Nov. 4, 1930. L. S. WILLIAMS 1,780,574

BOOT AND SHOE SOCK

Filed May 20, 1929

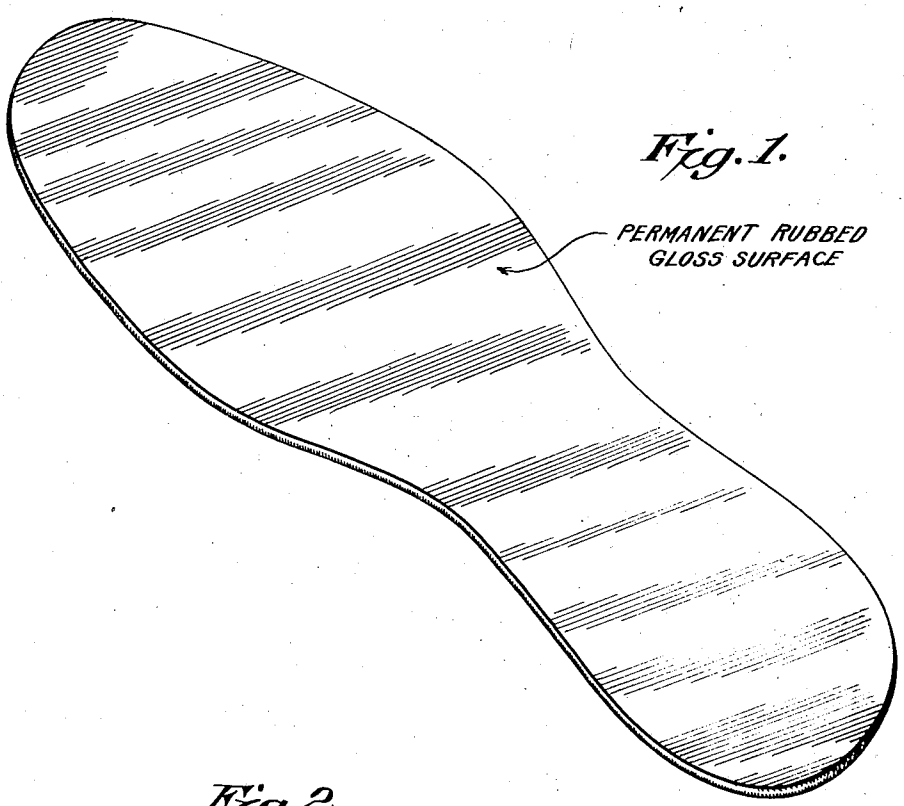
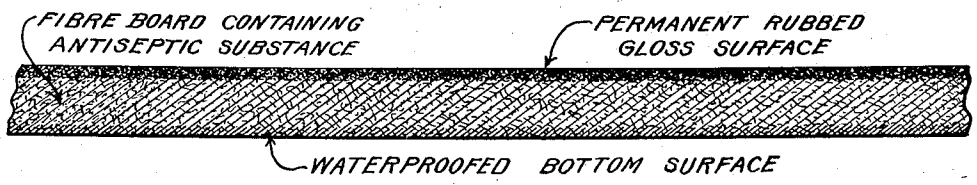


Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE

LEWIS SILVANUS WILLIAMS, OF ROMSEY, ENGLAND

BOOT AND SHOE SOCK

Application filed May 20, 1929, Serial No. 364,693, and in Great Britain March 11, 1929.

This invention relates to improvements in boot and shoe sock linings devised with the objects of giving, as compared with socks hitherto devised, better resistance to wear, freedom from rucking, ease when putting on the boot or shoe, comfort in use, protection from dampness, and hygienic properties.

The invention is illustrated in the accompanying drawing in which Figure 1 is a perspective view of the sock lining and Figure 2 is a fragmentary sectional view thereof on an enlarged scale.

The essential characteristic of the improved sock lining according to the invention is that it is composed of board-like material to whose upper surface is imparted a rubbed permanent gloss. The board is made, for example, by the same process as ordinary mill board, the ingredients being vegetable fibres which are disintegrated in pulpers and beaters, and the pulp converted into sheets by the ordinary drum mould paper making machine. The rubbed gloss on the upper surface of the board is produced (see my divisional application Ser. No. 427,939, filed February 12, 1930) by passing the sheet under a ball of very hard metal, such as chilled cast iron which is carried by the end of a heavy suspended beam, the sheet being placed between this ball and a bedplate which the operator presses up to the ball with a foot pedal. The beam works backwards and forwards relatively to the operator who manipulates the board so that it is traversed along diagonal lines at a very acute angle by the ball. The ball gives a stroke about an inch wide and creates by friction a permanent and very high rubbed gloss.

The rubbed gloss so produced on the board has very advantageous properties in a sock lining because it allows the foot to slip easily over the surface of the sock lining when putting on the boot or shoe, which operation is thereby greatly facilitated. Moreover, the smooth running prevents the sock lining from being rucked or torn by the rubbing of the foot. An adhesive gloss would not be suitable for the purpose owing to the heat of the foot.

The under surface of the sock lining is preferably coated or impregnated with a waterproofing medium such for example as paraffin wax. The latter may be applied simultaneously to two sheets of the glazed board by holding the two sheets together with their rubbed surfaces in contact and then passing both together through rollers which distribute the waterproofing medium on the outer unrubbed surfaces of the sheets. The sheets are then complete and ready for the different sized knives to stamp out the separate sizes, pairs of knives being provided, i. e., a right and a left for each size.

To impart hygienic (antiseptic and prophylactic) properties to the sock lining, chemical substances are incorporated in the course of its manufacture (see my divisional application, Ser. No. 427,939, filed February 12, 1930), either by mixing in the pulp or by impregnation of the sheet or by both. As chemical substances, boric acid, formaldehyde and salicylic acid may in particular be used. Others which may be used are alum, sodium benzoate and borax. For example, the treatment with chemicals may be effected by mixing the pulp with a 1% solution of alum and by immersing the sheet, after pressing, in a solution containing salicylic acid 0.1 parts by weight, sodium benzoate 2.5 parts, boric acid 2.5 parts, borax 2 parts, formaldehyde 0.2 parts, and water to produce 100 parts by volume.

What I claim is:—

1. A boot and shoe sock lining composed of board-like material whose upper surface has a permanent rubbed gloss.

2. A boot and shoe sock lining composed of board-like material whose upper surface has a permanent rubbed gloss and whose under surface is treated with a waterproofing medium.

3. A boot and shoe sock lining composed of board-like material whose upper surface has a permanent rubbed gloss and whose under surface is treated with paraffin wax.

In testimony that I claim the foregoing as my invention, I have signed my name, this 3rd day of May, 1929.

LEWIS SILVANUS WILLIAMS.