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TOOL AND METHOD FOR REMOVING INSOLES

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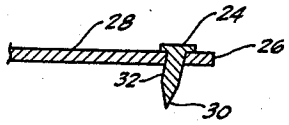


FIG 2

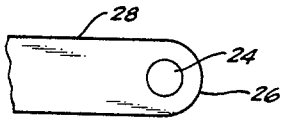


FIG 3

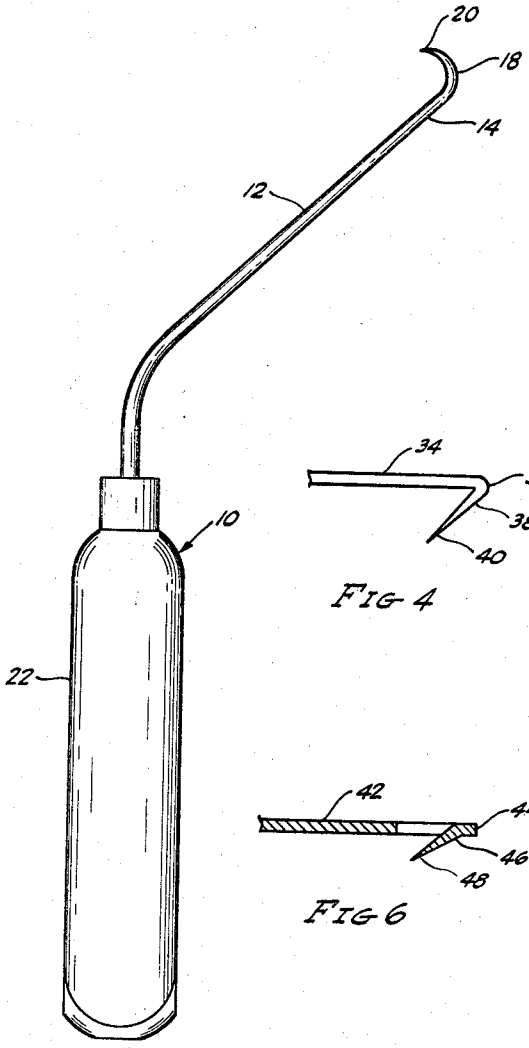


FIG 1

FIG 4

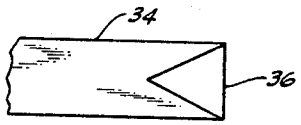


FIG 5

FIG 6

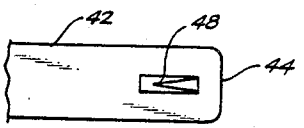


FIG 7

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TOOL AND METHOD FOR REMOVING INSOLES

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ABSTRACT OF THE DISCLOSURE

Disclosed herein is a method and tool for removing insoles from shoes. The tool has a shank carrying a sharp point at one end and a handle at the other end. The point can be formed as a stamping from the shank or a separate element secured to the shank. The handle extends at such an angle from the shank to permit the handle to extend from the open heel area of a shoe when the point engages the front toe portions of an insole.

This invention relates to the shoe art. More particularly, this invention relates to a tool and method for removing insoles from shoes.

Broadly, the method of this invention comprises inserting a sharp pointed tool into the toe area of a shoe and transfixing, with the sharp point of the tool, the insole near the tip thereof. The transfixed insole is then lifted and peeled from the sole of the shoe by withdrawing the tool from the toe area while the insole is transfixed by the sharp point.

Broadly, the tool of this invention comprises a sharp point, which is adapted to pierce an insole at about its tip while the insole is in position in a shoe. The sharp point is carried by an arm which is attached to a shank. The shank extends at such an angle from the point that, when the point is in position to pierce the insole at about its tip, the shank will extend from the enclosed toe area of the shoe, through the interior of the shoe, to the open heel area of the shoe.

A means is provided for grasping the tool. This means it attached to the shank in such a manner that, when the point is in a position to pierce the insole at about its tip, the tool may be conveniently grasped by the user. Generally, a handle is attached to the shank at such an angle that the handle projects out of the shoe, or at least into the open heel portion of the shoe, where it can be conveniently grasped by the user.

Shoes, and, in particular, women's shoes are manufactured in a limited number of different sizes. Generally, women's shoes, as manufactured, have an insole or sock-liner which forms at least the front portion of the inner bottom lining of the shoe. This insole may be composed of leather, composition, or other material. The bottom of the wearer's foot rests on the top side of this insole. It is customary, in the manufacture of women's shoes, to glue or otherwise adhere the bottom side of the insole to the shoe sole at every point except at the very tip of the toe.

When a potential purchaser is being fitted for a new pair of shoes, it often becomes apparent that the correct shoe size is somewhere between two standard shoe sizes. Also, it is not uncommon for a potential purchaser to have one foot larger than the other foot. Another common problem is the returning of shoes for minor size adjustment because of the enlargement of the shoe through wear. Thus, in order to secure a proper fit, it is necessary to slightly alter the size of an available shoe.

In general, the only rapid way to slightly alter the size of a shoe is to lift the insole and insert a small cushion or pad under the insole in at least the area where the ball of the wearer's foot rests. This slightly reduces the size of the shoe. The insertion of this cushion must generally be accomplished in a brief period of time, without the potential purchaser's knowledge. The insole must be lifted without tearing or wrinkling it, or any cushion which may be under the insole. Also, the entire operation must be performed rapidly so that potential purchaser does not become impatient and dissatisfied with their choice of shoes because of the delay. A sale can easily be lost because of difficulty in making the size alteration efficiently and effectively in a very short time span.

It is generally impossible to reach the unglued tip of the insole with the human finger. When the tool of this invention is not available, it is customary for those in the art to try to work a finer-tip under one side of the insole in about the area of the ball of the foot. Since the insole is generally tightly adhered to the top of the sole at this point, some stretching and distortion of the insole almost invariably takes place while it is being worked loose. Also any cushion under the insole is generally distorted by this operation. There is also considerable risk of tearing the insole itself during this operation. When the insole, or any cushion under it, is stretched or distorted, it may wrinkle or become displaced during use so as to cause discomfort and dissatisfaction to the wearer. If the insole is torn, generally it cannot be repaired in time to satisfy the customer's requirements, so the sale is lost.

Considerable skill is required to avoid damaging the shoe during the removal of the insole. If the shoe is so constructed that it is possible to reach the unglued tip of the insole with the human finger, the insole is often dragged back from the tip of the shoe so that it bunches and wrinkles with accordion-like pleats. The resulting distortion often causes discomfort and dissatisfaction to the wearer, as well as destroying the new appearance of the shoe. This problem causes considerable loss to the industry through lost sales and damaged merchandise.

Use of the tool according to this invention permits the insole to be transfixed near its tip, where it is not adhered to the sole, and peeled back gently and uniformly without stretching and tearing or damaging the cushion underneath it. The point of the tool pierces the insole near its tip. As the tool is withdrawn from the shoe, the tip of the insole remains transfixed by the point. The insole is lifted up and, as the tool is moved further back out of the shoe, the insole is gently peeled away from the sole. Using this tool, there is very little danger of tearing or distorting even the most fragile of insoles. The removal of the insole is accomplished rapidly, and little skill is required on the part of the operator.

For a more complete understanding of the invention, reference is made to the drawings, in which:

FIGURE 1 is an elevation of a tool of this invention:

FIGURE 2 is a cross-sectional view of a portion of one embodiment of this invention;

FIGURE 3 is a top view of the embodiment shown in FIGURE 2;

FIGURE 4 is a side elevation of a portion of an additional embodiment of this invention;

FIGURE 5 is a top view of the embodiment of FIGURE 4;

FIGURE 6 is a cross-sectional view of a portion of a further embodiment of this invention; and

FIGURE 7 is a top view of the embodiment of FIGURE 6.

Referring particularly to FIGURE 1, there is illustrated a tool **10** having a shank **12** with a first end **14** and a second end **16**. First end **14** is attached to an arm **18**. Arm **18** projects downwardly from shank **12** and is provided, at its outer end, with a sharp point **20**. Sharp point **20** is smoothly tapered and conical in shape. Sharp point **20** is of such a configuration that it easily pierces a shoe

insole. Second end **16** is bent upwardly and handle **22** is attached to second end **16**.

Referring particularly to FIGURES 2 and 3, there is illustrated an embodiment of this invention wherein a spike **24** is affixed at about the first end **26** of shank **28**. Spike **24** is provided with an arm **32** and a sharp point **30**. Sharp point **30** is smoothly tapered and conical in configuration. Spike **24** is affixed in shank **28** at such an angle that it is adapted to pierce an insole near its tip when the insole is in position in a shoe.

Referring particularly to FIGURES 4 and 5, there is illustrated an additional embodiment of this invention in which shank **34** is bent sharply at first end **36** to form arm **38** and sharp point **40**. Sharp point **40** tapers smoothly and is adapted to pierce an insole.

Referring particularly to FIGURES 6 and 7, there is illustrated a further embodiment of this invention in which shank **42** has formed in it at about its first end **44**, a point arm **46** and a sharp point **48**. Sharp point **48** is smoothly tapered, and is adapted to pierce an insole.

The user of the tool of this invention grasps the handle **22**, FIGURE 1, and inserts the shank **12** of the tool through the open heel area of a shoe into the hollow interior and up to the enclosed toe area of the shoe. The first end **14** is moved as close to the tip of the shoe's toe as possible and sharp point **20** is forced downward until it transfixes the insole. Shank **12** is then withdrawn from the interior of the shoe while the insole is still transfixed by sharp point **20**. The insole is lifted and peeled back as shank **12** is withdrawn from the interior of the shoe.

The sharp point on the tool of this invention is of such configuration that it easily pierces the insole of a shoe In general, the sharp point should taper smoothly for a length of at least about one-sixteenth inch to a sharp tip.

The overall length of the sharp point and arm combined is generally from about one-eighth inch to one inch, with a combined length of from about one-quarter inch to one-half inch being generally preferred. Combined arm and sharp point lengths or more than about one inch generally make it difficult or impossible to insert the tool all of the way into the toe of the shoe. Combined arm and sharp point lengths of less than about one-eighth inch often permit the insole to slip off the sharp point as the insole is being lifted and peeled back.

The sharp point should project at an angle of from about 15 degrees to 90 degrees to the approximately longitudinal axis of the shank. An angle of greater than about 90 degrees will result in the insoles slipping off the sharp point as the tool is withdrawn from the tip of the shoe. Angles of less than about 15 degrees make it difficult to transfix the insole. Tools in which the angle of the sharp point to the shank is less than about 15 degrees tend to gouge and rip the insole rather than transfixing it.

In general, angles of from about 30 to 60 degrees are preferred. The shank of the tool of this invention should be of sufficient length to permit the user to grasp the handle either outside the shoe or in the open heel area, when the sharp point is in position to transfix the insole at about the tip of the insole. In general, the second end of the shank is bent upwardly at an angle of from about 10 to 80 degrees to the approximate longitudinal axis of the shank.

What has been described and shown are preferred embodiments of the invention in which changes and modifications may be made without departing from the spirit and scope of the accompanying claims.

What is claimed is:

1. A tool for removing shoe insoles comprising:
a sharp point adapted to pierce an insole;
an arm carrying said point at one end and attached at the other end to a shank, said shank extending at such an angle from said point that said shank is adapted to extend from the enclosed toe area of a shoe to the open heel area of said shoe when said point is positioned so as to pierce said insole at about the tip of said insole; and
means for grasping said tool attached to said shank, said means extending at such an angle from said shank that said means is adapted to extend from the open heel area of said shoe to be grasped when said point is positioned so as to pierce said insole at about the tip of said insole.

2. The tool of claim **1** wherein said sharp point has a smoothly tapered conical configuration.

3. The tool of claim **1** wherein said sharp point projects at an angle of from about 15 degrees to 90 degrees to the approximate longitudinal axis of said shank.

4. A tool for removing shoe insoles comprising:
a longitudinal shank having a first end and a second end;
an arm terminated in a sharp point extending downwardly from said first end of said shank, said shank extending at such an angle from said sharp point that said shank is adapted to extend through the interior of said shoe from the enclosed toe area of a shoe to the open heel area of said shoe when said sharp point is positioned so as to pierce said insole at about the tip of said insole; and
a handle extending upwardly from said second end of said shank, said handle being adapted to be grasped when said sharp point is positioned so as to pierce said insole at about the tip of said insole.

5. The method of removing an insole from a shoe which comprises:
inserting a sharp pointed tool into the toe area of a shoe;
transfixing said insole near the tip thereof with the sharp point of said tool; and
lifting and peeling said insole from said shoe by withdrawing said tool from said toe area while maintaining said insole transfixed by said tool.

6. A tool for removing shoe insole comprising:
a longitudinal shank;
a downwardly extending hook terminating in an insole piercing point at one end of said shank; and
an upwardly extending handle attached to the other end of said shank and extending at such an angle from said shank that said handle is adapted to extend from the open heel area of said shoe and adapted to be grasped when said point is positioned so as to pierce said insole at about the tip of said insole.

7. A tool for removing insoles, said tool having a generally elongated S-shape comprising:
a shank having a first end and a second end;
an arm extending from said first end, said arm projecting at an angle of from about 15 to 90 degrees to the longitudinal axis of said shank for a distance of from about one-eighth to one inch;
a sharp point at the end of said arm, said point being adapted to pierce an insole; and
a handle extending from said shank in a direction generally opposite to said point arm and at an angle of from about 10 to 80 degrees to the longitudinal axis of said shank.

8. A tool for removing insoles comprising:
a shank having a first end and a second end;
an arm extending from said first end, said arm projecting at an angle of from about 15 degrees to 90 degrees to the axis of said shank for a distance of from about one-eighth inch to about one inch from said shank;
a sharp point at the end of said arm, said point being adapted to pierce an insole; and
means for grasping said tool extending from said second end.

9. A tool for removing shoe insoles comprising:
a sharp point adapted to pierce an insole;
an arm carrying said point at one end and attached at

the other end to a shank, the combined length of said point and said arm being from about one-eighth to one inch;

said shank extending at such an angle from said point that said shank is adapted to extend from the enclosed toe area of a shoe to the open heel area of said shoe when said point is positioned so as to pierce said insole at about the tip of said insole; and

means for grasping said tool attached to said shank, said means being adapted to be grasped when said point is positioned so as to pierce said insole at about the tip of said insole.

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