June 16, 1953 H. G. CLAUSING 2,641,783

SHOE LAST

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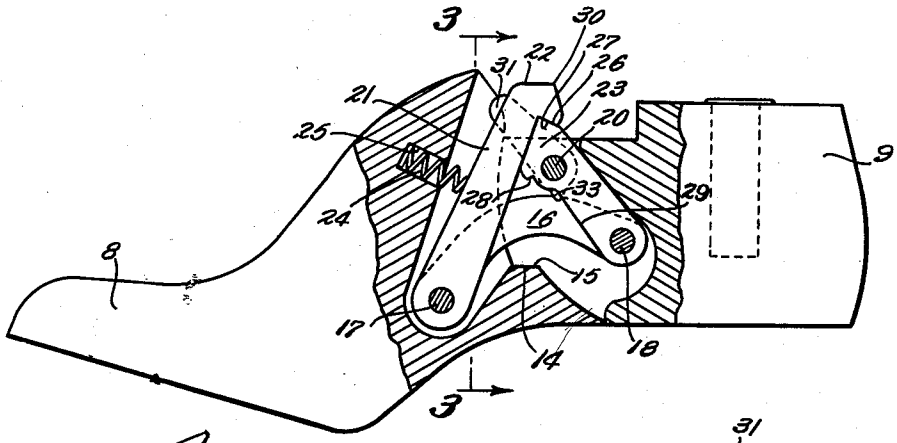


Fig. 1

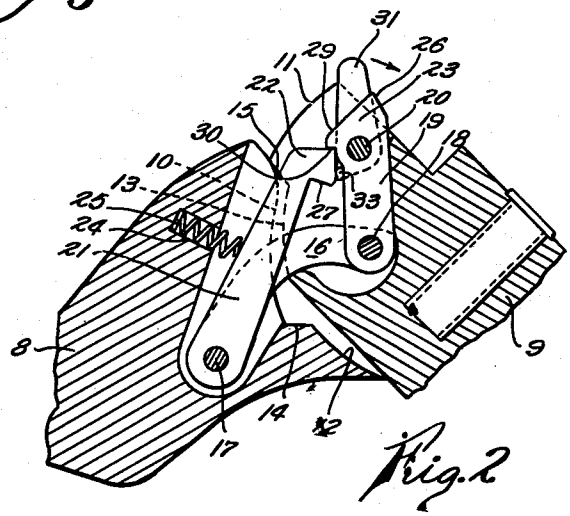


Fig. 2

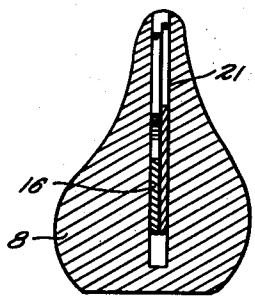


Fig. 3

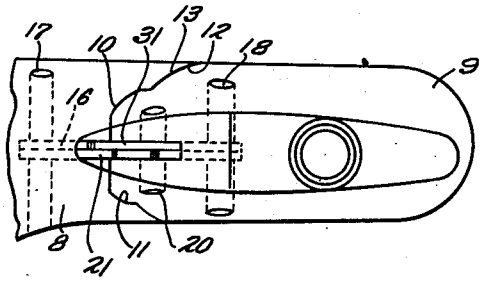


Fig. 4

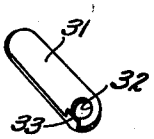


Fig. 5

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SHOE LAST

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7 Claims. (Cl. 12—136)

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This invention relates to shoe lasts and consists of a novel last latch contained means for locking the last parts in collapsed positions to facilitate the insertion of the collapsed last into a shoe upper and the removal of said last from the lasted shoe.

It is well known that it is often difficult to remove from, or insert the so-called "slip last" into, a shoe because the last parts have a certain amount of free swinging movement about their connecting link when the last is in collapsed condition. To overcome this difficulty various connecting devices have been suggested for locking the fore and heel parts of these lasts in relative collapsed positions; all such devices have, however, utilized certain portions of the cooperative meeting surfaces of the last parts as the means for securing them in collapsed positions for the manipulation of the collapsed lasts into and out of a shoe. Such connections have been unsatisfactory in that they were impositive in their actions and permitted relative sliding movement between portions of the last meeting surfaces which wore away the stock at said points and permanently marred the meeting surfaces.

It is therefore an object of this invention to provide an inexpensive and more durable last latch which has a novel means for positively locking the connected last parts in contracted or collapsed positions.

Another object of this invention is to provide an improved and extremely simplified means for locking the last parts in collapsed positions so that they may be more readily removed from, or inserted into, a shoe.

To these and other objectives, the invention consists of certain parts described hereinafter and illustrated in the accompanying drawing, in which:

Fig. 1 is a vertical section through the longitudinal center of a slip last illustrated in expanded position, parts thereof being shown in side elevation.

Fig. 2 is a view similar to that of Fig. 1 showing the last parts in collapsed positions, parts thereof being broken away.

Fig. 3 is a section taken on line 3—3 of Fig. 1.

Fig. 4 is a fragmental top plan view of the last shown in Fig. 1.

Fig. 5 is a perspective view of the trip lever for my last latch.

To accomplish the objects and secure the advantages outlined above I preferably employ a last latch having the general construction of the latch disclosed in my co-pending patent application for Shoe Last, which issued as Letters

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Patent 2,622,253 on December 23, 1952. The last of said application has a forepart and a heel part each formed with two offset meeting surfaces which provide two cooperative shoulders for maintaining the last parts in operative expanded positions. The parts are connected for swinging movements by the usual link secured to the fore and heel parts by individual pivot pins anchored in their respective parts. The heel part has a heightwise catch plate secured therein which is engaged by a spring pressed latch lever pivotally mounted in the forepart, a locking connection being made between the cooperative surfaces of the catch plate and latch lever at a point above the body of the last when the parts are in expanded condition, to detain the last parts in expanded condition. My locking means for maintaining the parts of a last in contracted position is associated with a last latch of the foregoing character as will be clear from the detailed specification which is to follow.

With reference to the drawings the reference numeral 8 indicates the last forepart and the numeral 9 refers generally to the heel part, said parts being provided with upper meeting surfaces 10 and 11, respectively, and offset lower meeting surfaces 12 and 13, respectively, which form cooperative shoulders 14 and 15 on the respective last parts. The last parts are connected together for relative swinging movement by an arcuate link 16 secured at its forward end to the forepart by a transverse pivot pin 17, whilst the rear end of the link is secured to the heel part by a transverse pivot pin 18.

The last latch for detaining the swingable last parts in their expanded positions is best depicted in Fig. 1 and comprises a catch plate 19 secured at its lower end on the pivot pin 18 that extends transversely through the body of the heel part, said plate being positioned in the heel part in a heightwise direction by a pin 20 anchored laterally in the upper portion of the heel part. A latch lever 21 is pivotally mounted on the lateral pin 17 in the forepart and is provided at its upper end with a rearwardly extending lug 22 which cooperates with the upper end 23 of the catch plate to lock the parts in expanded condition. An expansion spring 24 is secured in a bore 25 formed in the forepart and bears at its free end against an edge of the lever to bias the lever lug into cooperative contact with the catch plate. With reference to Fig. 1 it will be noted that the catch plate has a flat upper surface 26 which cooperates with a flat undersurface 27 on the lug for detaining the last parts in expanded posi-

tions, said surfaces being disengaged by pushing forward on the lug 22 against the action of the spring 24 until the surfaces are separated, whereupon the last parts may be swung to the collapsed position shown in Fig. 2.

The last latch contained means for maintaining the last parts in locked position comprises an abutment or deformation such as a notch 28 that is formed in the forward edge 29 of the catch plate intermediate its heightwise extent. This deformation is engaged by a cooperative abutment or irregularity on the lug 22 of the latch lever 21, said abutment being shown in the drawings as a shoulder 30 formed by the upper rear edge portion of said lug. The cooperative positions of the shoulder 30 on the lever 21 and the notch 28 on the catch plate 19 for locking the last parts in collapsed position is shown in Fig. 2, it being noted that the spring 24 constantly urges the latch lever against the catch plate so that the locking parts cannot be displaced. In said locked position the cooperative meeting surfaces of the last parts are brought positively into contact so that there will be no rocking movement between the parts when the latch maintains them in collapsed position.

A means for releasing the last parts from their locked, collapsed positions is shown in Fig. 5 as a trip lever 31 which has a hole 32 formed in one end to receive the pin 20. A finger 33 is struck from the edge of the lever adjacent the hole 32 and is adapted to extend laterally therefrom into a position adjacent the edge 29 of the catch plate 19 and in a position to contact the lug 22 on the latch lever 21. To release the latch parts from the locked collapsed position illustrated in Fig. 2 it is only necessary to rotate the lever 31 clockwise which forces the finger 33 against the lever lug 22 to cam the lever away from the catch plate until the shoulder 30 thereon is disengaged from the notch 28, whereby the last parts may be moved to their expanded positions.

What is claimed is:

1. A shoe last comprising a forepart and a heel part each having two offset meeting surfaces forming cooperative shoulders for maintaining the last parts in operative, expanded positions, a link connecting the forepart and heel part for relative swinging movements between collapsed and expanded positions, a heightwise catch plate mounted on the heel part, an upstanding latch lever pivotally mounted on the forepart and provided at its upper end with a rearwardly extending lug engageable with the upper edge of the plate to detain the last parts in expanded position, spring means for urging the latch lever against the plate, a deformation formed on the catch plate intermediate its heightwise extent, and a complementary irregularity on the latch lever lug for engaging the deformation in the catch plate to maintain the last parts in collapsed position.

2. A shoe last according to claim 1 characterized by the fact that the deformation in the catch plate is a notch having a downwardly facing edge, and that the complementary irregularity in the latch lever is a shoulder formed by the upper rear edge portion of the lug on said lever.

3. A shoe last comprising a forepart and a heel part each having two offset meeting surfaces forming cooperative shoulders for maintaining the last parts in operative, expanded positions, a link connecting the forepart and heel part for relative swinging movements between collapsed and expanded positions, a heightwise catch plate mounted on the heel part, an upstanding latch lever pivotally mounted on the forepart and provided at its upper end with a rearwardly extending lug engageable with the upper edge of the plate to detain the last parts in expanded position, spring means for urging the latch lever against the plate, an abutment formed on the forward edge of the catch plate intermediate its heightwise extent, a complementary abutment on the upper rear edge of the latch lever lug for engaging the catch plate abutment to maintain the last parts in contracted position, and cam means mounted on a last part for releasing the lever abutment from its cooperative abutment on the catch plate.

4. A shoe last according to claim 3, characterized by the fact that the cam means comprises an upstanding lever pivoted on the heel part and having a finger extending behind the lug on the latch lever.

5. A shoe last comprising a forepart and a heel part each having two offset meeting surfaces forming cooperative shoulders for maintaining the last parts in operative, expanded positions, a link connecting the forepart and heel part for relative swinging movements between collapsed and expanded positions, a heightwise catch plate mounted on the heel part, an upstanding latch lever pivotally mounted on the forepart and provided at its upper end with a rearwardly extending lug engageable with the upper edge of the plate to detain the last parts in expanded position, spring means for urging the latch lever against the plate, and cooperative lock means formed on the lug and an intermediate part of the catch plate for maintaining the last parts in contracted positions.

6. A shoe last comprising a forepart and a heel part each having two offset meeting surfaces forming cooperative shoulders for maintaining the last parts in operative, expanded positions, a link connecting the forepart and heel part for relative swinging movements between collapsed and expanded positions, a heightwise catch plate mounted on the heel part, an upstanding latch lever pivotally mounted on the forepart and provided at its upper end with a rearwardly extending lug engageable with the upper edge of the plate to detain the last parts in expanded position, spring means for urging the latch lever against the plate, cooperative lock means formed on the lug and an intermediate part of the catch plate for maintaining the last parts in contracted positions, and a release means mounted on a last part and normally operable to swing the latch lever away from the catch plate.

7. A shoe last comprising a forepart and a heel part each having two offset meeting surfaces forming cooperative shoulders for maintaining the last parts in operative expanded condition, a link connecting the forepart and the heel part for relative swinging movements between collapsed and expanded positions, a catch means mounted on the heel part, a cooperative, shiftable latch lever pivotally mounted on the forepart and cooperatively associated with the catch means to detain the last parts in expanded condition, and releasable, cooperative abutments on the latch lever and the catch means for maintaining the last parts in collapsed positions.

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No references cited.