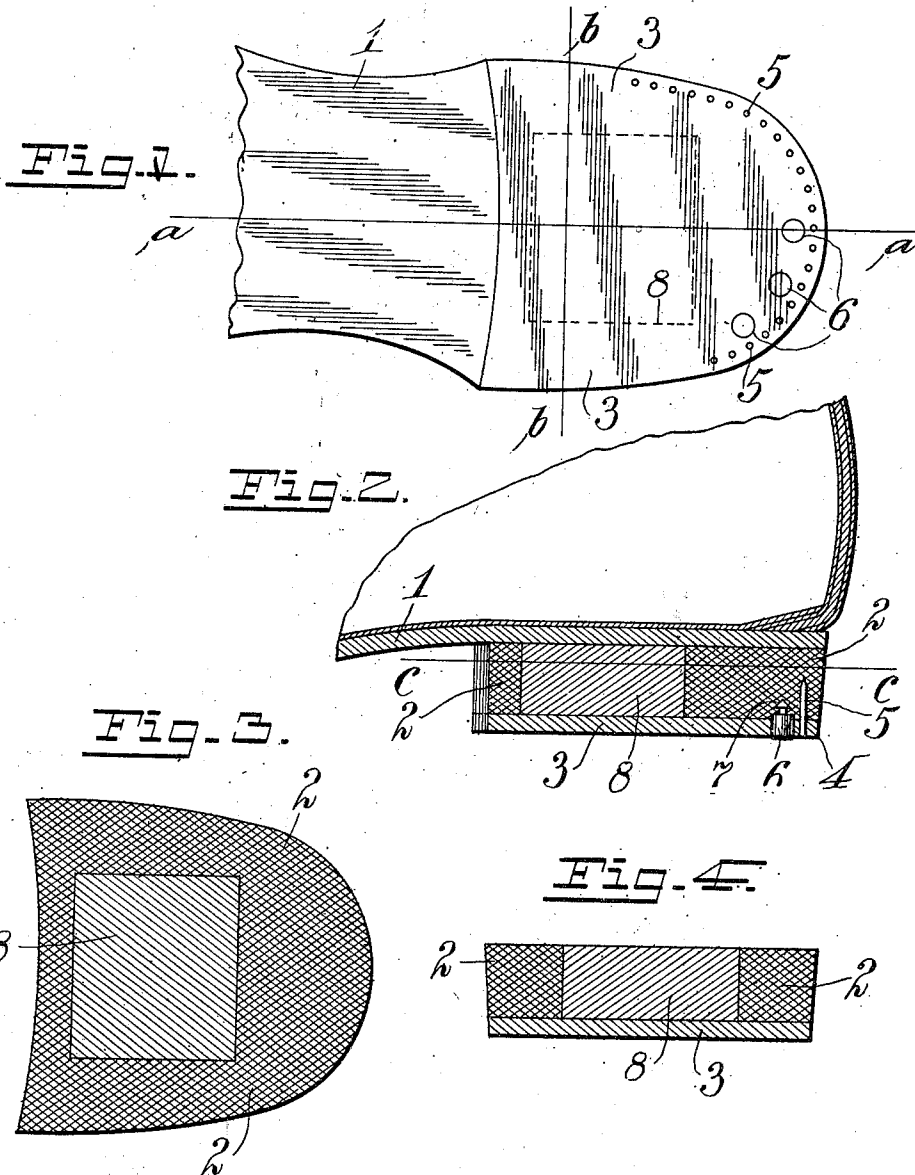


F. L. SMITH.
SHOE HEEL.

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1,013,623.

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FRANK L. SMITH, OF DAYTON, OHIO.

SHOE-HEEL.

1,013,623.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK L. SMITH, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Shoe-Heels; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in shoe heels.

The object of the invention is to provide a resilient shoe heel of great wearing qualities, which will prevent slipping and not tire the muscles of the leg.

Another object of the invention is to provide a resilient shoe heel in which there is not present the objectionable feature of the silent tread, so often a source of embarrassment to the wearer when approaching another person.

Referring to the drawings, Figure 1 is a bottom plan view of a portion of a shoe provided with my improved heel; Fig. 2 is a section on the line *a-a* of Fig. 1; Fig. 3 is a section on the line *c-c* of Fig. 2; and Fig. 4 is a section on the line *b-b* of Fig. 1.

In the drawings, 1 represents the sole extension of a shoe, on the rear end of which is mounted the heel, consisting of a resilient portion 2 and a non-resilient cap or cover 3. This cap or solid portion 3 of the heel is placed nearer the front edge of the heel in order not to interfere with the elasticity of the rear portion of the heel, which is the portion that engages the ground in walking. The portion 2 may be made of any resilient material such as rubber, and the cap 3 is preferably made of leather, which is comparatively hard. The portion 2 and the cap 3 may be united or attached to the shoe in any convenient manner. It will be seen that a heel thus constructed will be resilient in its nature, and the jar incidental to placing the foot on the ground, will be absorbed by the rubber portion 2; and yet the impact between the cap 3 and the ground

will not be noiseless, due to the comparative hardness of the cover 3. Accordingly, the muscles of the leg will be relieved of sudden strains, and the tread of the wearer will be perceptible, thereby allowing another person to be informed of the wearer's approach. When placing the foot on the ground, the lower rear edge 4 of the heel touches the ground first, and to prevent this initial shock separating the portion 2 from the cap 3 at this point, a series of nails 5 are provided. These nails 5 extend through the cap 3 into, but not through, the resilient portion 2, and are adapted to unite the two portions 2 and 3. As the inner ends of the nails 5 lie within the resilient portion 2, said nails will give when the foot is placed on the ground; consequently said nails will not mar a finished surface such as a hard wood floor. The nails 5 resist to a certain extent, the wear on the portion 3, and are therefore distributed along that portion of the edge of the heel which is subject to wear. To further resist the wear of the cap or cover 3, and to prevent the foot slipping, there is provided a suitable number of studs 6 which fit freely in the cap or cover 3, and which are provided with heads 7 embedded in the rubber 2, thereby holding the studs 6 in position. The studs 6 are made of metal, and when the foot is placed on the ground, engage the same and prevent the shoe slipping. These studs 7 may extend beyond the outer surface of the cap or cover 3, and as the inner ends or heads 7 are embedded in the rubber 2, said studs may be pressed inwardly, which prevents the surface with which they come in contact being marred.

When the wearer is standing still, a strictly resilient heel has a tendency to tire the muscles of the leg; therefore, only that portion of the heel which receives the shock when walking is made resilient, and other portions are made rigid. This rigid portion consists of a core 8 made of non-resilient material such as wood or leather, and which is embedded within the resilient portion 2 between the cap or cover 3 and the sole extension 1. When the wearer is standing, his entire weight is supported upon the core 8, which obviates the objectionable qualities above specified.

I claim:

In a device of the type specified, a resilient portion, a non-resilient portion attached thereto, a stud freely mounted in said non-resilient portion and extending there-
5. through, and united to said resilient portion, said stud adapted to engage the ground to prevent slipping, and to recede thereby

preventing the surface with which it comes in contact being marred.

In testimony whereof I affix my signature, in presence of two witnesses.

FRANK L. SMITH.

Witnesses:

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