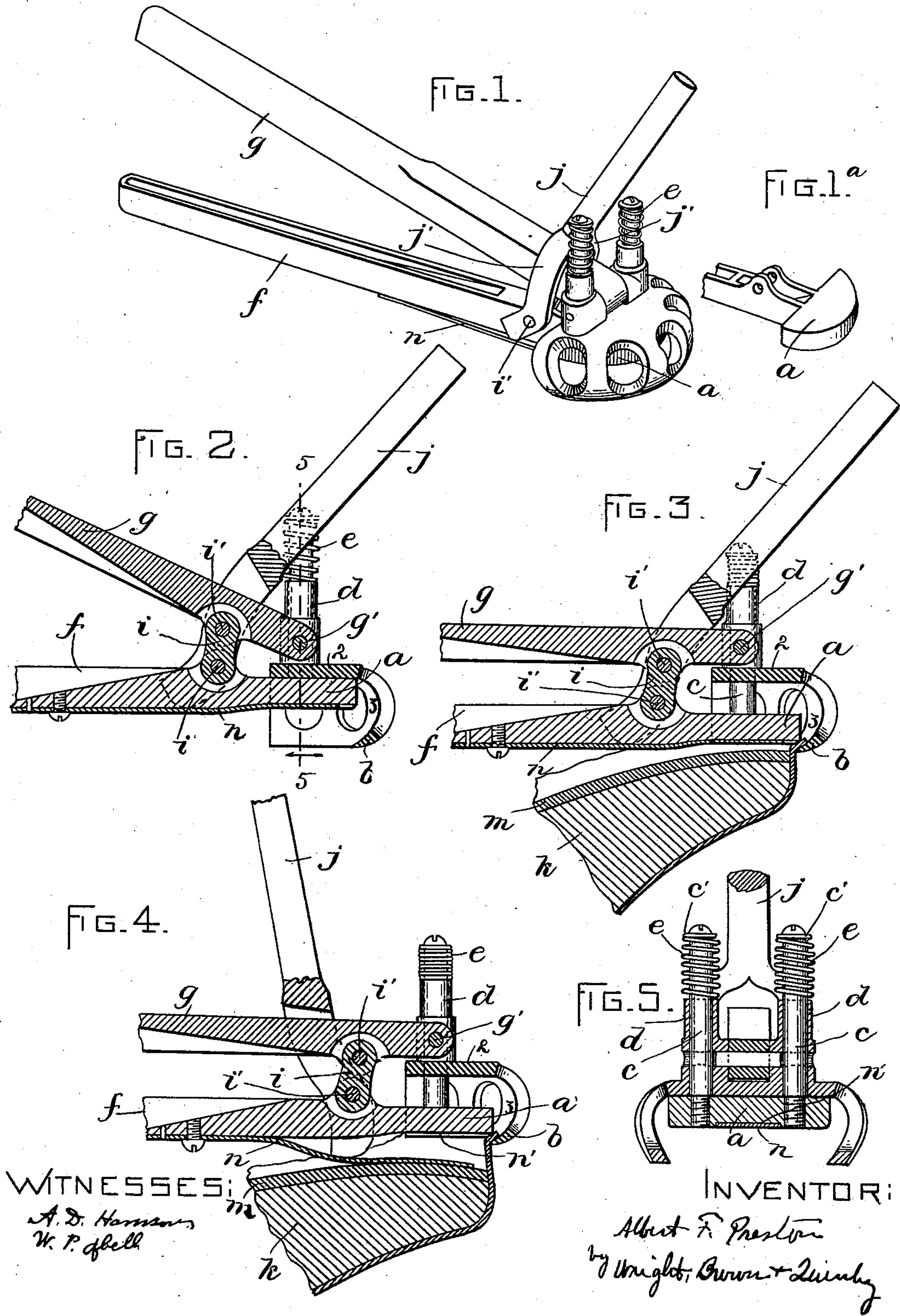


(No Model.)

A. F. PRESTON.
LASTING PINCHERS.

No. 540,598.

Patented June 4, 1895.



UNITED STATES PATENT OFFICE.

ALBERT F. PRESTON, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE PRESTON LASTING COMPANY.

LASTING-PINCHERS.

SPECIFICATION forming part of Letters Patent No. 540,598, dated June 4, 1895.

Application filed August 30, 1894. Serial No. 521,678. (No model.)

To all whom it may concern:

Be it known that I, ALBERT F. PRESTON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Lasting-Pinchers, of which the following is a specification.

This invention relates to lasting pinchers, or appliances of the general construction shown in Letters Patent of the United States No. 503,672, dated August 22, 1893, and comprising two jaws formed to co-operate in grasping the toe portion of a partially lasted upper, and means for manipulating said jaws and lifting the same from the outer face of the inner sole, the construction and arrangement being such that the operator can cause the jaws to grasp the toe portion of the upper, pull the same upwardly above the face of the last and the inner sole thereon, and hold it for the action of the toe wipers of a lasting machine, said wipers being moved inwardly over the upper surface of the inner sole and between the latter and the jaws, so that they gather in the marginal portions of the upper held by the jaws, the latter being allowed to open and release the upper just as the wipers take hold of it.

My present invention has for its object to provide certain improvements relating to the construction and relative movements of the jaws in opening and closing, and to the means for manipulating the jaws, and for raising the same from the inner sole to stretch the toe portion of the upper.

To these ends, the invention consists in the several improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of a pair of lasting-pinchers embodying my invention. Fig. 1^a represents a perspective view of the inner jaw, detached. Fig. 2 represents a longitudinal section of the pinchers, showing the jaws in their normal or open position. Fig. 3 represents a similar view, showing the jaws closed and grasping the toe portion of an upper. Fig. 4 represents a view similar to Fig. 3, showing the jaws raised from the inner sole to stretch the toe portion of the upper. Fig. 5 represents a section on the line 5 5 of Fig. 2.

The same letters and numerals of reference indicate the same parts in all the figures.

In the drawings—*a* represents the inner jaw of my improved lasting pinchers, and *b* represents the outer jaw of the same, said jaws being formed to co-operate in grasping the toe portion of a partially lasted upper; that is to say, the edge of the upper that projects outside of the face of the inner sole before the upper has been turned inwardly and secured to the inner sole.

The inner jaw *a* is convex, and bears upon the inner side of the toe portion of the upper, while the outer jaw is concave and bears upon the outer side of said toe portion. The two jaws are connected in such manner that in opening and closing their grasping portions remain parallel, so that when the jaws close they grasp with equal force along the entire portion of the upper with which they come in contact. This parallel motion of the two jaws is an important feature of my invention, since it makes the hold of the jaws uniform at all points and prevents greater liability of the leather slipping at any one point than at any other point. The preferred construction for connecting the two jaws so as to insure the parallelism of their acting portions is shown in the drawings, and comprises two guiding members or studs *c c* rigidly attached at their lower ends to the jaw *a* and projecting upwardly therefrom, and elongated tubular guiding members or sockets *d d* formed on the outer jaw and fitted to slide upon the studs, the latter being parallel. The upper jaw is of the recessed form shown in the drawings and comprises the central portion or plate 2 on which the sockets *d d* are formed, and the downwardly projecting concave flange 3, the lower margin of which constitutes the acting portion of the outer jaw. The recess within the flange 3 is of sufficient depth to permit the inner jaw to move up and down, the jaw *a* moving upwardly in said recess to separate from the jaw *b*, and downwardly to co-operate with said jaw. The jaws are normally held in the open position shown in Figs. 1, 3, and 5 by the action of springs *e e* which are interposed between heads or enlargements *c'* on the stud *c*, and the upper ends of the sockets *d*, said springs

normally holding the plate 2 of the jaw *b* against the upper side of the jaw *a*, as shown clearly in Figs. 2 and 5.

f represents an operating handle or lever 5 formed on or rigidly attached to the inner jaw *a* and projecting rearwardly therefrom; and *g* represents a similar operating handle or lever pivoted at *g'* to the outer jaw and having a loose or swinging connection with 10 the inner jaw *a* or with the handle *f* thereof, said connection being preferably a link *i* pivoted at *i'* *i''* to ears formed on the levers *f* *g*. The connection afforded by the link *i* enables the handle or lever *g* to conform to the rect- 15 angular movements of the jaw *b* with which it is connected, when the levers *f* *g* are manipulated to operate the jaws in the manner hereinafter described.

j represents a jaw-lifting lever which is 20 bifurcated at its lower end, its arms or bifurcations *j'* *j''* bestriding the lever *g* and bearing on opposite sides of the lever *f*, said arms being pivotally connected with the last mentioned lever at *j'*. The lifting lever is formed 25 so that when in the position shown in Figs. 1, 2, and 3, its lower end will not project below the plane of the under surface of the inner jaw; but when moved to the position shown in Fig. 4, its lower end will project below said 30 surface and will, by exerting pressure upon the last *k*, and the interposed inner sole *m*, raise the jaws from the said inner sole, thus causing them to elevate and stretch the toe portion of the upper and prepare it for the 35 action of the wiping jaws of the lasting machine. I prefer to interpose between the lower end of the lifting lever and the inner sole an elastic metal plate *n* which is attached at one end to the lever or handle *f*, its other 40 end, which is free, projecting under the inner jaw *a* and being received in a groove or recess *n'* (Figs. 4 and 5) formed for its reception in the under side of said jaw. The plate *n* normally bears against the under side of 45 the jaw, as shown in Figs. 2, 3, and 5; but when the lifting lever is operated to raise the jaws, its lower end bearing on the plate *n* presses the latter downwardly upon the inner sole and prevents the latter from being raised 50 from the face of the last as it would be likely to be by the contact of its edges with the toe portions of the upper when the latter are stretched and pulled away from the face of the last by the action of the jaws.

55 The operation of the described device is as follows:—The upper being placed upon the last and the last, upper, and inner sole being supported in a lasting machine having toe wipers arranged to be moved over the face of 60 the inner sole at the toe portion, the operator applies the jaws to the edge of the toe portion of the upper, and by manipulating the handles *f* *g* closes the jaws upon the upper, as shown in Fig. 3. The operator then, while holding 65 the levers *f* *g*, to maintain a tight grasp of the jaws upon the upper, moves the lifting lever

to the position shown in Fig. 4, thus causing the latter to exert downward pressure on the rigidly supported last and therefore raise the jaws above the outer face of the inner sole, 70 the upper grasped by the jaws being also raised and stretched along the entire curved portion, the toe of the upper being thus caused to closely fit the toe of the last. While the upper is thus held, the wiping plates of the 75 lasting machine move forward over the upper surface of the inner sole and in close proximity thereto, and wipe the edge of the upper inwardly, causing it to lie upon the inner sole, the jaws being released by the operator dur- 80 ing the action of the wiping plate. When the operator releases the handles or levers *f* *g*, the springs *e* *e* force said handles apart and open the jaws, as shown in Fig. 2.

I do not limit myself to the exact details of 85 construction here shown and described, and may variously modify the same without departing from the spirit of the invention. The lifting lever may be used in connection with 90 pinchers in which the jaws are connected by other means, such as those shown in Patent No. 503,672 above mentioned.

I claim—

1. The improved lasting pinchers comprising a convex jaw and a concave jaw formed to 95 bear respectively on the inner and outer surfaces of the toe portion of a partially lasted upper, co-operating guiding members affixed to said jaws whereby their grasping portions are kept parallel, and loosely connected op- 100 erating levers extending backwardly from the jaws.

2. The improved lasting pinchers comprising a convex jaw and a concave jaw formed to 105 bear respectively on the inner and outer surfaces of the toe portion of a partially lasted upper, co-operating guiding members affixed to said jaws whereby their grasping portions are kept parallel, springs whereby said jaws are normally opened, and loosely connected 110 handles or levers extending backwardly from the jaws, whereby the jaws may be closed.

3. The improved lasting pinchers comprising two jaws formed to bear respectively on 115 the inner and outer surfaces of the toe portion of a partially lasted upper, operating handles or levers suitably connected with each other and with said jaws and extending backwardly from the jaws, and a jaw-lifting lever pivotally connected with one of the parts of the 120 pinchers and provided with an upwardly projecting longer arm and with a downwardly projecting shorter arm, said shorter arm being arranged to be depressed below the pinchers by a backward movement of the longer arm. 125

4. The improved lasting pinchers comprising the jaws formed to bear respectively on the inner and outer surfaces of a partially lasted upper, operating handles or levers suitably connected with each other and with the jaws, 130 a jaw-lifting lever fulcrumed to the handle of the inner jaw, and a spring plate located

below the inner jaw and adapted to be held down on the inner sole by the jaw-lifting lever.

5 The improved lasting pinchers comprising the inner jaw having a rigidly attached operating handle and upwardly projecting guides, the recessed outer jaw having sockets sliding upon said guides, and an operating handle pivotally connected with the outer jaw and having a loose or swinging connection with the inner jaw, as set forth.

15 6. The improved lasting pinchers comprising the inner jaw having a rigidly attached operating handle and upwardly projecting studs or guides, the recessed outer jaw having sockets sliding on said studs, springs supported by said studs and exerting downward pressure on the outer jaw whereby it is normally separated from the inner jaw, and an operating handle pivotally connected with the outer jaw and having a loose or swinging connection with the inner jaw, as set forth.

25 7. The improved lasting pinchers comprising the inner jaw formed to bear on the inner surface of the toe portion of a partially lasted upper and provided with the upwardly projecting studs or guides and with the rigidly attached operating handle or lever, the recessed outer jaw formed to bear on the outer surface of said toe portion and provided with sockets adapted to slide on said studs, the operating handle or lever pivotally connected with the outer jaw, and the link connecting the said operating handles, as set forth.

35 8. The improved lasting pinchers comprising the inner jaw formed to bear on the inner

surface of the toe portion of a partially lasted upper and provided with the upwardly projecting studs or guides and with the rigidly attached operating handle or lever, the recessed outer jaw formed to bear on the outer surface of said toe portion and provided with sockets adapted to slide on said studs, the operating handle or lever pivotally connected with the outer jaw, the link connecting the said operating handles, and the jaw-lifting lever pivoted to the operating handle of the inner jaw, as set forth.

9. The improved lasting pinchers comprising the inner jaw formed to bear on the inner surface of the toe portion of a partially lasted upper and provided with the upwardly projecting studs or guides and with the rigidly attached operating handle or lever, the recessed outer jaw formed to bear on the outer surface of said toe portion and provided with sockets adapted to slide on said studs, the operating handle or lever pivotally connected with the outer jaw, the link connecting the said operating handles, the jaw-lifting lever pivoted to the operating handle of the inner jaw, and the sole-holding spring plate adapted to bear on the lower end of the said lifting-lever, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 27th day of August, A. D 1894.

ALBERT F. PRESTON.

Witnesses:

C. F. BROWN,
A. D. HARRISON.