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SHOE SOLE STRAIGHTENER

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Fig. 1

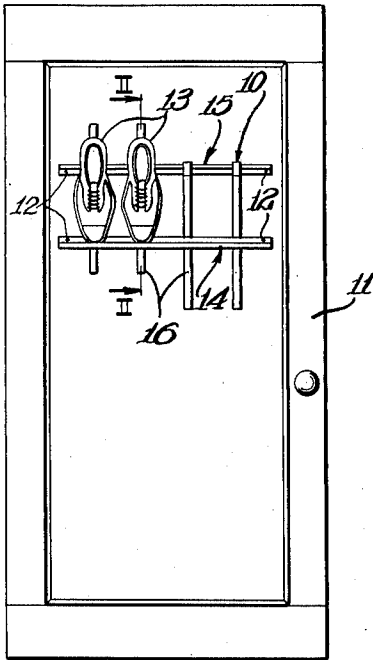


Fig. 2

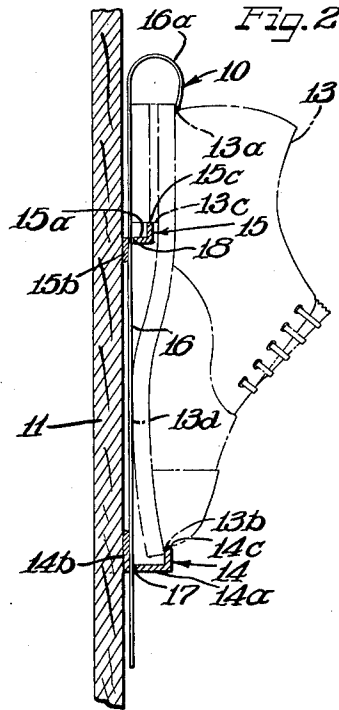


Fig. 3

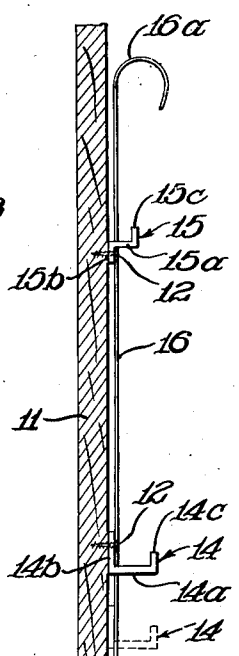
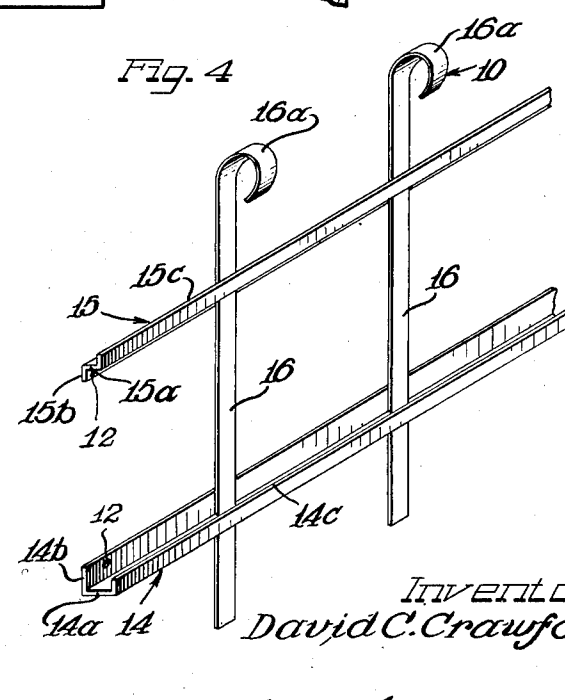


Fig. 4



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SHOE SOLE STRAIGHTENER

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5 Claims. (Cl. 12—129.1)

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This invention relates to a simple inexpensive device attachable to a wall, door, or the like for receiving and straightening shoes without impeding circulation of air in the shoes.

Specifically, the invention deals with a combined shoe tree and hanger rack composed of inexpensive easily assembled strip-like pieces for supporting shoes while simultaneously restoring them to correct shape.

The device of this invention includes a U-shaped channel strip, a Z strip and a plurality of slidable hook strips. The hook strips slide through slots in the channel and Z strips and extend at right angles thereto. The upper ends of the hook strips have curved hook-like portions. A hook strip is provided for each shoe and the hook-like portion thereof engages the rear end of the shoe in the groove between the counter and heel. The channel strip receives the toe portion of the sole therein to engage in the groove between the sole and the toe of the shoe upper. The hook-like end of the hook strip forces the shoe into a straight flat position while fulcruming the sole of the shoe against the hook. The fulcrum pressure of the shoe sole on the hook strip binds the hook strip in the slots of the channel and Z strips to prevent the hook from raising and releasing the shoe heel. The strips of the device are easily mounted on a wall, or door in proper position to receive the shoes and the channel strip is adjustable relative to the Z strip for accommodating shoes of different size.

A feature of the invention resides in the ease in which the strips are assembled for use enabling sale of the structure in a compact disassembled condition.

A further feature of the invention resides in the adjustability of the device to meet the individual requirement of the user, thereby obviating the necessity for manufacture of different sized devices.

An important feature is the utilization of pressure of the shoe sole in the channel strip and against the hook strip to hold the hook strip against movement in the slots of the cross strips.

A still further feature of the invention resides in the dual function of each strip thereof for forming a rigid frame as well as a shoe support.

It is, then, an object of the present invention to provide an easily assembled and adjustable combined shoe tree and hanger rack which is composed of interfitting metal strips.

A further object of the invention is to provide a combined shoe tree and hanger wherein cross bars can cooperate with slidable hook strips to support and urge shoes into their proper shape.

Another object of the invention is to provide a combined shoe tree and hanger composed of

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metal strips including a pair of cross strips and an individual hook member for each shoe.

A further object of the invention is to provide a combined shoe tree and hanger composed of inexpensive metal strips that are easily assembled on a wall or door with the aid of a screwdriver only.

Other and further objects of the invention will be apparent to those skilled in the art from the following detailed description of the annexed sheet of drawings which, by way of a preferred example, show one embodiment of the invention.

On the drawings:

Figure 1 is an elevational view of a closet door having a combined shoe tree and hanger of this invention mounted thereon;

Figure 2 is a cross-sectional view, with parts in elevation, taken along the line II—II of Figure 1 and shown in larger scale;

Figure 3 is a cross-sectional view similar to Figure 2 showing the adjustability of the parts to accommodate shoes of different size; and

Figure 4 is a fragmentary isometric view of the device.

As shown on the drawings:

The device 10 of this invention is mounted on the face of a closet door 11 by means of screws 12. The illustrated device 10 is adapted to support two pairs of shoes, but only one pair of shoes 13 is shown mounted in the device.

The device 10 includes a horizontal channel strip 14, a horizontal Z strip 15 in spaced parallel relation above the strip 14 and a vertical hook strip 16 for each shoe 13.

As best shown in Figure 2, each hook strip 16 slides through a slot 17 in the web 14a of the channel strip 14 and through a slot 18 in the web 15a of the Z strip. These slots 17 and 18 lie parallel with and adjacent to leg 14b of the channel strip 14 and leg 15b of the Z strip 15, respectively, so that these legs will abut against the hook strip and lie between the hook strip and the door face.

The channel strip 14 has an upturned front leg 14c in spaced relation outwardly from the strip 16 and the Z strip 15 has a similar upturned leg 15c.

The upper end of each hook strip 16 has a forwardly curved hook portion 16a opening downwardly and inwardly as shown in Figure 3.

The end portions of the channel strip 14 and Z strip 15 have screw holes therethrough to receive the screws 12 for attaching the strips to the door.

As shown in Figure 3, the channel strip 14 can be mounted at any desired distance beneath the Z strip 15 to accommodate shoes of different size.

The combined shoe tree and hanger of this invention is especially adapted for men's shoes

such as shoe 13, since every man's shoe has a groove or lip 13a between the heel counter and heel thereof, together with a groove or lip 13b between the toe portion of the sole and the toe counter of the upper.

As illustrated in Figures 1 and 2, the shoe 13 is mounted on the device 10 of this invention by inserting the toe end of the sole into the channel strip 14 so that the groove 13b between the sole and toe counter receives the upturned leg 14c of the channel strip. The hook strip 16 is then raised in the slots 17 and 18 so that the hook end 16a will clear the heel of the shoe. The shoe is flattened against the hook strip and the strip is forced down so that the end of the hook engages in the groove 13a between the heel and heel counter of the shoe. The hook 16a will thereupon fulcrum the shoe 13 against the leg of the strip 16 at an intermediate portion of the sole 13a, thereby stretching the shoe into a straight shape much in the same manner as the conventional shoe tree. This fulcrum pressure causes sufficient friction between the shoe sole and the channel and hook strips to prevent the hook from coming out of the heel. The shoe will thus be restored to its original shape and will be maintained in this restored shape as it remains in the hanger. Since nothing is inserted in the shoe, air can circulate freely therethrough to ventilate and dry out the shoe.

Shoes are easily removed from the device 10 of this invention by merely lifting the hook member from the heel and removing the shoe.

While the channel strip 14 could be replaced with a Z strip such as 15 but with a wider web 15a to position the leg 15c sufficiently outward from the strips 16 for removing thick soled shoes, it is preferred to have strips of different shapes so the inexperienced assembler cannot be confused.

The device of this invention can be made to accommodate any desired number of shoes by mere provision of a hook member for each shoe and by provision of Z and channel strips which are long enough to accommodate all of the hook members.

If desired, the hook strips can be somewhat springy to deflect and tightly grip the walls of the slots 17 and 18 when the shoe is fulcrumed at 13d or the spring gripping effect can be obtained by positioning a leaf spring between each strip 16 and the leg 14b of the channel 14 or the leg 15b of the Z strip 15.

From the above description, it will be understood that the invention provides a shoe rack which will have a shoe tree action on shoes held thereby and which is formed of inexpensive easily assembled component strips.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention.

I claim as my invention:

1. A shoe sole straightener which comprises spaced superimposed cross strips having web portions with legs on the ends thereof and in angular relation therewith, said web portions having slots therethrough adjacent one of the legs thereof, an upright strip extending through each of said slots at right angles to said cross strips and slidable in said slots, said upright strip having a rounded end portion forming a hook with a free end having a downward and inward gripping action, each of said webs having the legs thereof remote from the slots projecting toward said

hook-like end to coact therewith for supporting a shoe, and fasteners positioning the cross strips in desired spaced relation, said hook-like end of the upright strip being adapted to seat in the groove between the heel and counter of a shoe and the upturned leg of the lower cross strip being adapted to seat in the groove between the toe of the sole and the toe counter of the shoe, whereby the hook-like end of the upright strip will urge the shoe so that the sole will fulcrum about a point between the heel and toe thereby straightening the shoe and creating friction to hold the upright strips in fixed relation to the cross strip.

2. A shoe sole straightener comprising a pair of cross bars in spaced parallel relation, an upright strip for a shoe intersecting the cross bars in right angular relation, said upright strip having a hook-like end adapted to engage in the groove between the heel counter and heel of a shoe, and each cross strip having an upturned ledge adapted to support the toe and heel respectively of a shoe, one of said cross strips being adjustable relative to the other strip to accommodate shoes of different sizes.

3. A shoe sole straightener which comprises an upright metal strip having a hook-like end adapted to seat in the groove between the heel counter and heel of a shoe to exert an inward pull on the shoe, a cross strip slidably carrying said upright strip, and said cross strip having a ledge for receiving the toe portion of the sole of a shoe to resist the inward action of the hook on the heel of the shoe for fulcruming the shoe about a point on the sole between the heel and the toe.

4. A shoe sole straightener which comprises an upright strip having a hook-like end adapted to engage the groove between the heel counter and heel of a shoe, an upper cross strip having a slot receiving the upright strip therethrough, a lower channel strip having a slot receiving the upright strip therethrough, fasteners independent of said upright strip for affixing the lower channel and upper cross strip to a support in desired spaced parallel relation and said channel strip having an upturned leg spaced outwardly from the upright strip for projecting into the groove between the toe counter and toe portion of the sole of the shoe.

5. A shoe sole straightener which comprises a cross Z strip, a cross channel strip spaced beneath the Z strip, each of said cross strips having horizontal webs and upturned outer flanges, each of said webs having a slot therethrough spaced from the upturned legs, said Z strip having a downturned leg adjacent the slot therein, an upright strip slidably mounted in said slots and having a hook-like top end, and fastener receptacles in the end portions of the Z and channel strips.

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