D. KOCH.

SHOE.

APPLICATION FILED MAR. 26, 1919.

1,419,676. Patented June 13, 1922.

Fig. 1.

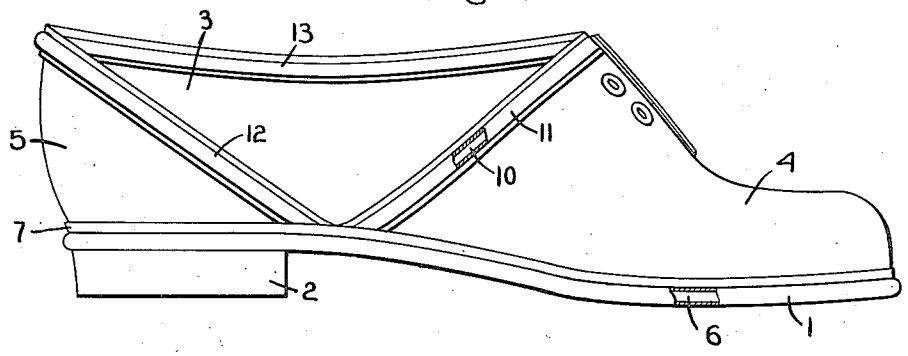


Fig. 2.

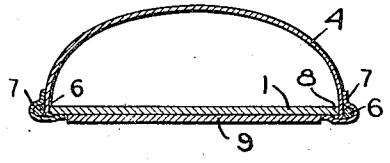


Fig. 3.

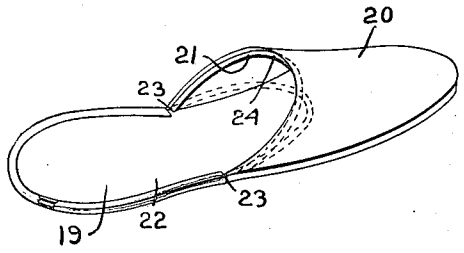
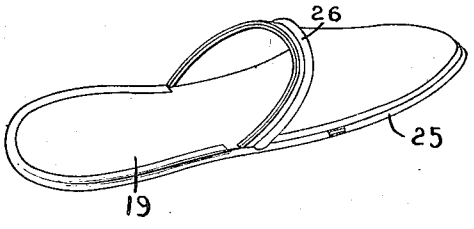


Fig. 4.



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UNITED STATES PATENT OFFICE.

DANIEL KOCH, OF ROXBURY, MASSACHUSETTS.

SHOE.

1,419,676. Specification of Letters Patent. Patented June 13, 1922.

Application filed March 26, 1919. Serial No. 285,201.

To all whom it may concern:

Be it known that I, DANIEL KOCH, a citizen of the United States, and resident of Roxbury, county of Suffolk, State of Massachusetts, have invented an Improvement in Shoes, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention relates to improvements in shoes and the broad object thereof is to provide a shoe with a resilient reinforcing member adapted to strengthen such a particular part of the shoe as may need reinforcement.

More specifically the object of the invention is to produce a shoe made of paper or a similar material with suitable reinforcing means for the sole or the upper, the vamp or the counter thereof.

A further object of the invention is to provide a collapsible shoe having suitable reinforcement.

Other objects and features of the invention will more fully appear from the following description and drawings and will be pointed out in the annexed claims.

Certain preferred embodiments of the invention are illustrated in the accompanying drawings in which,

Fig. 1 is a side elevation of a shoe containing resilient reinforcing members in accordance with my invention,

Fig. 2 is a transverse vertical sectional view through the toe portion of a shoe showing one form of means for reinforcing the sole portion,

Fig. 3 is a perspective view of a slipper showing a reinforcing means supporting the vamp portion of the shoe in operative position but which may be bent down upon the sole when the slipper is to be placed in the package,

Fig. 4 is a perspective view of the slipper having a reinforced sole and also containing a reinforcing member for the vamp.

This invention contemplates the production of a shoe formed of paper or other material which heretofore has not been considered of sufficient strength for the purpose, one of the objects of the present invention being to produce a shoe which may be worn once and then thrown away. In many instances it is desirable to provide a foot covering for a special purpose and for temporary use, for example surgeons in performing operations carefully clothe themselves in sterilized gowns, caps and masks but wear their usual footwear.

One of the objects of the invention is to provide a cheap shoe which may be sterilized and kept in a hermetically sealed container until required for use by surgeons, nurses and those visiting the sick, which can be put on and worn during the time required for the operation or the visit to the room of the patient and then burned up.

Again in many instances travelers upon Pullman cars and transient guests at hotels find themselves temporarily in need of slippers, and another object of the invention is to provide a shoe or slipper of the character specified which may be packaged in a sealed container and furnished to the traveler or patron of the hotel, such slippers being produced at a price which can reasonably be afforded by the traveler, guest or hotel proprietor.

In each case the shoes or slippers preferably are put up in heremetically sealed, desirably paraffine paper packages which will exclude dust, germs, moisture, etc.

I am aware that heretofore patents have been granted upon shoes made of paper of special form and construction but in view of the lack of strength of the paper from which the shoe is made such devices have been found impracticable.

The present invention contemplates the introduction into a shoe made of paper, or other material having relatively little tensile strength of a reinforcing member or of such reinforcing members as will strengthen a shoe and also receive the strains put upon it by the wearer, thus enabling the shoe to perform its purpose whether temporarily or for a longer period.

Certain illustrative embodiments of my invention are shown in the accompanying drawings in Fig. 1 of which a shoe of the oxford type is illustrated which comprises a sole 1 with a heel 2 and an upper 3 including a vamp 4 and counter 5. The sole 1 as illustrated is provided with a marginal reinforcement consisting of a wire 6 extending preferably around and bounding the edge of the sole and secured to it by an

overlying strip 7 of material which is secured to the edge of the sole 1 and the side of the lower portion of the upper. The upper 3 including the vamp 4 and counter 5 may be cut in the usual form and secured to the sole by wrapping the edge portion 8 around the edge of the sole and pasting it or sewing it to the sole. The strip 7 desirably overlaps the edge portion 8 of the upper and is likewise secured to the sole. The sole may comprise a single piece and may have a channelled edge to receive the portion 8 of the upper and the strip 7 which is wrapped around its edge, and if desired the sole may be provided with a supplemental outsole 9 which may be of waterproof material such as paraffined or otherwise treated paper.

The main body of the sole may be made in such case of any suitable material such as absorbent species of paper. While the sole reinforcement above described is ordinarily sufficient for shoes adapted for temporary use only it may be desired in some instances to provide further reinforcement for the upper in order to provide a more permanent type of shoe which may be worn repeatedly. In such case other reinforcement may be made such as a resilient reinforcement 10 extending from about the heel seat upwardly over the instep, or along the usual line of the edge of the vamp.

The reinforcing member 10 may be conveniently of wire secured in place by an overlying strip of tape, paper or other suitable material 11 suitably secured to the vamp by adhesive or by a line or lines of stitching. A similar reinforcement 12 may be provided for the counter extending from the forward portion of the heel seat upwardly across the back of the upper portion of the heel.

A still further reinforcing member 13 of like character may be provided around the margin of the upper portion of the upper. By providing some or all of these reinforcements for the upper of the shoe the strain which otherwise would be imposed upon the paper or other fibrous material forming the upper will be absorbed by the reinforcing strip or strips so that the shoe will be given a durable quality.

In Fig. 3 a slipper of the usual type known as a bath slipper is illustrated which comprises a sole 19 and an upper in the form of a vamp 20. A reinforcing member 21 preferably of wire is secured along the margin 22 of the sole from the instep around the rear portion of the heel. This reinforcing member desirably extends upwardly and free from the sole from a point 23 at which the end of the vamp is secured to the sole to present a loop 24 which normally stands up a sufficient distance to stretch the vamp tightly along its margin. By reason of this construction the reinforcing member 24 will engage the foot and sustain the strain placed upon the vamp portion during the wearing of the slipper.

When it is desired to place the slipper in a package this free loop may be depressed into the dotted line position illustrated in said figure in which it rests upon the upper surface of the sole 19, thus permitting the vamp portion 20 to be collapsed upon the sole.

In Fig. 4 a similar construction is shown in which the sole 19 is provided with a marginal reinforcing member 25 which desirably extends entirely around the edge of the sole and is secured to it in the manner illustrated in Fig. 2. A further reinforcing member 26 may be secured to the vamp along the instep portion thereof to receive the strain imposed by the foot of the wearer as above described. Of course the slipper illustrated in Fig. 3 may likewise have a reinforcing member extending along the margin of the sole in the manner described.

Slippers of this character may be provided for surgeons or for those whose duties require them to enter sick rooms, thereby providing a sanitary precaution against the carrying of disease germs as the slippers can be burned immediately after use. Shoes having a more rigid construction which are adapted to be used repeatedly may also be packaged in sealed sanitary containers as will be readily apparent.

It will be understood that the embodiments of the invention dislcosed herein are illustrative merely of the invention and that the uses herein described are but suggestive of a few of the many desirable uses to which the invention may be placed.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A shoe comprising a sole and an upper, a reenforcing wire extending along the margin of said sole in the plane of said sole and a confining strip of material enclosing said wire and the edge portions of the sole and upper and means for securing the edge portions of said confining strip to said sole and upper.

2. A shoe comprising a sole and an upper, a reenforcing wire extending along the margin of said sole in the plane of said sole and a confining strip of material enclosing said wire and the edge portions of the sole and upper and secured to said upper and sole respectively by adhesive.

3. A paper shoe having a sole, a reinforcing member extending along the margin of the sole, a confining strip of material embracing and secured to the edge of said sole and enclosing said reinforcing member, and an outer sole of greater thickness than said confining strip secured to the underface of said sole.

4. A paper shoe having a sole, a reinforcing member extending along the margin of the sole, a confining strip of material embracing and secured to the edge of said sole and enclosing said reinforcing member, and an outsole of waterproof material of greater thickness than that of the confining strip secured to the under-face of said sole within the margin defined by the edge of said confining strip.

In testimony whereof, I have signed my name to this specification.

DANIEL KOCH.