

W. C. STEWART.
TACK POUNDER.
APPLICATION FILED SEPT. 17, 1909.

958,035.

Patented May 17, 1910.

Fig. 1.

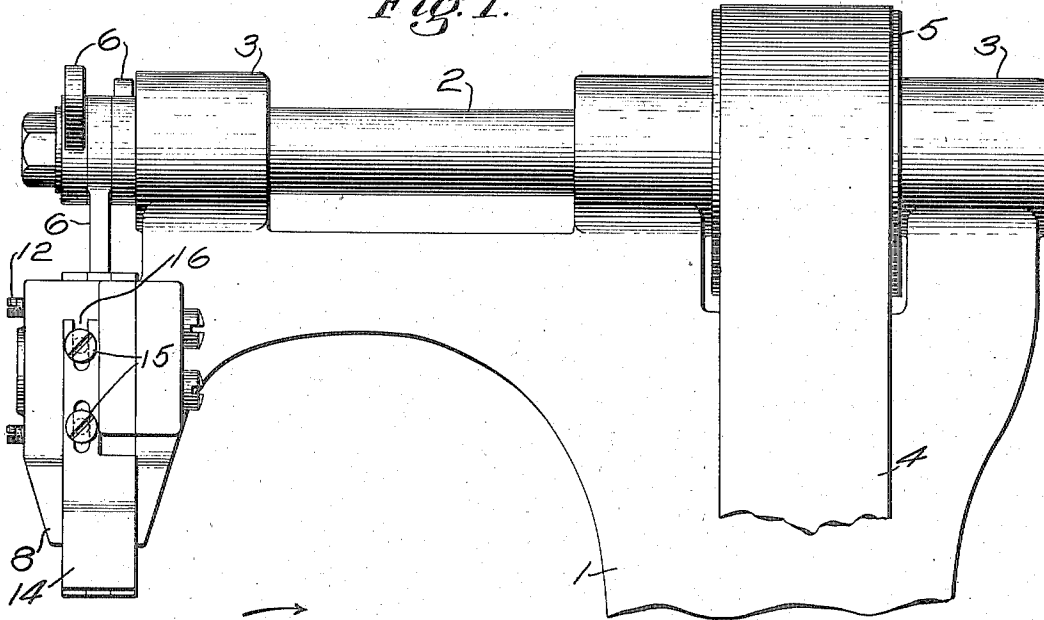


Fig. 2.

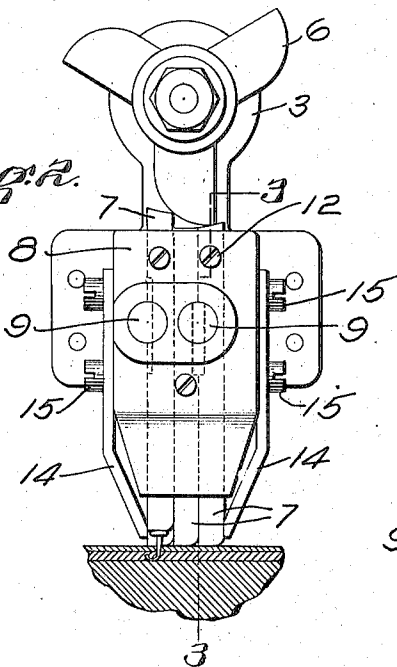


Fig. 3.

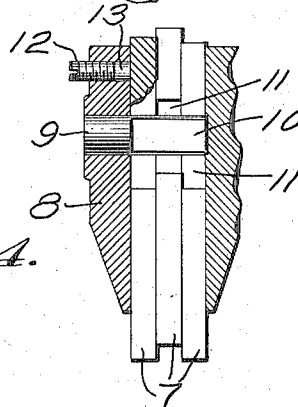
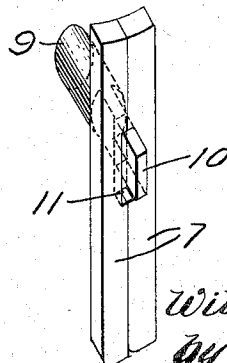


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM C. STEWART, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THOMAS G. PLANT,
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TACK-POUNDER.

958,035.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM C. STEWART, a subject of the King of Great Britain, residing at Lynn, in the county of Essex and State of Massachusetts, have invented an Improvement in Tack-Pounders, of which the following description, in connection with the accompanying drawings, is a specification, like figures on the drawings representing like parts.

This invention to be hereinafter described relates to machines for pounding or driving tacks which may project above a surface into which they have been previously driven.

The object of this invention is to provide a machine which can be operated over the edges of a lasted shoe, especially of the McKay type, for the purpose of removing any projections it may encounter and to bring the sole to an even and uniform surface. These projections consist principally of the heads of tacks, used to attach the upper to the inner sole, which have not been driven sufficiently or which have been driven in such irregular manner as to leave the heads thereof on an angle to the sole surface.

There is shown in the accompanying drawings one of the many forms in which this invention may be embodied and this will be described as a good practical form of the invention.

In the drawings:—Figure 1 is a side view of a tack pounder embodying the present invention, the supporting column being partly broken away; Fig. 2 is a front view looking from the left of Fig. 1; Fig. 3 is a section on the line 3—3, Fig. 2; and Fig. 4 is an isometric view showing two of the plungers and their retaining pin.

Supported on the column 1 are bearings 3, 3, in which is a shaft 2 carrying a pulley 5. A belt 4 driven by any convenient means is adapted to drive the pulley and shaft. Fixed to the end of the shaft 2, as shown, are a number of pounder arms 6, in this case three, but any number may be used. In the preferred form of the invention these pounder arms are disposed with their pounding surfaces in a helical path around the shaft. The ends of the arms are rounded on one side, as indicated in Fig. 2, so that as the shaft revolves in the direction of the arrow in Fig. 2, each arm will strike a sliding blow on any plunger 7 which may be in its path.

The plungers 7 are preferably, though not necessarily, grouped in three rows with three plungers in each row, and are disposed below the pounder arms in a bearing 8 projecting from or connected to the column 1.

Extending into the bearing 8 are two pins 9 flattened on their inner ends, as at 10, to pass through slots 11 in the plungers 7, as shown in Figs. 2, 3 and 4, which serve to limit the motion of said plungers, as will be readily understood.

From the construction thus far described it will be apparent that as the shaft 2 rotates, the pounder arms 6 will act upon the top portion of any of the plungers 7 which may be in their paths, and that the rounded ends of the pounder arms cause the plungers engaged thereby to descend, it being understood that the plungers in each group act each independent of the other.

In order that the plungers may not rebound when they strike the pins 9 under the impetus of the arms 6, there is provided means for retarding too free action of the plungers, and as one means to this end a frictional device may be caused to coast with each row of plungers, such as three screws 12 which may be adjusted against leather pieces 13 which in turn bear against one of the plungers of a group. Upon the sides of the bearing 8 are two stop fingers 14 adjustable vertically by the screws 15 in the slots 16, and against the lower ends of which the sole of the shoe may at times be forced.

In the operation of this machine the shoe is held under the plungers so that they cover the tack or projection to be leveled and lifted against the stop fingers 14. All the plungers will thus be lifted slightly and the one or ones covering a tack will be lifted higher than the others and into the path of the arms 6 which will drive the plungers downward with considerable force, thus driving the tack and pounding more lightly the surface around it. The pounding of the surface adjacent the tack will prevent the point of the tack being turned by the iron plate on a last and projecting to the surface of the upper. It is preferably desirable that the shaft 2 be driven at a high speed to impart rapid blows to the plungers.

What is claimed is:

1. In a tack pounder, the combination of

a shaft, a series of pounder arms driven by said shaft, a series of plungers, a bearing for said plungers in which they are held normally out of the path of movement of the pounder arms, and means for operating the shaft to cause the plungers when raised by the work to pound and depress any projection thereon and to act upon the work about said projection.

2. In a tack pounder, the combination of a shaft, a series of pounder arms arranged thereon in different transverse planes, a plurality of plungers arranged in planes corresponding to the planes of the pounder arms, a bearing for said plungers in which they are held normally out of the path of the pounder arms, and means for operating the shaft to cause the pounder arms to act each separately on its corresponding plunger to depress or pound any projection on the work and pound the work about said projection when the plungers are raised by the work.

3. In a tack pounder, the combination of a shaft, a series of pounder arms arranged thereon in different transverse planes, a plurality of groups of plungers, one group disposed for coöperation with each of said pounder arms, a bearing for said plungers in which they are normally held out of the path of the pounder arms, and means for operating the shaft for causing each of the plungers of a group to be operated by a pounder arm when the plungers are raised by the work to pound any projection and to act upon the work about the projection.

4. In a tack pounder, the combination of a shaft, a series of pounder arms driven by said shaft, a series of plungers, a bearing for said plungers in which they are held normally out of the path of movement of the pounder arms, retarding means acting on the series of plungers, and means for operating the shaft to cause the plungers when raised by the work to pound and depress any projection thereon and to act upon the work about said projection.

5. In a tack pounder, the combination of a shaft, a series of pounder arms driven by said shaft, a series of plungers, a bearing for said plungers in which they are held normally out of the path of movement of the pounder arms, means for operating the shaft to cause the plungers when raised by the work to pound and depress any projection thereon and to act upon the work about said projection, and stops projecting at each side of the series of plungers.

6. In a tack pounder, the combination of a shaft, a series of pounder arms having curved end portions and arranged in different transverse planes, a series of plungers each having a slot and disposed one in the plane of each of the pounder arms, a pin passing through the slots in the plungers, and means for operating the shaft.

7. In a tack pounder, the combination of a shaft having a series of pounder arms disposed with their pounding surfaces helically about said shaft, a bearing, a series of plungers in said bearing coacting with each of said pounder arms, and means for operating the shaft to cause the series of plungers to act upon any projection on the work and pound the work adjacent said projection when they are raised by the work.

8. In a tack pounder, the combination of a shaft having a series of pounder arms disposed with their pounding surfaces helically about said shaft, a bearing, a series of plungers in said bearing coacting with each of said pounder arms, frictional retarding means for said plungers, and means for operating the shaft to cause the series of plungers to act upon any projection on the work and pound the work adjacent said projection when they are raised by the work.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WILLIAM C. STEWART.

Witnesses:

ROSWELL F. HATCH,
REDFIELD H. ALLEN.