

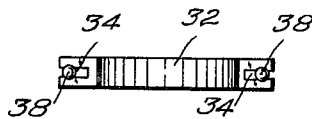
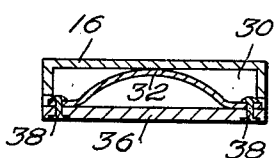
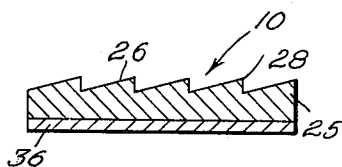
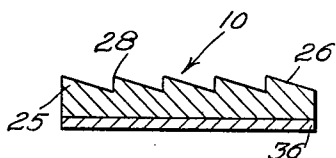
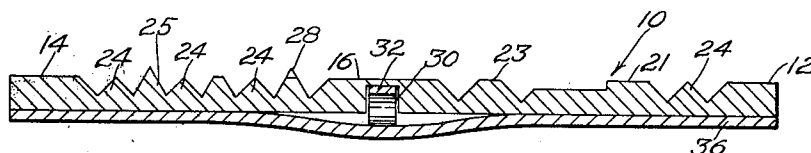
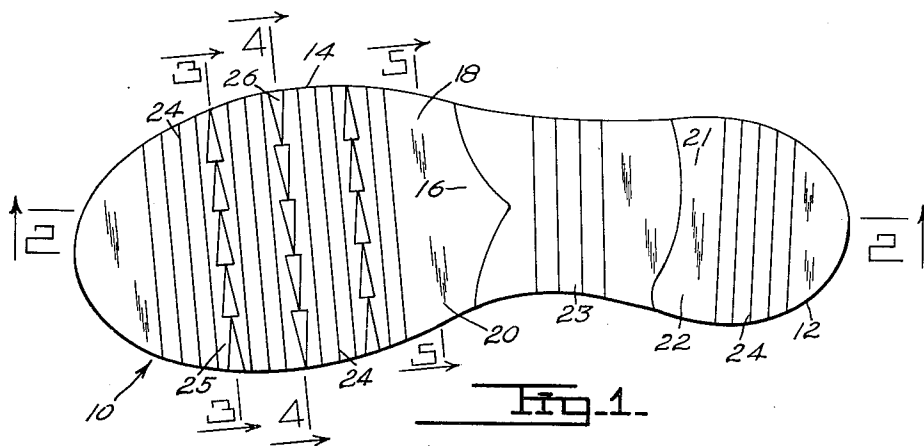
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SHOE SOLES

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3,061,952
SHOE SOLES

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This invention relates to shoe soles generally, and more particularly to a unitized type of sole and heel construction.

Most manufacturers of footwear provide soles and heels of anti-skid construction which are suitable for use on both street and sport shoes. A great variety of tread designs have accordingly been developed in an effort to improve gripping properties, without sacrificing foot comfort. Many of such treads are characterized by a series of transverse flexible ribs on both the sole and heel.

While such ribbed construction has proven to be extremely effective, it has however, failed to provide adequate and proper support for the foot. As a consequence, the ribbed shoe treads presently in use cause an unusual and excessive amount of foot fatigue. Fully cognizant of this shortcoming, the applicant has, as the primary object of his invention, the provision of a ribbed sole and heel for shoes which has very effective anti-skid properties and affords adequate foot support.

Another object of the invention is to provide a shoe sole having a self-contained exerciser unit which automatically flexes the forepart of the foot during a normal walking operation, so as to strengthen the arch and prevent undue foot fatigue.

A further object of the invention is the provision of a sole and heel of the type previously described, which is neat in appearance and relatively inexpensive to produce.

Additional features and advantages of the invention will become apparent after consideration of a detailed discussion of the same composed with reference to the drawings constituting a portion of this application, and in which:

FIGURE 1 is a plan view of a shoe tread embodying the applicant's invention, showing both the transverse and longitudinal arch supports.

FIGURE 2 is a section view taken substantially on plane 2-2 in FIGURE 1, showing the location of the exerciser unit, and the relative depth of the various tread members.

FIGURE 3 is a section view taken substantially on plane 3-3 in FIGURE 1, showing the characteristic shape of the inclined triangular supports on the transverse ribs of the tread.

FIGURE 4 is a section view taken substantially on plane 4-4 in FIGURE 1, showing disposition of the inclined triangular supports on the transverse ribs of the tread.

FIGURE 5 is a section view taken substantially on plane 5-5 in FIGURE 1, showing the exerciser unit mounted in the transverse cavity between the inner and outer soles of the tread.

FIGURE 6 is a plan view of the elongated resilient member detached from the exerciser unit showing the longitudinal slots in each end thereof and the anchor rivets in position.

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For a detailed description of the invention, reference is made to the drawings in which numeral 10 designates a molded tread having a heel 12 and a sole 14. A lateral member 16 on the sole 14 provides a pair of spaced supports 18 and 20 for the transverse or metatarsal arch. A lateral member 21 on the heel 12 of the tread 10 has an enlargement 22 providing additional support for the longitudinal arch. An intermediate transverse support 23 is provided between the sole 14 and the heel 12 of the tread 10.

Spaced transverse ribs 24 and 25 of different construction are provided on the tread 10. The transverse ribs 24 are triangular in cross section, with the upper surface thereof lying substantially in the plane of the lateral member 16 of the tread 10. The transverse ribs 25 on the sole 14 each have an array of inclined triangular supports 26, with the apexes 28 thereof lying slightly above the plane of the lateral member 16. The inclined triangular supports 26 are disposed in opposite directions on the successive transverse ribs 25 of the tread 10.

A transverse cavity 30 is provided in the upper surface of the lateral support on the tread 10. An exerciser unit in the transverse cavity 30 has a curved resilient member 32 with a longitudinal slot 34 in each end. A flexible inner sole 36 is applied to the upper surface of the tread 10, so as to rest on the curved resilient member 32. An anchor rivet 38 through each of the longitudinal slots 34 in the resilient member 32 is securely imbedded in the inner sole 36.

The foregoing discussion completes a detailed description of the structure characterizing the preferred embodiment of the applicant's invention; however, it should be recognized that both the exerciser unit and the tread can be varied considerably in construction without departing substantially from the applicant's teachings and appreciably modifying the desirable effects achieved by the structure herein disclosed.

Therefore, I claim as new, and desire to secure by Letters Patent:

In shoe construction, a sole, transverse linear ribs on the sole and an array of inclined triangular supports on alternate transverse linear ribs, each of such triangular supports having the apex thereof extending above a plane including the upper surfaces on the two immediately adjacent transverse linear ribs.

References Cited in the file of this patent

UNITED STATES PATENTS

1,088,328	Cucinotta	Feb. 24, 1914
1,194,152	Douglas	Aug. 8, 1916
1,502,087	Bunns	July 22, 1924
1,708,683	Roberts	Apr. 9, 1929
2,437,227	Hall	Mar. 2, 1948
2,570,949	Hoffenberg	Oct. 9, 1951
2,668,374	Seigle	Feb. 9, 1954
2,833,057	Hack	May 6, 1958

FOREIGN PATENTS

431,023	Great Britain	June 28, 1935
958,766	France	Sept. 19, 1949