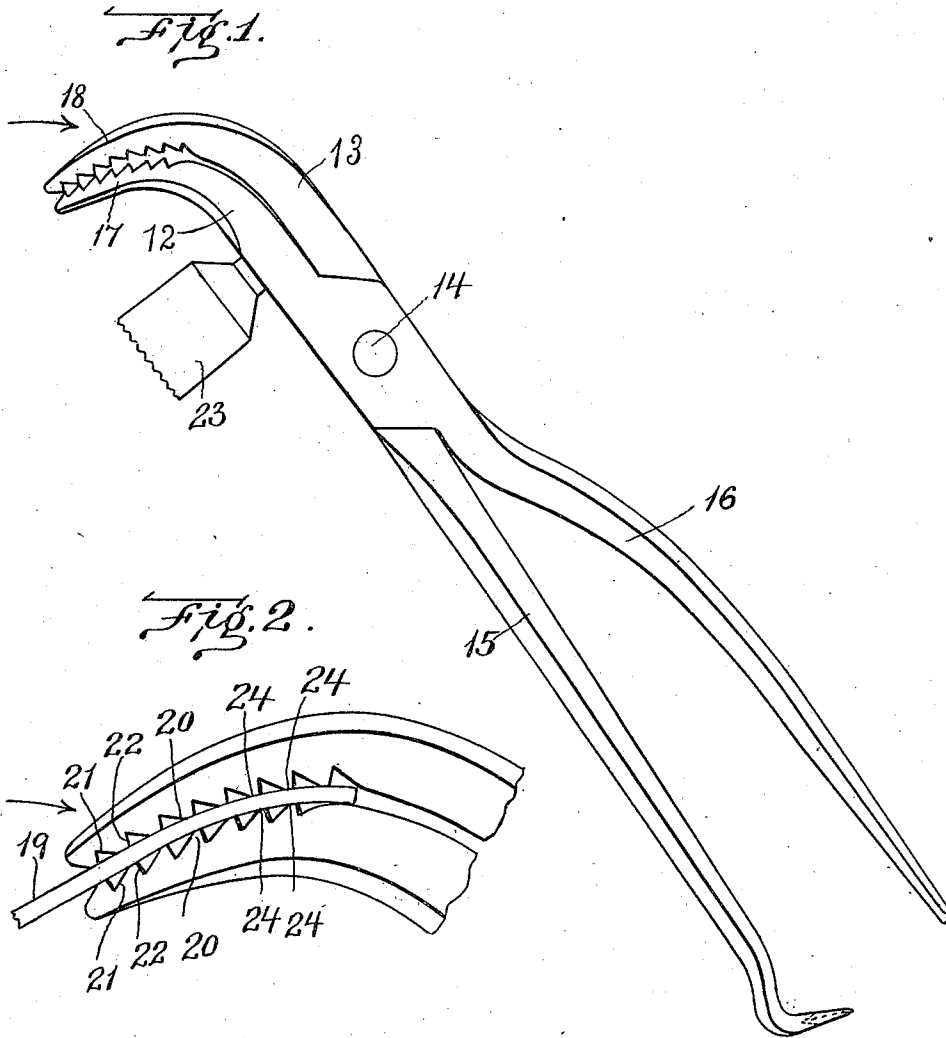


G. O. BARBOUR.
LASTING PINCERS.
APPLICATION FILED OCT. 4, 1909.

974,627.

Patented Nov. 1, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE O. BARBOUR, OF ROCKLAND, MASSACHUSETTS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO FRANK W. WHITCHER CO., OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

LASTING-PINCERS.

974,627.

Specification of Letters Patent.

Patented Nov. 1, 1910.

Application filed October 4, 1909. Serial No. 520,965.

To all whom it may concern:

Be it known that I, GEORGE O. BARBOUR, of Rockland, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Lasting-Pincers, of which the following is a specification.

This invention relates chiefly to pincers which are used for lasting the shank portions of boot and shoe uppers, a pair of pincers embodying my invention being composed of two shanks pivotally connected and extended at one side of the pivot to form handles, the shanks at the opposite side of the pivot being bent laterally and arranged to form grasping jaws, the opposed surfaces of which are serrated to engage a portion of an upper inserted between the jaws, one of the shank portions being provided with a projecting hammer head which forms a fulcrum adapted to bear on the bottom of a last, or on an inner sole supported by a last, and permit a rocking motion of the pincers in the direction required to pull the shank portion of the upper over the bottom of the last.

The invention has for its object to improve the form of the jaws, particularly with respect to the upper engaging teeth thereon, in such manner that the jaws, while firmly engaging the upper leather without liability of slipping thereon, will not injure the leather, and will require the minimum expenditure of force to keep them closed upon and properly engaged with the leather during the lasting operation.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification,—Figure 1 represents a side elevation of a pair of lasting pincers embodying my invention, the jaws being represented as closed. Fig. 2 represents an enlargement of a portion of Fig. 1, showing the jaws engaged with an interposed piece of leather.

The same reference characters indicate the same parts in all the figures.

In the drawings,—12 and 13 represent a pair of shanks which are pivotally connected at 14, the shanks being extended at one side of the pivot to form the usual handles 15, 16. At the opposite side of the pivot,

the shanks are extended and bent to form laterally projecting jaws 17 and 18 which are adapted to grasp an interposed piece of upper leather 19, as indicated in Fig. 2. The opposed faces of the jaws are provided with teeth 20, each of which has a longer face 21 which is inclined inwardly from the outer end of the jaw, and a shorter face 22 which is approximately at a right angle with the face 21. The teeth are so arranged that their points, formed by the intersection of the faces 21 and 22, coincide with each other so that the points of the teeth on the outer jaw 18 are directly opposite the points of the teeth on the inner jaw 17, so that when the jaws are closed, the teeth do not intermesh, but coincide, as indicated in Fig. 2, and therefore present a plurality of pairs of biting angles engaging the opposite sides of the leather piece 19. The points of the teeth of each jaw support the pressure exerted on the leather by the points of the teeth of the opposite jaw. The short front faces 22 of the upper jaw are substantially in alinement with the short front faces of the lower jaw as though lying in an arc of a circle of larger diameter, so that if a line were drawn along the front face of both an upper and a lower tooth it would be substantially an arc of a circle as will be clear from the drawings. The formation of the teeth and jaws is preferably such that when the jaws are closed with nothing between them, the points of a plurality of the teeth at the outer end portions of the two jaws will meet, while the points of the teeth at the inner end portions of the jaws will be slightly separated, as indicated in Fig. 1. The jaws are made relatively thin between their serrated sides and backs, so that they are somewhat resilient, and are adapted to spring slightly, and thus bear with equal force on the interposed leather. When the jaws are closed upon the leather and pressure is exerted the resiliency of the jaws will cause them to slightly bend after the front teeth bite the leather so that the rear teeth which are normally spaced apart will be brought closer together to also bite the leather.

The shank 12 is provided with a projection 23 formed as a hammer head and arranged to serve as a fulcrum adapted to bear on the bottom of a last or on an inner sole

placed thereon, and permit a rocking motion of the jaws in the direction indicated by the arrow, so that when the jaws are engaged with an upper 19, they may be moved in the direction required to stretch the upper over the shank portion of the last.

I have found that by forming the teeth as shown and described, and arranging them so that the points of the teeth on one jaw are opposite the points of the teeth on the opposite jaw, the teeth may be held in engagement with the upper, without liability of slipping thereon, by exerting a minimum degree of force on the handles 15 and 16, the power required to hold the jaws properly closed on the upper being less than would be the case if the teeth of the two jaws were arranged to intermesh with each other. The described form of the teeth and the resilience of the jaws cause the teeth to automatically close or hug the leather during the shank lasting operation, and to resist strain tending to cause the jaws to slip from the leather. I find that the points of the teeth may be blunted by removing the angles formed by the intersection of the faces 21 and 22, thus giving each tooth a relatively wide bearing on the upper without materially diminishing the hold of the jaws on the upper.

In Fig. 2 I have shown the teeth blunted as above described, the leather-engaging portion of each tooth being a narrow flat face 24.

I claim:

1. A pair of pincers having opposed serrated jaws, the points of the teeth of each jaw being opposite the points of the teeth of the other jaw and when the jaws are closed

the points of a plurality of the teeth at the outer end portions of each jaw normally engaging the points of the opposing teeth of the other jaw, and the points of a plurality of the teeth at the inner end portions of the jaws being spaced apart from each other.

2. A pair of pincers having opposed serrated jaws, the front face of each tooth having a relatively long slope and the rear face of each tooth being relatively short and substantially at right angles with the face of the jaw and the short face of each tooth of the upper jaw being substantially in alignment with the short face of the opposing tooth of the lower jaw.

3. A pair of pincers having opposed serrated jaws, the points of the teeth of each jaw being opposite the points of the teeth of the other jaw and when the jaws are closed the points of a plurality of the teeth at the outer end portions of each jaw normally engaging the points of the opposing teeth of the other jaw, and the points of a plurality of the teeth at the inner end portions of the jaws being spaced apart from each other, said jaws being relatively thin and resilient and adapted to bend under pressure upon the handles after the normally contacting front teeth are in engagement with each other to also bring the normally separated rear teeth into engagement with each other.

In testimony whereof I have affixed my signature, in presence of two witnesses.

GEORGE O. BARBOUR.

Witnesses:

AMOS A. PHELPS,
CHESTER H. SYLVESTER.