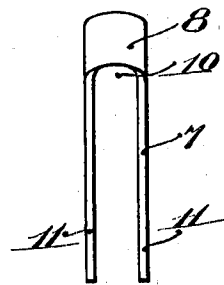
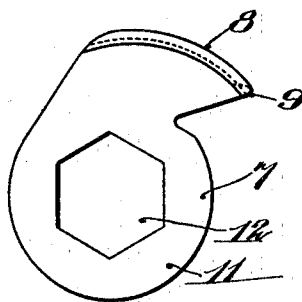
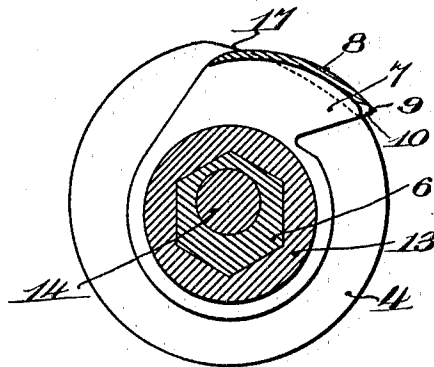
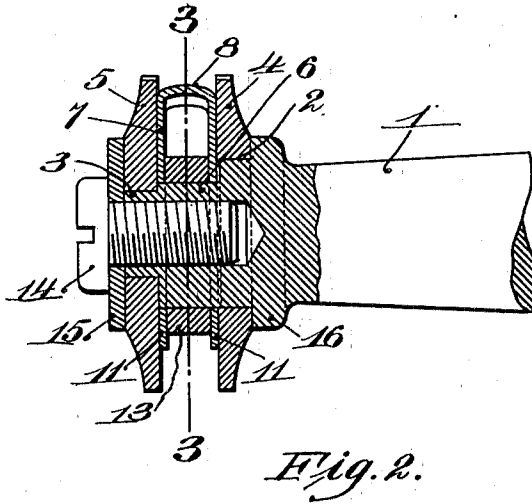
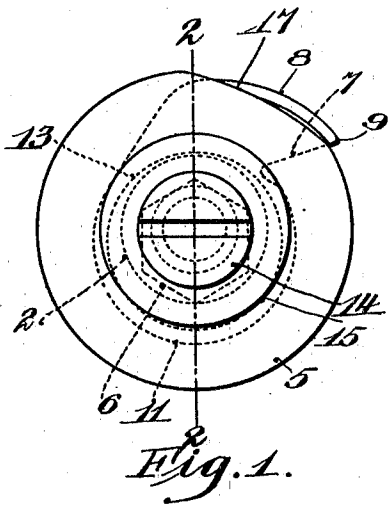


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MACHINE FOR PULLING TACKS FROM LASTED SHOES.
APPLICATION FILED JULY 23, 1910.

1,059,349.

Patented Apr. 22, 1913.



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MACHINE FOR PULLING TACKS FROM LASTED SHOES.

1,059,349.

Specification of Letters Patent.

Patented Apr. 22, 1913.

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To all whom it may concern:

Be it known that I, BURTON N. CLARY, a citizen of the United States, residing at Beverly, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Machines for Pulling Tacks from Lasted Shoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to machines for pulling tacks from lasted shoes, and more particularly to that class of tack pulling machines in which the tacks are acted upon and extracted by a rotary tool bearing a transverse tack engaging blade.

The object of the invention is to provide a tack pulling tool of this character with a tack puller, the tack engaging edge of which may be readily removed for repair and sharpening, and in the provision of means whereby the tack engaging edge may gradually be adjusted to project just the requisite distance beyond the peripheral edges of the guard flanges as the tack engaging edge is ground away by repeated sharpening.

A further object of the invention is to provide a tack puller which may be cheap to manufacture, and also from which the leather cuttings may be readily discharged or dislodged thus preventing the tool from becoming clogged.

To these ends the invention contemplates the use of a rotating shaft or spindle upon which are mounted two rotatably adjustable guard flanges the peripheral edges of which are at one point somewhat ground away or flattened. Between the guard flanges is mounted the tack pulling blade, said blade being radially adjustable in relation to the shaft to provide a gross adjustment, a finer adjustment being attained by turning the flattened portion of the guard flanges with relation to the tack engaging edge. The preferred form of radial adjustment of the tack engaging edge with relation to its shaft is by mounting the tack pulling blade upon an eccentric portion of the shaft or spindle, but in accordance with the broader features of the invention any suitable form of radial adjustment of the tack pulling blade may be employed. The tack pulling blade is formed of a U-shaped piece of metal the transverse

part of which forms the tack engaging edge. This form of tack pulling blade may be stamped and bent up from sheet metal thus being cheap to manufacture and entailing but little expense in replacing this part when worn out. The U-shape is particularly advantageous since it leaves a hollow portion inside the tack engaging edge through which the leather cuttings are pushed and discharged from the tool.

The various features of the invention will be readily understood from an inspection of the accompanying drawings in which—

Figure 1 is a front elevation of the tack pulling blade embodying the invention; Fig. 2 is a sectional elevation on the line 2—2, Fig. 1; Fig. 3 is a sectional elevation on line 3—3, Fig. 2; Fig. 4 is a front elevation and Fig. 5 is a side elevation of the tack pulling blade.

In the construction shown in the drawings the tack pulling tool is supported upon a rotating spindle or shaft 1. The end of this shaft is provided with two concentric bearing surfaces 2 and 3 upon which are mounted the respective guard flanges 4 and 5, which guard flanges are ground away somewhat at parts 17 of their peripheries. The bearing 2 is of greater diameter than bearing 3 so that the guard flange 4 may be freely slipped over the eccentric portion 6 upon which is mounted the tack pulling blade 7. The tack pulling blade 7 is of a U-shape and may be stamped from sheet metal. The transverse or bridge portion 8 of the U-shaped tack pulling blade has the tack engaging edge 9 which is sharpened to cut into the leather and engage under the heads of the insole tacks of a shoe and so extract them. Back of the tack engaging edge 9 the transverse portion is eccentric being curved inwardly from the engaging edge to allow the necessary projection of the edge beyond the other parts to cut under the embedded heads of the tacks. The engaging edge may be straight or it may be provided with a notch 10 as shown in Fig. 2. The fork portions 11 of the pulling blade are formed with polygonal perforations 12 which fit over the eccentric portion 6 of the shaft which has the cross-section of a corresponding polygon. Between the forks 11 of the U-shaped tack puller is placed a washer 13 to space the forks apart when they are clamped in place. The guard flanges 4 and

5 and the tack pulling blade 7 with its washer 13 are held on the end of the spindle by means of the screw 14 which clamps the aforesaid parts between its bearing washer 15 and the flange 16 of the shaft. The edge of the tack pulling blade is in practice ground back by repeated sharpening and it is evident that means must be provided whereby this wearing away may be compensated by advancing the engaging edge to its proper distance beyond the guard flanges. This is accomplished by two adjustments, a gross adjustment and a fine adjustment.

15 It is readily seen that when the tack pulling blade 7 is put upon its polygonal eccentric 6 it may be placed in a definite number of positions which will give adjustments of the engaging edge radially to the axis of the spindle giving a rough adjustment. A second or fine adjustment is then made by means of the flattened portions 17 of the guard flanges 4 and 5. These flattened portions 17 will, by being turned toward the engaging edge 9, allow the edge 9 to project the desired distance beyond the bearing edges of the flanges and so make a gradual adjustment of the distance which it may be desirable to have the edge cut into the leather in extracting the tacks.

It will be noted that an important advantage in the use of the U-shaped tack pulling blade is that it prevents clogging of the tool by the leather cuttings or other matter. The space beneath the transverse or bridge portion and between the forks of the U allows the leather cuttings to pass freely through and to be discharged from the tack pulling tool.

40 Having explained the nature and object of the invention and specifically described a form of the tack pulling tool in which it may be embodied, what is claimed is:—

1. A rotary tack pulling tool, having, in combination, a spindle, a tack pulling blade having a transverse edge mounted on the spindle, and a guard flange having a portion of its periphery somewhat flattened mounted on the spindle at one side of the pulling blade.

2. A rotary tack pulling tool, having, in combination, a tack pulling blade provided with a transverse tack pulling edge, a guard flange at one side of the pulling blade, said guard flange being somewhat flattened at one portion of its periphery, and means for rotatably adjusting said guard flange in relation to the tack pulling edge.

3. A rotary tack pulling tool, having, in combination, a tack pulling blade provided with a transverse tack engaging edge, means

for varying the position of the tack engaging edge radially, a guard flange at one side of the tack pulling blade, said guard flange being somewhat flattened at one portion of its periphery, and means for rotatably adjusting the guard flange in relation to the tack pulling edge.

4. A rotary tack pulling tool having, in combination, a spindle and substantially U-shaped tack pulling blade having its transverse portion forming a tack engaging edge and having its legs extending inward from said transverse portion and mounted on the spindle, substantially as described.

5. A rotary tack pulling tool comprising a spindle adapted to be rotated, and a U-shaped tack pulling tool mounted on the spindle, the transverse portion of the U forming a tack engaging edge and the legs of the U extending from the transverse portion toward the spindle.

6. A rotary tack pulling tool, comprising a U-shaped tack pulling blade, having a tack engaging edge and an eccentric periphery back of said edge, substantially as described.

7. A rotary tack pulling tool, comprising a U-shaped tack pulling blade and a spacing washer between the forks of the U leaving a free space between the washer and the transverse part of the U.

8. A rotary tack pulling tool, having, in combination, a spindle, a tack pulling blade having a transverse edge mounted on the spindle, a guard flange at one side of the pulling blade, said guard flange being somewhat flattened at one portion of its periphery, and means providing a relative rotatable adjustment between the pulling blade and the guard flange.

9. A rotary tack pulling tool having, in combination, a spindle adapted to be rotated, a substantially U-shaped tack pulling blade having its legs extending at substantially right angles to the axis of the spindle and having openings in the legs through which the spindle is received, substantially as described.

10. A rotary tack pulling tool, having, in combination, a spindle adapted to be rotated, a U-shaped tack pulling blade mounted on the spindle, the transverse portion of the U forming a tack engaging edge, and the legs of the U extending from the transverse portion toward the spindle and a guard flange mounted on the spindle at one side of the tack pulling blade.

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