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J. J. DALY

SHOE FILLER

Filed Nov. 23, 1922

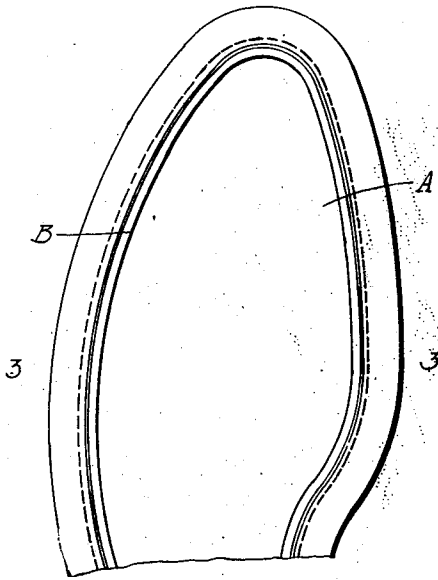


Fig. 1.

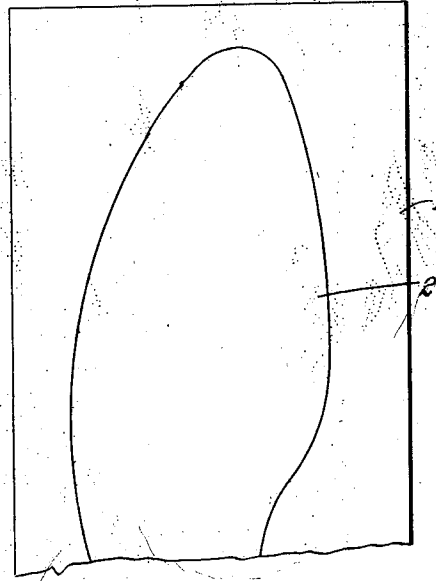


Fig. 2.

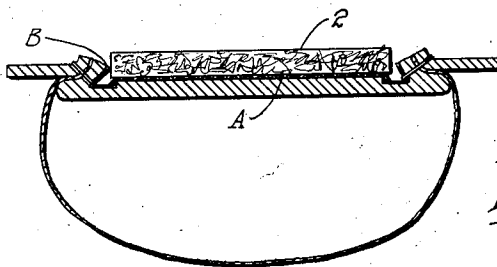


Fig. 3.

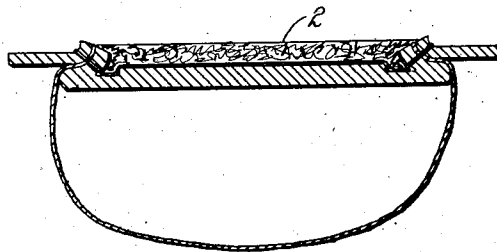


Fig 4

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by

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UNITED STATES PATENT OFFICE.

JOHN JOSEPH DALY, OF NEWTON, MASSACHUSETTS.

SHOE FILLER.

Application filed November 23, 1922. Serial No. 602,849.

To all whom it may concern:

Be it known that I, JOHN J. DALY, a citizen of the United States, residing at Newton, county of Middlesex, Commonwealth of Massachusetts, have invented certain new and useful Improvements in Shoe Fillers, of which the following is a specification.

This invention relates to fillers for shoes and particularly to a filler for the in-seam space beneath the inner sole of a shoe.

Various materials and methods of filling this space have been devised, each having points of advantage and disadvantage. In my present invention I avoid some of the difficulties and produce an improved ultimate structure without adding to the expense of the materials or cost of making the shoe. As illustrative of my invention I have herein shown and will particularly describe a novel material and method of filling characteristic of my invention and very well adapted to practical shoemaking. Throughout specification and drawings like reference characters are employed to indicate corresponding parts, and in the drawings:

Fig. 1 is a view of a portion of a shoe ready for filling.

Fig. 2 a diagrammatic illustration indicating the filler piece being cut.

Fig. 3 a transverse section through the area 1 and with the blank shown in Fig. 2 applied, and

Fig. 4 a similar view showing the said blank pressed down and in place.

In practicing my invention I prepare a filling material by making a mixture of such filling material as ground up rags, paper or other inexpensive stock. The material should preferably be a light material and in a comminuted state and if it should be of a fibrous character the main body of it should be reduced to short fibre length.

With this I mix fibrous material such as hair, lint or other animal or vegetable fibres which impart to the mixture a slight body strength so that it can be formed into a sheet but only distributed through a larger mass of material of much shorter fibre such as ground up paper or rag stock which constitutes the body of the filling and which is in a substantially free state so that it will respond readily to pressure and make the mass easily conformable to irregularities in the space to be filled.

This mixture I impregnate with a fusible binding material such as powdered gum or

asphalt in such proportion as would upon its fusing make the material moderately stiff.

From such material formed in sheets as indicated at 1, I cut blanks 2 of a size to fit the space A defined by the in-seam B of the shoe. The blanks 2 as indicated in Fig. 3 are cut so as to have rather a free fit within the in-seam B. They are first heated to fuse the gum or asphalt or to bring it to an adherent state, after which the operative places the blank within the space A while hot and irons it under pressure so that it will be pressed firmly against the inner sole C and laterally spread into the margins of the in-seam and at the same time levelled to fill any inequalities that may exist along the lower surface of the inner sole.

Upon cooling the filling 2 hardens into a firm but sufficiently pliant state to give adequate support to the inner sole and to completely fill and seal the space beneath it. The filling moreover is not affected by the warmth of the foot nor by any ordinary external heat usually encountered by footwear. The filling is inexpensive in itself and economical to handle and shoes so made are more resistant to wear and free from tendency to develop depressions or rolls or bunches.

Various materials may be employed to constitute the body of the filling and the impregnating material and the material may be embodied in a shoe in ways other than herein described all without departing from the spirit of my invention.

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

1. The method of filling the sole space of a shoe consisting in forming a sheet of comminuted fibrous material having therein in an unfused state a fusible material, said filling material being compressible and self-conforming when said material is fused, in cutting from said sheet a blank of substantially the size of the sole cavity, in heating the blank and inserting it in the cavity and in compressing the blank in place while hot to cause it to spread and fill the entire sole space.

2. The method of filling the sole space of a shoe consisting in forming a sheet of comminuted material including a small amount of long fibre and having therein in an unfused state a fusible material, said filling material being compressible and self con-

forming when said material is fused, in cutting from said sheet a blank of substantially the size of the sole cavity, in heating the blank and inserting it in the cavity and in compressing the blank in place while hot to cause it to spread and fill the entire sole space.

3. The method of filling the sole cavity of a shoe consisting in inserting into such space a blank of compressible absorbent comminuted fibrous material impregnated with a fusible material in an unfused state which is normally stiff but is adapted to be softened by heat, and in compressing the blank in place while hot to cause it to spread and fill the entire cavity.

4. The method of filling the sole cavity of a shoe which consists in inserting into such space a filler consisting of compressible fibrous material in comminuted form and in substantially a free state so as to readily conform to irregularities in the space to be filled upon application of pressure thereto and impregnated with a fusible binding material of asphaltic or resinous origin which is normally stiff but is adapted to be softened by heat, and in compressing the blank in place while hot to cause it to spread and fill the entire sole cavity.

In testimony whereof I affix my signature.

JOHN JOSEPH DALY.