

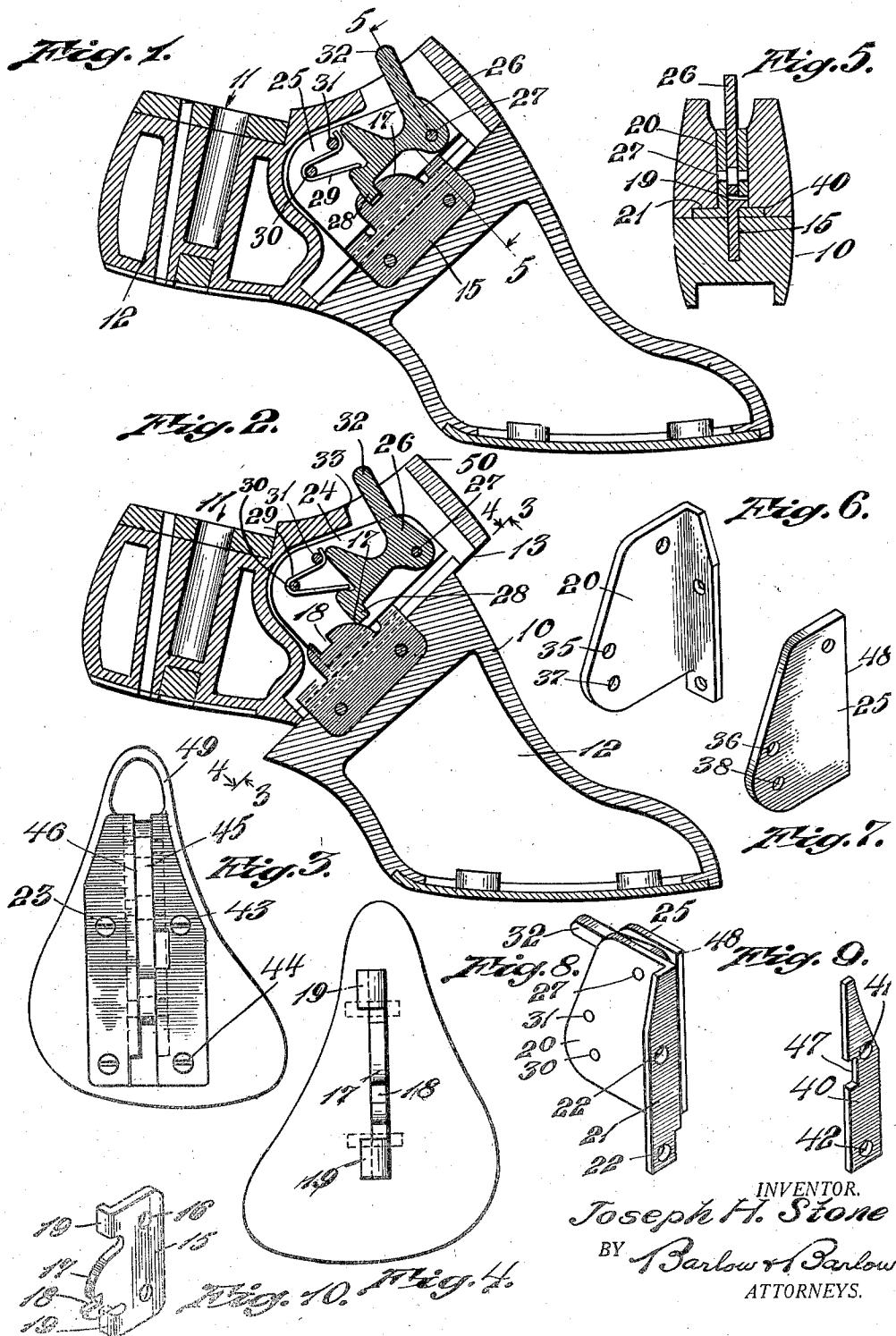
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J. H. STONE

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SHOE LAST

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INVENTOR.
Joseph F. Stone
BY Barlow & Barlow
ATTORNEYS.

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SHOE LAST

Joseph H. Stone, Brockton, Mass.

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This invention relates to a shoe last; and has for one of its objects the provision of a metal last which may be easily manipulated for breaking the same from shoes after formed thereon.

Another object of the invention is the provision of a shoe last which will immediately contract its length upon manipulation rather than first lengthening before shortening, as occurs in certain hinged lasts, whereby the strain on the shoe fastenings is prevented.

Another object of the invention is the provision of a last formed of two relatively movable parts which are firmly held in position but which may be easily released by a simple movement of a catch.

Another object of the invention is the provision of a heel part which may be utilized with a plurality of fore parts for providing lasts of varying sizes so that economy in storage of lasts may be had.

Another object of the invention is the provision of the locking parts of the last in units which may be inserted within the externally shaped portions of the last as they are molded into shape and be held therein either by separate means or molded into the last.

Another object of the invention is the provision of a locking means with a minimum number of parts in order that the cost of production and assembly may be reduced to a minimum.

Another object of the invention is the provision of a last with no recesses or holes in its outer surface whereby the same will be better for dipping into rubber or the like for the formation of such products thereon.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawing:

Fig. 1 is a sectional view of the last showing the parts in locked working position;

Fig. 2 is a similar view showing the parts slid to contract the length of the last;

Fig. 3 is an end view of the heel part of the last on line 3—3 of Fig. 2 looking in the direction of the arrow 3;

Fig. 4 is an end view of the fore part of the last on the same line but looking in the direction of the arrows 4—4;

Fig. 5 is a sectional view on line 5—5 of Fig. 1;

Fig. 6 is a perspective view of one of the plates for mounting the latch;

Fig. 7 is a perspective view of the companion plate for the latch unit;

Fig. 8 is a perspective view of the assembly of the two plates with the latch between;

Fig. 9 is a perspective view of another plate 5 cooperating with the unit of Fig. 8;

Fig. 10 is a perspective view of the tongue member which is mounted in the toe part of the last.

Metal shoe lasts are desirable in the formation of shoes for many reasons, among them the greater durability of the metal, the non-shrinking or swelling of the last due to moisture conditions and the ability to cast the last into substantially a size desired with the saving of expense. I have caused the last to be made in two parts which are slid one on the other along an angular line of cleavage, the parts being separable one from another and readily locked in position; and I have made the two parts of the lasts separable so as to utilize the heel part in which the majority of the mechanism is provided for attaching several various toe parts thereto whereby different sized or styled lasts may be had by merely interchanging the toe parts; and I have provided a simple and effective means for locking these together of which the following is a more detailed description:

With reference to the drawing, 10 designates generally the fore part and 11 the heel part of the last, each being of a cast metal construction of a hollow formation with as much of the metal removed as is consistent with the strength required, to leave spaces 12 and 13 in their interiors. These parts 10 and 11 abut along the cleavage line 13 which is arranged at an angle so that a relative sliding of the parts along this line serves to change the length of the last. A sliding from the position shown in Fig. 1 to the position shown in Fig. 2 in one direction causes an immediate and a progressive shortening of the last from the position shown in Fig. 1 to the position shown in Fig. 2, so that there will be no strain on the shoe attached to the last by reason of any first lengthening before shortening, as occurs in some hinged lasts.

In order to guide the fore and heel parts in their movement and also to lock them in desired position, I provide a tongue plate 15 shown in perspective in Fig. 10 on the fore part of the last. This plate has a pair of openings 16 therethrough which metal will flow when the fore part of the last is molded or cast about it, or these holes may serve to receive other fastenings which may be provided in securing it in position. This plate has a projecting somewhat arcuate-shaped

portion 17 with a notch 18 therein forming a catch, while the stock on either side of this projecting portion is bent over in the same direction to provide fingers 19 to extend beneath the edge 5 of a locking plate in the heel portion of the last, as will presently appear.

The heel part of the last 11 is provided with a unit as shown in Fig. 8, comprising a plate 20 which has one edge folded at right angles there- 10 to as at 21 and provided with openings 22 for the reception of screws 23 to secure this unit in position in a recess 24 in the heel part of the last. The other plate of this unit is designated 25 and is shown in perspective in Fig. 7. Between the plates 20 and 25 there is pivotally 15 mounted a latch 26, shown best in Figs. 1 and 2, the pivot being designated 27 and the latch having a projection 28 to extend into and substantially fill the notch 18 in the tongue part, the 20 curved surface 17 of this projection permits the latch to slide thereover and enter the notch in the tongue of the fore part of the last as these last parts are slid one on the other. A spring 29 held about pins 30 and 31 serves to 25 urge the latch so as to move into the notch 18, the handle 32 of the latch extends outwardly from the cone of the last and serves to limit, by engagement with the portion 33, the movement of the latch in one direction. These pins 30 and 31 are shouldered with their small ends 30 extending through both plates 20 and 25 in the openings 35, 36, 37 and 38, and are headed over on their outer surface to hold this unit shown in Fig. 8 in assembled position.

After this locking unit is inserted in place, a plate 40 having openings 41 and 42 is secured by screws 43 and 44 in place with its edge 45 spaced from edge 46 of the plate 20 so as to provide a guide channel for the reception of and guiding of the tongue 15 in the fore part of the last. 40 This plate 40 is notched as at 47 and is spaced from the edge 48 of the plate 25 so as to receive through the notch 47 one of the fingers 19, while the other finger is received over the top edge of the plate 40 that the finger may slide beneath the plate 40 while the tongue is guided in the slot 45. Thus, these fingers serve to prevent a movement of the parts of the last away from the sliding surfaces at right angles thereto while these fingers are hooked upon the plate 40.

In use it is merely necessary to position the fore part on the heel part by placing the turned fingers 19 through the notch 47 and in the space 49 and then slide the parts relatively along their faces or along the line of cleavage 13 from the position shown in Fig. 2 to the position shown in Fig. 1, the latch sliding up over the curved surface 17 and lodging within the notch 18 to hold the parts in locked relation. When the shoe has been completed upon the last it is merely necessary to reach beneath the last and force the handle 32 toward the cone portion 50 to release the latch from its notch, after which free movement of the parts one on the other is permitted and by grabbing the toe of the shoe and bending the last will slide to the position shown in Fig. 2 and the stripper may by the same motion with the other hand which is used to release the latch strip the heel of the shoe from the heel of the last to detach the same from the last.

Should it be desired to then utilize a different size of last the fore part may be entirely separated from the heel part and a different sized fore part substituted so that it will be neces-

sary to carry a fewer number of heel parts in stock than otherwise would be necessary for a group of sizes of lasts.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. In a shoe last, a fore part, a heel part, said parts being slidably related along an angular line to change the length of the last upon relative movement, a catch on one part and a latch on the other part to engage said catch, said parts being unrestrictedly slideable upon withdrawal of said latch from said catch, said latch having a portion positioned adjacent to the outer surface of the last to be readily accessible for the manual manipulation thereof.

2. In a shoe last, a fore part, a heel part, said parts being slidably related along an angular line to change the length of the last upon relative movement, means provided for detachably securing said parts together, a catch on the fore part and a pivoted latch on the other part to engage said catch, said parts being unrestrictedly slideable upon withdrawal of said latch from said catch.

3. In a shoe last, a fore part, a heel part, said parts being slidably related along an angular line to change the length of the last upon relative movement, spaced plates on said heel part providing a groove therebetween, protuberant portions extending from the fore part into said groove and guided thereby, a catch on one part and a latch on the other part to engage said catch, said parts being unrestrictedly slideable upon withdrawal of said latch from said catch, and a spring to urge said latch toward said catch.

4. In a shoe last, a fore part, a heel part, said parts being slidably related along an angular line to change the length of the last upon relative movement, a catch on the fore part and a latch on the other part to engage said catch, said parts being unrestrictedly slideable upon withdrawal of said latch from said catch, said heel part carrying the cone of the last with a recess therein and said latch having a handle located in said recess and extending beyond the outer surface of said cone for manipulation thereof.

5. In a shoe last, a fore part, a heel part, said parts being slidably related along an angular line to change the length of the last upon relative movement, a catch on one part and a latch on the other part to engage said catch, said parts being unrestrictedly movable upon withdrawal of said latch from said catch, and a spring to urge said latch toward said catch, said heel part carrying the cone of the last with a hole therein, and said latch having a handle located in said recess and extending adjacent to the outer surface of said cone for manipulation thereof.

6. In a shoe last, a fore part, a heel part, individual inserts in each part providing between them an interlocking connection for slidably moving said parts one on the other, means on said inserts for readily detaching said interlocking connection, a catch carried by one part and a latch carried by the other part to engage therewith to lock the parts in extended relation.

7. In a shoe last, a fore part, a heel part, individual inserts of material harder than the body of the last in each part providing between them

an interlocking connection for slidably moving said parts one on the other, means on said inserts for readily detaching said interlocking connection, a catch carried by one part and a latch carried by the other part to engage therewith to lock the parts in extended relation.

8. In a shoe last, a fore part, a heel part, individual inserts in each part providing between them an interlocking connection for slidably

10 moving said parts one on the other, means on said inserts for readily detaching said interlocking connection, a catch carried by one part and a latch carried by the other part to engage therewith to lock the parts in extended relation, said

15 inserts providing a mounting for said catch and latch apart independent from the body of the last.

9. In a shoe last, a fore part, a heel part, individual inserts in each part, one of said inserts 20 providing a channel and the other a tongue to enter said channel and be guided thereby, means on said inserts for detachably and movably securing said fore and heel parts together, a catch carried by one part and a latch carried by the other part to engage therewith to lock the parts in extended relation.

10. In a shoe last, a fore part, a heel part, individual inserts in each part, one of said inserts providing a channel and the other a tongue to 25 enter said channel and be guided thereby, means on said inserts for detachably and movably securing said fore and heel parts together, and a catch carried by one insert and a latch carried by the other insert to engage said catch and lock the parts in extended relation.

11. In a shoe last, a fore part, a heel part, in-

dividual inserts in each part, one of said inserts providing a channel and the other a tongue with fingers to enter said channel and a hook beneath one edge thereof and guided thereby, a catch carried by one part and a latch carried by the other part to engage therewith to lock the parts in extended relation.

12. In a last having a fore part and a heel part 10 slidably related to each other, spaced plates in the heel part providing a channel and an uncut groove, a single plate in the fore part extending into and slidably in said channel and guided thereby, protuberant portions extending from said single plate into said groove and movably secured therein, and means carried by said spaced 15 and single plates for locking said fore and heel part against movement.

13. In a last having a fore part and a heel part 20 slidably related to each other, spaced plates in the heel part providing a channel and a groove, one of said plates having an opening therein connecting with said groove, and a single plate in the fore part of the last extending into and slidably in said channel and provided with protuberant portions extending into said groove, one of 25 said protuberant portions being positionable into registry with said opening for disconnecting said fore and heel parts.

14. A unit assembly for a two-part slidably related shoe last, comprising spaced plates, and a 30 spring pressed latch movably secured between said plates, one of said plates having a portion extending at an angle thereto and provided with openings and through which securing means may extend for mounting said assembly in position.

JOSEPH H. STONE. 35