitching in accordance with the usual practices in shoe construction.

In accordance with the present invention, the heel 3 is formed of a coil or roll of material which is substantially cylindrical and disposed with its axis extending horizontally and transversely of the shoe. As illustrated in the drawings, the coil of material forming the heel is a rearward extension of the sole which has been coiled into cylindrical form. When the shoe has an insole and an outsole, either or both may be provided with rearwardly extending portions coiled into cylindrical form to provide a heel. However, because the insole is usually of softer and more pliable material, it has been found preferable to form the heel by coiling a rearwardly extending portion of the insole only. The rearward extension of the sole forming the heel of the shoe may either be of the same material as the rest of the sole or it may be formed of a different material which is spliced onto the sole. Thus, as illustrated by way of example in FIG. 3, the heel 3 is formed of a strip of material 9 which is spliced onto the rear of the insole 7, for example by a fish-tail joint 10. When the cylindrical coil forming the heel of the shoe is of a piece of material spliced onto the remainder of the sole, it is preferably formed of softer and thicker material such as felt or plastic foam so as to impart to the heel still greater cushioning characteristic. In order to give the shoe a finished and attractive appearance, the edges of the coiled material forming the heel are preferably bound or covered with a suitable binding 11 formed for example of leather or plastic material. When the coil or material constitutes a rearward extension

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sion of the insole as particularly illustrated in FIG. 3, the binding may continue forwardly on the edges of the insole at least to the rear of the vamp 4 or throughout the entire length of the insole.

The material forming the heel of the shoe may either be coiled on itself as illustrated in FIG. 3, or on a substantially cylindrical core 12 as shown in FIG. 1. Moreover, the core may be of circular cross-section as shown in FIG. 1 of rectangular cross-section as illustrated by the core 13 in FIG. 4 or of oval cross-section as illustrated by the core 14 in FIG. 5. The core is formed of any suitable material, for example wood or plastic, and may either be solid or hollow or tubular as illustrated by the core 14 in FIG. 5. The core is preferably of light weight and sufficiently strong to withstand the compressive forces to which it is subjected while preferably being somewhat resilient to enhance the cushioning characteristics of the heel.

The convolutions of material forming the heel are suitably secured to one another and to the core—when a core is used—for example, by adhesive. The upper portion of the coiled material is also securely united to the overlying heel seat portion of the sole. As illustrated in FIG. 3, nails 15 are driven down through the heel seat portion of the sole into the coiled material forming the heel and also up through the coiled material of the heel. When the heel is formed by a rearward extension of the insole as illustrated in FIG. 3, the rear end of the outsole 6 is skived and extends rearwardly between the heel seat portion of the insole and the upper portion of the outermost convolution forming the heel so as to provide a strong construction. The heel seat portions of the insole and outsole and the convolutions forming the heel are securely united and bonded together, for example by cement. The shoe is preferably also provided with a customary steel shank 16 which is enclosed between the shank portions of the insole and outsole and has a rear end portion lying between the convolutions forming the heel and heel seat portion of the insole. The rear end portion of the steel shank 16 may be provided with one or more holes through which nails 15 are driven.

The rearwardly extending portion of the sole which is coiled to form the heel may be of any desired width. For example, it may be narrower than the heel seat portion of the sole or may be shaped to provide a heel which is narrower at the base than at the top. Alternatively, as illustrated in FIG. 2, the material forming the heel is of approximately the same width as the heel seat portion of the sole.

Particularly when the heel is formed of felt or other pervious material, the cylindrical surface of the heel is covered with a durable, flexible, decorative waterproof material which may, for example be an extension of the sock lining 17 of the shoe. As will be seen in FIG. 2, the edge portions of the cover 17 overlie the edge binding 11 of the heel forming material. The decorative effect is enhanced by having the binding 11 and cover 17 of contrasting colors or materials and by providing the cover 11 with scalloped picot, saw tooth or other decorative edges. The ends of the core of the heel—when a core is used—are also preferably coated or covered with a durable, attractive and weather-proof material. A wide variety of decorative effects is obtainable by using various materials and colors for the edge binding 11, cover 17 and the material covering or coating the ends of the heel core. The bottom of the heel is suitably protected by a leather or other heel tap 19 which preferably extends substantially the full length of the heel in a direction transversely of the shoe. The heel tap is suitably secured in place, for example by nails, screws or cement.

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While the invention has been illustrated and described with reference to preferred embodiments, it will be understood that the invention is not limited to the particular embodiments shown by way of example in the drawing and may be modified within the scope of the following claims.

What I claim and desire to secure by Letters Patent is:

1. In a shoe construction, the combination of an upper and a sole of flexible sheet-like material having a ball portion, a shank portion and a heel seat portion, a coil forming a rearward extension of the heel seat portion of said sole and forming a substantially cylindrical roll disposed under said heel seat portion and constituting the heel of the shoe, the axis of said roll extending horizontally transversely of the shoe, and being substantially parallel to said heel seat portion.

2. A shoe construction according to claim 1, in which a heel tap is affixed to the bottom of said roll substantially parallel to the axis of said roll.

3. A shoe construction according to claim 1, in which said sole extension is of softer material than the heel seat, shank and ball portions of the sole.

4. A shoe construction according to claim 1, further comprising a sock lining overlying the ball, shank and heel seat portions of the sole and extending around and covering said cylindrical roll.

5. In a shoe construction, the combination of an upper and a sole of flexible sheet-like material including an outsole and an insole having a ball portion, a shank por-

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tion and a heel seat portion, a coil forming a rearward extension of the heel seat portion of said insole and forming a substantially cylindrical roll disposed under said heel seat portion and constituting the heel of the shoe, the axis of said roll extending horizontally transversely of the shoe, and being substantially parallel to said heel seat portion.

6. A shoe construction according to claim 5, in which the rear end of said outsole is skived and disposed between said roll and the heel seat portion of said insole.

7. A shoe construction according to claim 5, in which said rearward extension of the insole is coiled around a substantially cylindrical core.

8. A shoe construction according to claim 7, in which said core is tubular.

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