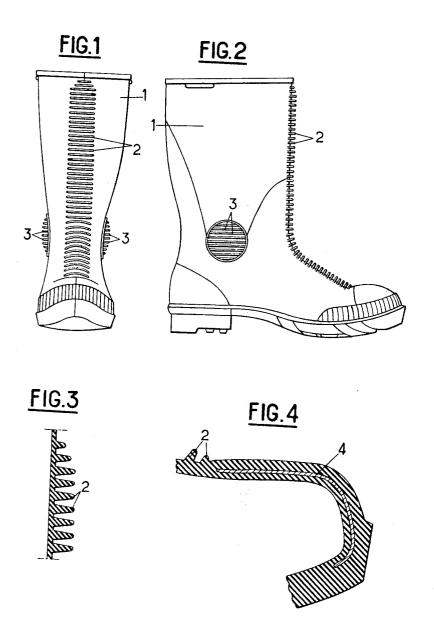
MOLDED BOOT

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INVENTOR

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ATTENTION

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3,091,871 MOLDED BOOT

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The present invention relates to novel or improved safety footwear such as a boot made of injected or molded rubber or plastic material.

The footwear to which the invention relates is characterized by a protective part comprising a fully embedded reinforcing toe cap arranged adjacent to the wearer's toes and protective elements located at the shin-bone and ankle of the wearer's leg. The reinforcing toe cap for the wearer's toes is generally made of metal (e.g. of steel) while the elements adapted to protect the shin-bone, ankle or instep have heretofore comprised strips of foam rubber glued to the molded rubber upper of the boot to provide zones where possible shocks are considerably lessened or damped.

The object of this invention is to provide footwear 25 such as a boot, as hereinbefore described, which is simple to manufacture and which possesses a more efficient structure than such articles as have been heretofore manufactured.

In footwear according to this invention the parts or regions covering those portions of the wearer's foot requiring protection from shocks or impacts comprises a series of outer parallel ribs or projections laminated of laminated rubber or plastic, molded or injected integrally with said upper as the boot is being manufactured, the metal shell (made for example of steel) which forms the toe-protective cap portion of the boot being entirely imbedded within the rubber or plastic material constituting the boot, this imbedding process being effected in the course of the molding or injecting operations.

The protective parallel ribs or projections formed on the rubber or plastic parts at several locations of the boot upper are preferably arranged horizontally so as to avoid adding resistance to bending of the boot forward and backward in the direction in which the boot is normally bent flexible, when the wearer of this improved footwear is walking or kneeling down.

A preferred embodiment of this invention is shown in the accompanying drawing and hereinafter described.

FIGURE 1 is a front elevational view of a boot made <sup>50</sup> according to the invention.

FIGURE 2 is a corresponding side elevation.

FIGURE 3 is a part longitudinal sectional view of a protecting element made of rubber or plastic whose outer surface is provided with a series of parallel ribs or projections.

FIGURE 4 is a sectional view of the toe cap of a boot showing the protective reinforcing toe cap portion thereof entirely imbedded within the molded rubber or plastic of the boot.

Referring first to FIGURES 1 and 2 it will be seen that

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a boot according to this invention, comprises on the outside of the front part of its upper portion 1 a series of parallel ribs or projections 2 formed integral with said upper portion during the molding or injecting process. Such parallel ribs or projections 2 which extend from the upper part of the upper 1 down to the end of the portion, covering the instep, so as to give proper protection to the shin-bone and instep, preferably extend transversely with respect to the median plane of the boot so that they do not restrict flexing of the boot in that plane, particularly when the wearer is kneeling down.

The boot upper 1 also comprises on each lateral or side portion an ankle protection formed by parallel ribs or projections 3, similar to the ribs or projections 2, integrally formed during the molding or injecting of the boot.

FIGURE 3 represents a part longitudinal section, at an enlarged scale, of a protecting element made of rubber or plastic material showing on its outer part a portion of the series of parallel ribs or projections 2 provided on the front portion of the upper 1.

FIGURE 4 illustrates at an enlarged scale the toe cap of a boot with its protective reinforcing toe cap 4 entirely imbedded within the molded rubber or plastic material said boot is made of.

It will be seen that the series of parallel ribs or projections 2 and 3 which are provided on the boot according to this invention create zones thereon where possible shocks or impacts are considerably damped.

Those portions of the boot which are provided with parallel ribs or projections are obtained by a molding or injecting process requiring corresponding recesses to be provided in the molds utilized for making such boot.

What I claim is:

1. A safety boot comprising an upper provided with a plurality of short integral external parallel ribs extending in a direction substantially perpendicular to the median plane of said boot and disposed in a row extending from a point within the top portion of the front of the leg of the boot down over the instep covering portion thereof, said ribs terminating short of the sides of said boot and said boot also comprising a group of short external parallel ribs positioned centrally of the ankle portion of each side thereof.

2. A safety boot as claimed in claim 1 comprising a toe portion having a continuous outer surface and a metal protective plate embedded therein.

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