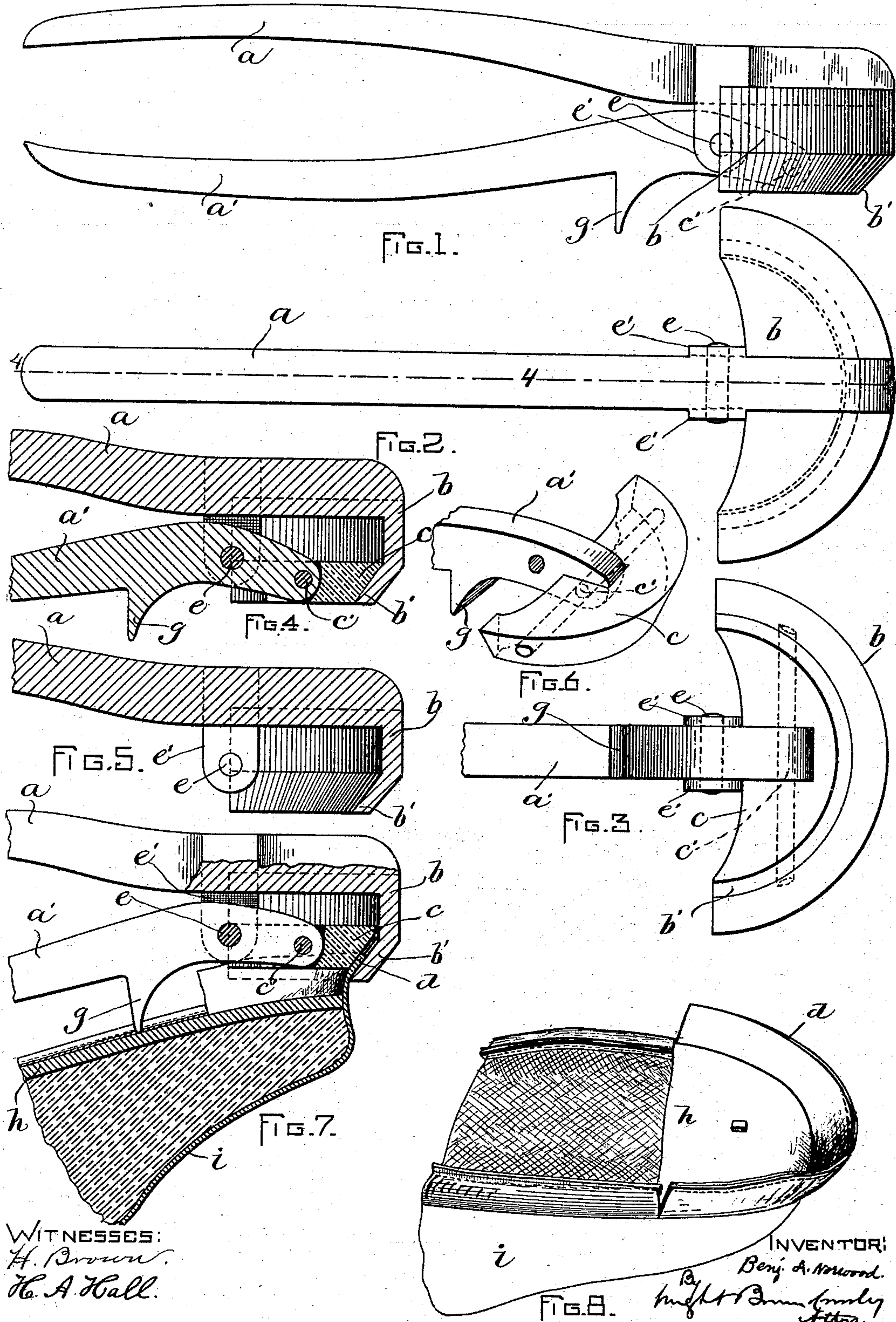


(No Model.)

B. A. NORWOOD.
LASTING PINCHERS.

No. 503,672.

Patented Aug. 22, 1893.



UNITED STATES PATENT OFFICE.

BENJAMIN A. NORWOOD, OF BOSTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE EUREKA PROCESS LASTING COMPANY, OF SAME PLACE.

LASTING-PINCHERS.

SPECIFICATION forming part of Letters Patent No. 503,672, dated August 22, 1893.

Application filed October 3, 1892. Serial No. 447,674. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN A. NORWOOD, of South 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 pinchers used in lasting boots and shoes, and it has for its object to provide a tool adapted particularly for use in a new process or method of lasting described in an application for Letters Patent of the United States, filed by me concurrently with this.

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 my improved pinchers. Fig. 2 represents a top view of the same. Fig. 3 represents an inverted plan view with the operating handles or levers broken off. Fig. 4 represents a section on line 4, 4 of Fig. 1. Fig. 5 represents a sectional view of the upper portion hereinafter explained. Fig. 6 represents a perspective view of the lower portion separated from the upper. Figs. 7 and 8 represent detail views hereinafter explained.

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

In the drawings—*a a'* represent the handles or levers by which the tool is operated. The upper handle *a* has a segmental jaw *b* formed on or attached rigidly to said handle. Said jaw has its concave acting portion or face beveled at *b'* to present a support for a convex correspondingly beveled jaw *c* secured at *c'* to the lever *a'* which lever is pivoted at *e* to ears *e' e'* formed on the lever *a* so that when the jaw *c* is raised by the depression of lever *a'* an opening is created between the jaws to receive the toe portion *d* of the upper of a boot or shoe as shown in Fig. 7, said toe portion being gripped between the jaws, the beveled form and curvature of the latter corresponding to the toe piece before it is turned back over the inner sole as shown in Figs. 7 and 8.

The lever *a'* has formed upon its under side a projection or fulcrum *g* which is adapted to

bear upon the inner sole *h* of the lasted shoe *i* as shown in Fig. 7, the arrangement being such that when the toe *d* of the upper has been gripped by the jaws, the projection can be used as a fulcrum and the toe piece be drawn over the last by a depression of the upper handle, as will be readily understood by reference to Fig. 7. The projection or fulcrum *g* causes the jaws to grasp the interposed material whenever downward pressure is exerted in any way on the fulcrum, such pressure causing the depression of the jaw *c* and an increase of its pressure toward the jaw *b'*. It will be feasible therefore to dispense with the rear or handle portion of the lever *a'* using only the handle *a* but the tool is more conveniently operated when provided with both handles.

In the operation of my improved pinchers I provide a shoe *i* lasted with the toe piece *d* projecting as shown in Fig. 8, the curve of the jaws approximating as nearly as practicable the curve of the projecting toe piece. The operator grasps the handle *a* between the thumb and first finger of the right hand and presses the handle *a'* downwardly with the remaining fingers, which action raises the jaw *c* until a sufficient opening between the jaws is provided to permit the insertion of the toe piece *d*. The operator then raises the handle *a* bringing the jaw *c* down upon the toe piece at the same time resting the projection *g* upon the sole and pressing downwardly upon the upper handle, thus exerting a firm grasp upon the interposed substance. The beveled acting faces of the jaws cause an equal bearing of both upon the toe piece and prevents the latter from "cocking" or wrinkling during the operation.

The acting surfaces of the jaws may be either smooth or corrugated. In some cases it will be desirable to corrugate the jaws to give them a sufficiently firm grip on the leather.

I claim—

1. A pair of lasting pinchers, comprising a convex jaw curved and beveled or undercut to conform to the inner surface of the projecting toe portion of a partially lasted upper, a concave jaw curved and beveled to conform to said convex jaw and to the outer surface

of said toe portion, and means for operating said jaws, as set forth.

2. A pair of lasting pinchers, comprising two pivotally connected levers, a convex jaw
5 on one lever conforming to the inner surface of the projecting toe portion of a partially lasted upper, and a concave jaw on the other lever conforming to the outer surface of said toe portion, said levers projecting rearwardly
10 over the sole when the jaws are applied to the toe portion of the upper, one of the levers having a fulcrum formed to bear on the sole, as set forth.

3. A pair of lasting pinchers having a con-
15 cave jaw depending from a head or holder, said jaw having a box-like concavity, a convex jaw fitting the curvature of the concave

jaw and movable in said concavity, and means for opening and closing said jaws, as set forth.

4. The combination of the lever *a*, the seg- 20 mental jaw *b* formed thereon, the lever *a'* pivotally connected with the lever *a*, the jaw *c* pivoted to the end of the lever *a'* and adapted to be operated as described, and the projec- 25 tion *g* formed on the under side of the lever *a'*, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 29th day of September, A. D. 1892.

BENJAMIN A. NORWOOD.

Witnesses:

C. F. BROWN,
M. W. JACKSON.