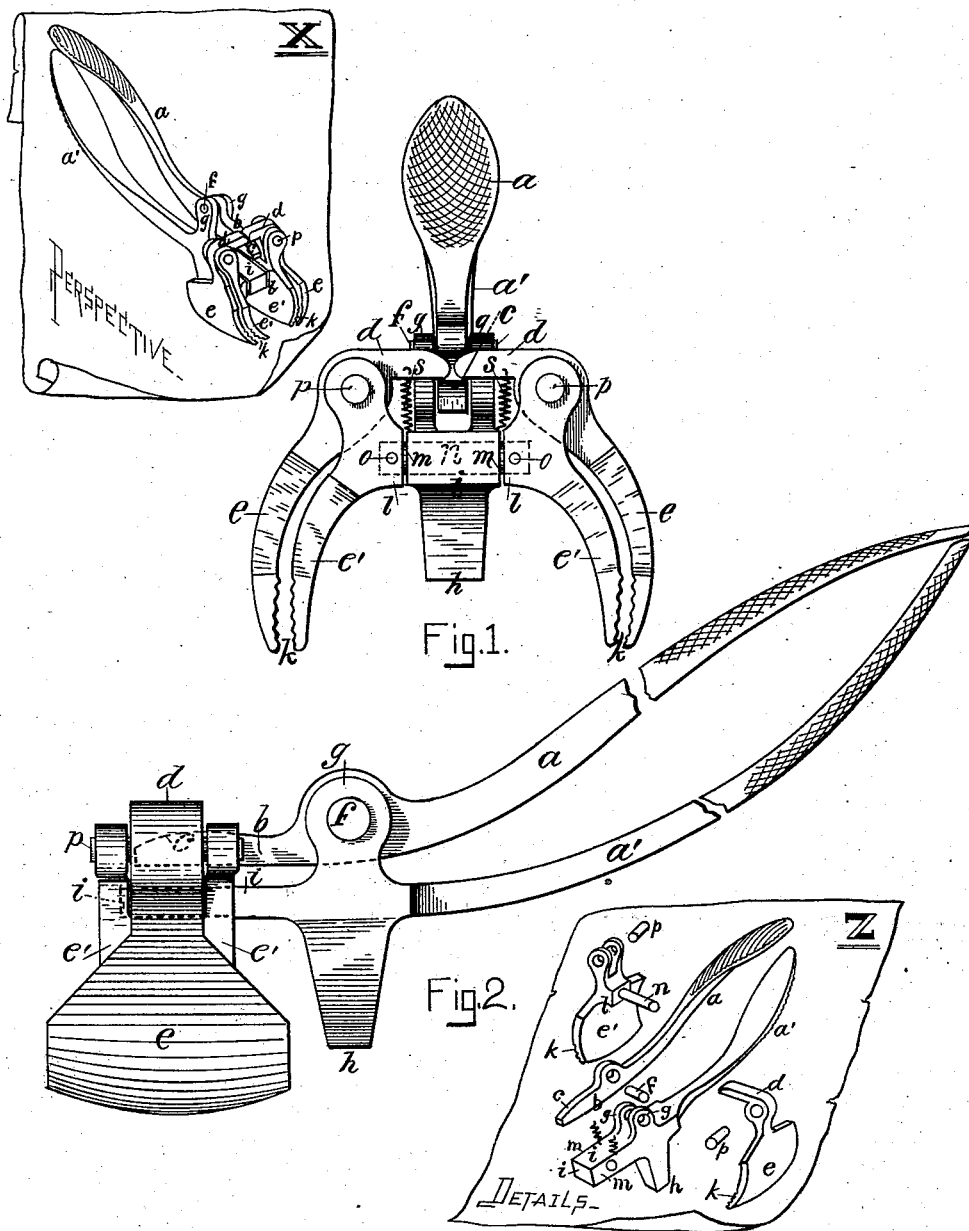


(No Model.)

M. V. B. ETHRIDGE.  
HAND PINCHERS.

No. 259,674.

Patented June 20, 1882.



Witnesses:

Inventor.

Wm. H. Miller  
H. E. Remick.

Martin V. B. Ethridge.

# UNITED STATES PATENT OFFICE.

MARTIN V. B. ETHRIDGE, OF LYNN, ASSIGNOR OF ONE-HALF TO C. W. HODGDON, OF BOSTON, MASSACHUSETTS.

## HAND-PINCHERS.

SPECIFICATION forming part of Letters Patent No. 259,674, dated June 20, 1882.

Application filed December 19, 1881. (No model.)

To all whom it may concern:

Be it known that I, MARTIN V. B. ETHRIDGE, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Hand-Pinchers, of which the following is a specification.

My invention relates to that class of pinchers more particularly employed in the manufacture of boots and shoes, and used in stretching or drawing in the upper leather composing the same in the process of "lasting."

My invention consists practically in the application of double duplicated grasping-jaws having a duplex action and simultaneously operated by a single movement of the upper and lower handles, in conjunction with certain projecting arms, cam-lever, springs, and parts hereinafter more fully described, and shown in the accompanying drawings, forming a part of this specification, referring to which—

Figure 1 is a front end elevation, exhibiting my improved invention. Fig. 2 indicates a side elevation of the same. X and Z are sheets showing my invention respectively in perspective and in detail.

Similar letters of reference indicate like parts in the various figures, in which—

*a a'* are the curved handles, having their outer surfaces indented in the ordinary manner. The upper handle, *a*, is formed with a forward-projecting arm, *b*, of suitable length for leverage, and provided upon its upper side with a cam-surface, as shown at *c*, Fig. 2, to facilitate the upward movement and adjustment of the two projecting lever-arms *d d*, which are integral with and operate to close the two outer grasping-jaws, *e e*, the firm hold of said jaws being augmented by serrated inner surfaces, *k k*, and controlled by the handle *a*.

The inner jaws, *e' e'*, are also serrated or grooved upon their contact-surfaces, as at *k*, for the obvious purpose of securing a firm hold upon the leather, fabric, or material used. Said jaws *e' e'* are constructed with a boss or increased thickness of metal, as at *l l*, Fig. 1, to form bearings against the sides *m m* of the

elongated part *i* of the arm *a'*. The bearings *l l* are drilled a sufficient depth for the reception of the ends of the rocker-shaft *n*, (see sheet Z,) to which the jaws *e' e'* are fixedly attached by the pins *o o*. The shaft *n* rotates freely through the arm *i*, and permits the jaws *e' e'* to move in a circular direction. Said jaws *e' e'* are further attached by pins or bolts *p p*, which operate as hinges to the outer jaws, *e e*.

*s s*, Fig. 1, are closed coil-springs, which operate to keep the serrated surfaces of the outer jaws, *e e*, apart from the inner jaws for the ready insertion of the material it is desired to secure.

In the operation of my improved invention when lasting boots or shoes both edges of the upper-leather, comprising vamp and quarter, are grasped simultaneously by the jaws *e e'*, and the leather or cloth is drawn over the last by a steady and equalizing strain upon both sides of the "upper" at the same moment, facilitating and expediting the operation of lasting.

Having thus described the nature and operation of my invention, what I desire to secure by Letters Patent is—

1. The construction of hand pinchers or pliers having double clinching-jaws *e e'*, working simultaneously by one operation of the grip-handles *a a'*, in combination with the jaw-lever arms *d d*, the projecting arm *i*, and cam-lever *b*, constructed and arranged to operate substantially in the manner and for the purpose set forth.

2. The construction of the jaws *e' e'*, provided with a rotating shaft, *n*, in combination with the elongated nose or bearing *l*, forming a part of the handle *a'*, essentially as specified.

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

MARTIN V. B. ETHRIDGE.

Witnesses:

WM. H. MILLER,  
H. E. REMICK.