

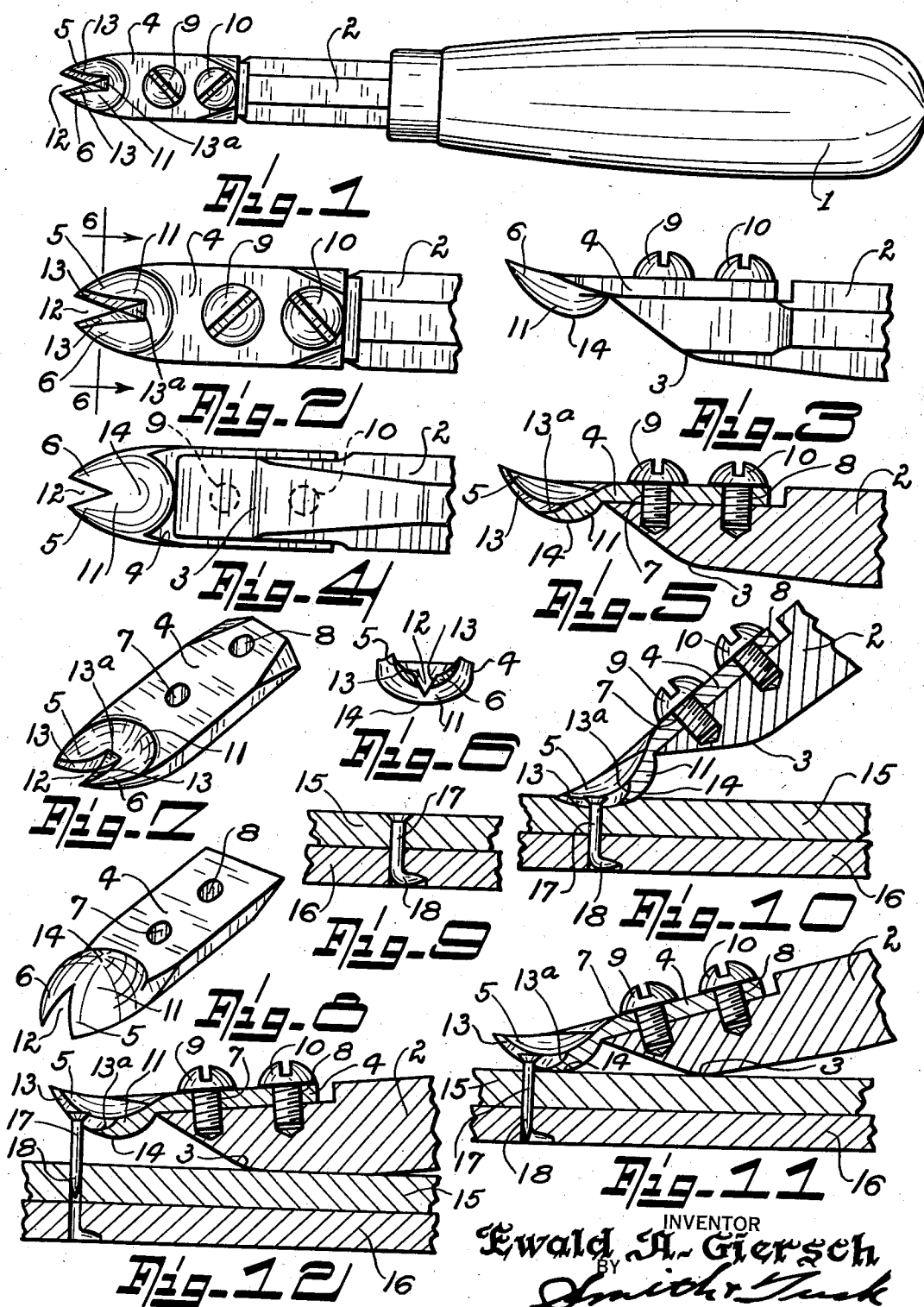
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TACK PULLER

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TACK PULLER

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My present invention relates to an improved tack puller and more particularly to the type of puller normally employed in removing clinched or bent tacks from leather articles such as shoes.

As is well known in the shoe trade, the sole securing tacks are driven through the sole and clinched or deformed at the inner end by forceful contact with a hard object usually a metal form or anvil.

In removing these tacks it is desirable that the tacks be pulled and removed from the shoe sole with a minimum of injury to the sole and without enlarging the hole through the sole.

The primary purpose of my invention, then, is to provide a tack puller so constructed that when used according to instructions, it will provide sufficient force and leverage so that the tack will be straightened as it is withdrawn and will not deform the hole through the shoe sole.

In the accompanying drawing I have illustrated one complete example of the physical embodiment of my invention according to the best mode I have thus far devised, but it will be understood that changes and alterations may be made in the exemplified structure within the scope of the appended claims.

Referring to the drawing, throughout which like reference characters indicate like parts,

Figure 1 is a top plan view of my tack puller.

Figure 2 is a partial enlarged view of the tool of my invention showing the claw thereof.

Figure 3 is an enlarged, partial side elevation of my tack puller.

Figure 4 is an enlarged, partial bottom view of the tool of my invention.

Figure 5 is a partial vertical sectional view of my tack puller.

Figure 6 is a front elevation along the line 6—6 of Figure 2 showing the claw of my tool.

Figure 7 is a top perspective view of the claw.

Figure 8 is a bottom perspective view of the claw.

Figures 9, 10, 11, and 12 are views showing the position of a clinched tack in a shoe sole and the relative positions of the claw of my tack puller in successive stages of the withdrawal of the tack.

Referring now to the drawing, the handle of the tool is illustrated as at 1. This handle, normally of wood, is provided with a shank 2 of metal or other desirable material, the shank being inserted in the handle in the usual manner. Adjacent the forward end of the shank and on its under side I fashion a fulcrum point 3 on which the tool is rocked to withdraw the tack.

The free end of the shank is flattened to receive the tack pulling claw 4 having the tack engaging prongs 5 and 6.

The claw 4 comprises a substantially flat rear portion in which are fashioned holes 7 and 8 through which I provide screws 9 and 10 for retaining the claw on the shank in rigid relation therewith.

The forward portion of the claw 4 includes a cup-shaped head or elevating ball 11 disposed at a slight angle with relation to the shank. This cup-shaped head 11 is provided with a V-shaped notch 12 to form the prongs 5 and 6 and the edges of the notch are beveled as at 13 and the apex of the V is beveled as shown at 13a.

The under side of the cup-shaped head 11 diverges toward the rear thereof from the upper surface to a point 14 rearwardly of the vertical axis of the head 11.

This point 14 forms a fulcrum upon which the tool is rocked during the preliminary operation when the claw prongs 5 and 6 are inserted under the head of a tack. Due to the fact that the thickness of the head becomes greater toward the point 14, the tack will be elevated as the prongs are slid thereunder. As the point of the V-shaped notch reaches and engages the tack, the point 14 then becomes a fulcrum and the tack is given its preliminary upward movement.

Thus the tool of my invention includes two distinct fulcrum points, the first adapted to furnish the initial movement for the tack pulling operation, and the second to furnish the major lifting movement through which the necessary force and leverage may be applied to withdraw the tack.

Referring to Figures 9, 10, 11 and 12, I have illustrated a pair of leather strips 15 and 16 comprising a shoe sole. A tack 17 in the sole has its pointed end 18 bent at right angles to the body thereof and lies against the inner face of the sole.

In withdrawing the tack it is desirable that the end 18 thereof be straightened before the forceful withdrawing takes place and in order to accomplish that result the tool of my invention accomplishes the desired result.

In operation, the prongs 5 and 6 of the claw 4, are inserted under the head of the tack 17 as shown in Figure 10. The prongs of the tool are then pushed under the tack head until the extremity of sliding movement is reached, i. e., when the point of the notch engages the tack. The tool is then rocked slightly to the right in the figures wherein the head 11 as a fulcrum

causes the tack to be slightly elevated from its hole in the shoe sole. The bent end of the tack has become straightened by this preliminary movement where fulcrum 14 is positioned to give maximum leverage and the tack may now be completely removed or withdrawn, by the use of the fulcrum 3, without enlarging or tearing the hole in the shoe sole as is shown in Figure 12. It will be noted that the displacement of fulcrum 3 from the tack is considerable, consequently the tack is removed in substantially a straight lift.

The foregoing description and the accompanying drawing are believed to clearly disclose a preferred embodiment of my invention; and it is believed that it will be apparent that the device of my invention is simple to use, and will be economical to manufacture, and will fill a long felt need in the art of shoe repairing, or in other fields where the device may be employed to advantage.

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

1. A tool for removing clinched tacks comprising a handle and shank, said shank having a

fulcrum on the under side thereof, a claw on said shank and including a cup-shaped head having a notch therein forming a pair of tack engaging prongs and the bottom of said head being substantially thicker than the points of the prongs at a point rearward of the vertical axis of the head to form a fulcrum whereby the force applied through the latter fulcrum will straighten the clinched tack and force applied through the former fulcrum will withdraw the straightened tack.

2. A tool for removing clinched tacks comprising a handle and shank, said shank having a fulcrum on the under side thereof, a claw on said shank disposed angularly thereof and including a cup-shaped head having a notch therein forming a pair of tack engaging prongs and the bottom of said head being substantially thicker than the points of the prongs at a point rearward of the vertical axis of the head to form a fulcrum whereby the force applied through the latter fulcrum will straighten the clinched tack and force applied through the former fulcrum will withdraw the straightened tack.

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