

FIG. 9

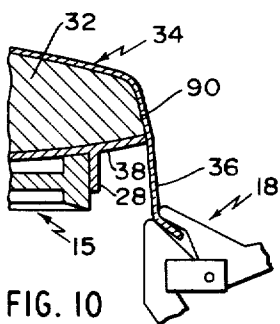


FIG. 10

FIG. 1

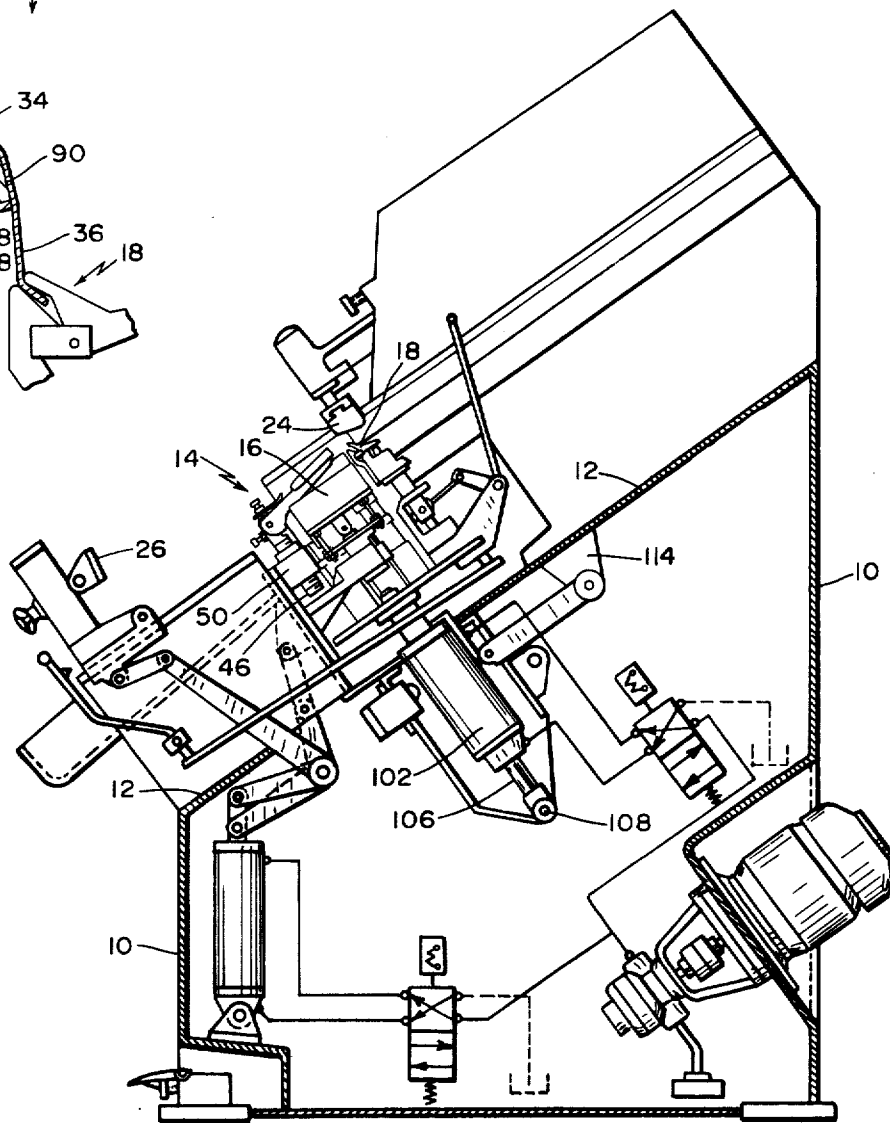


FIG. 2

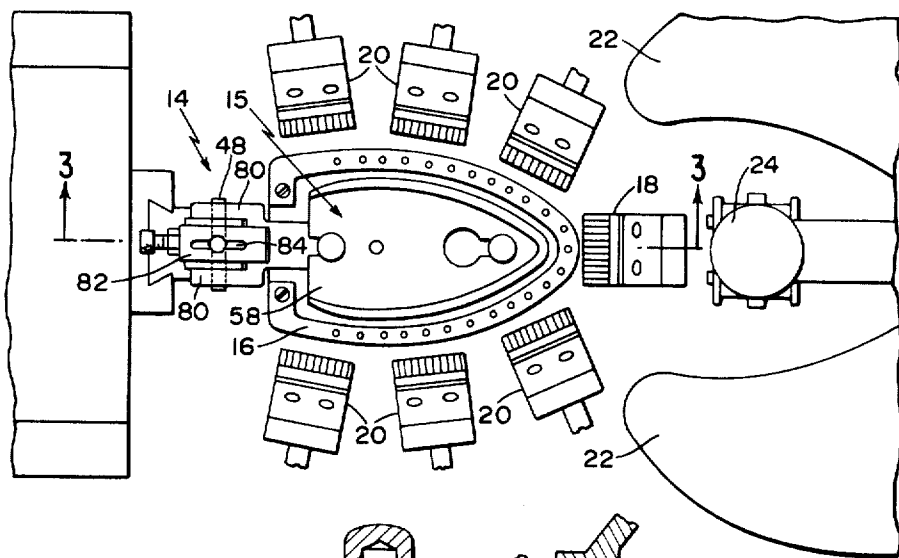
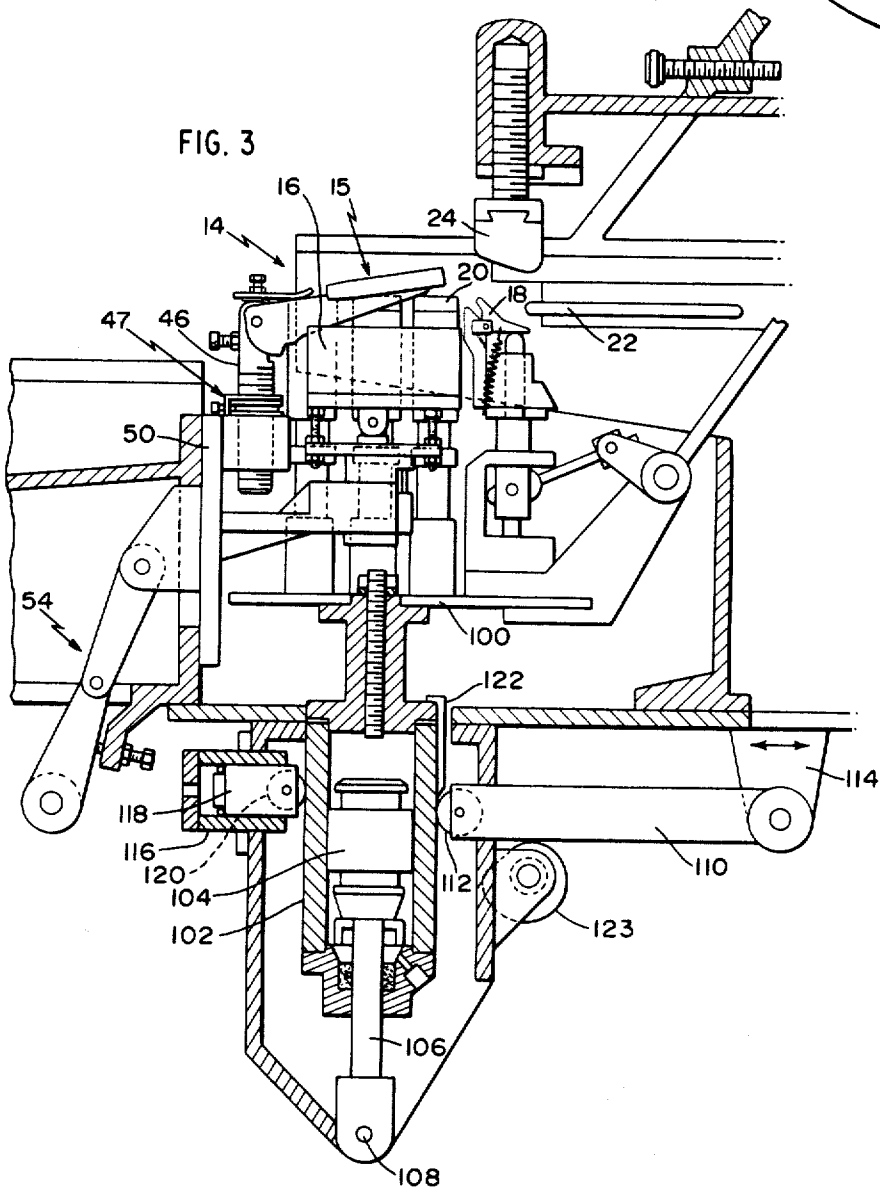
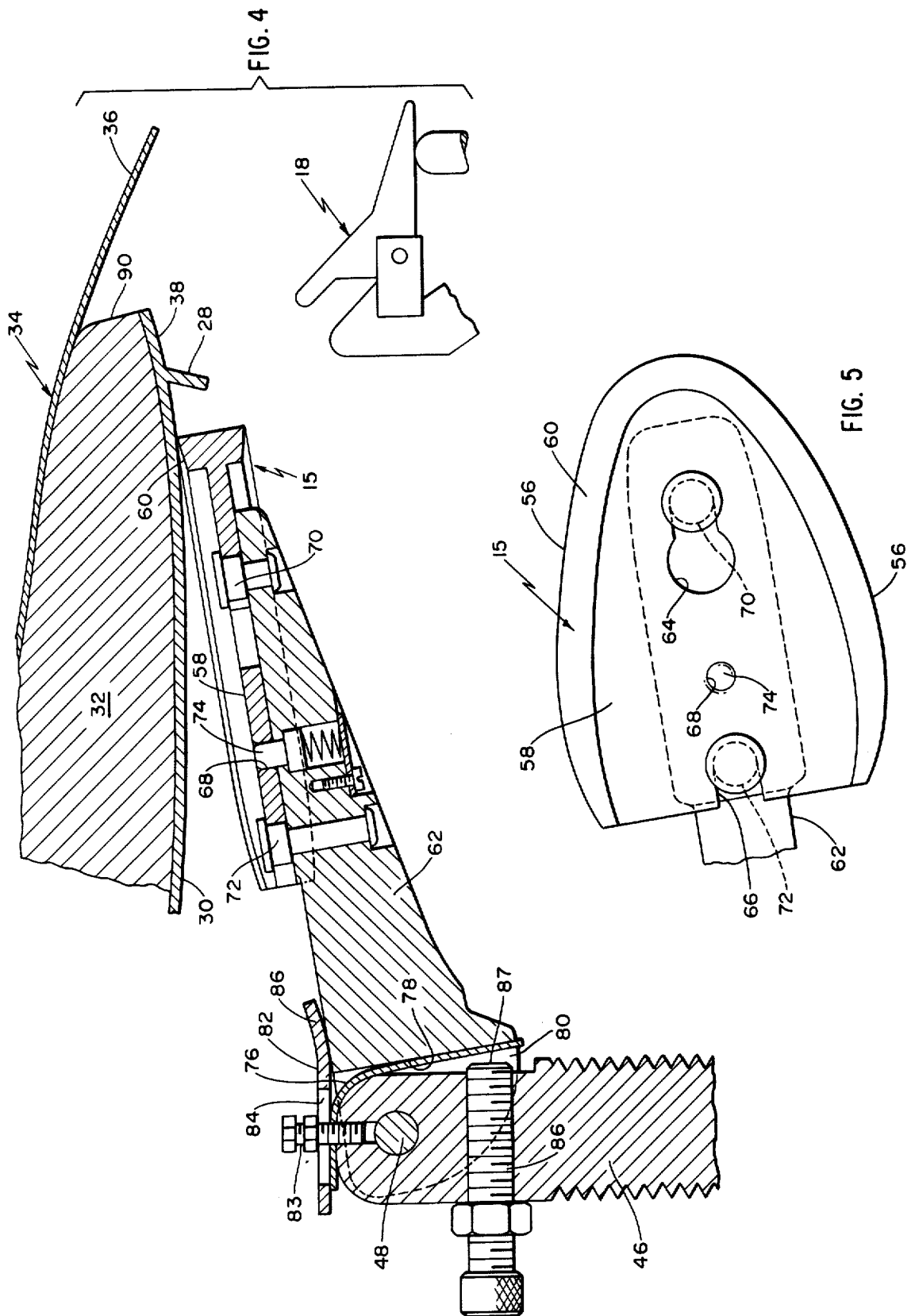
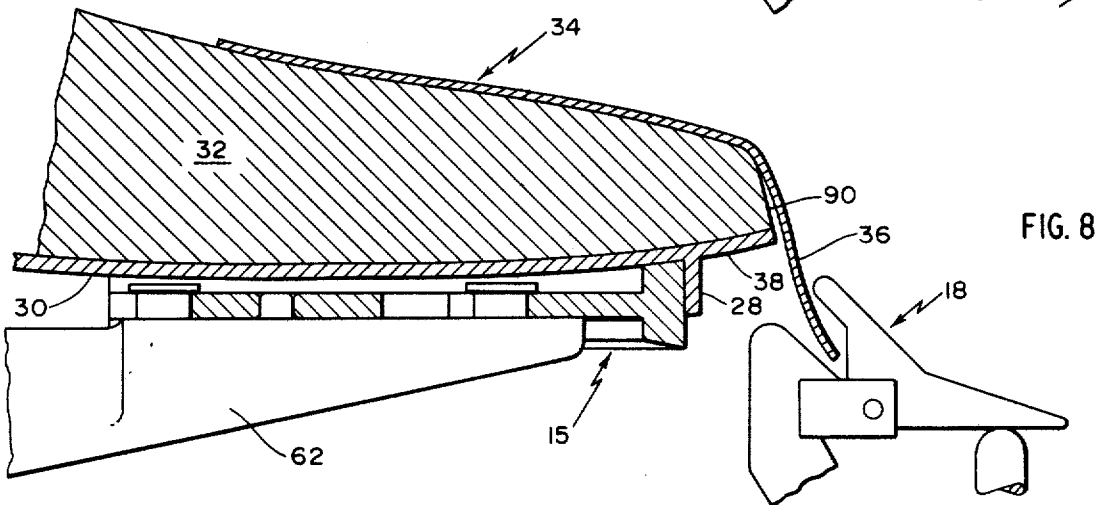
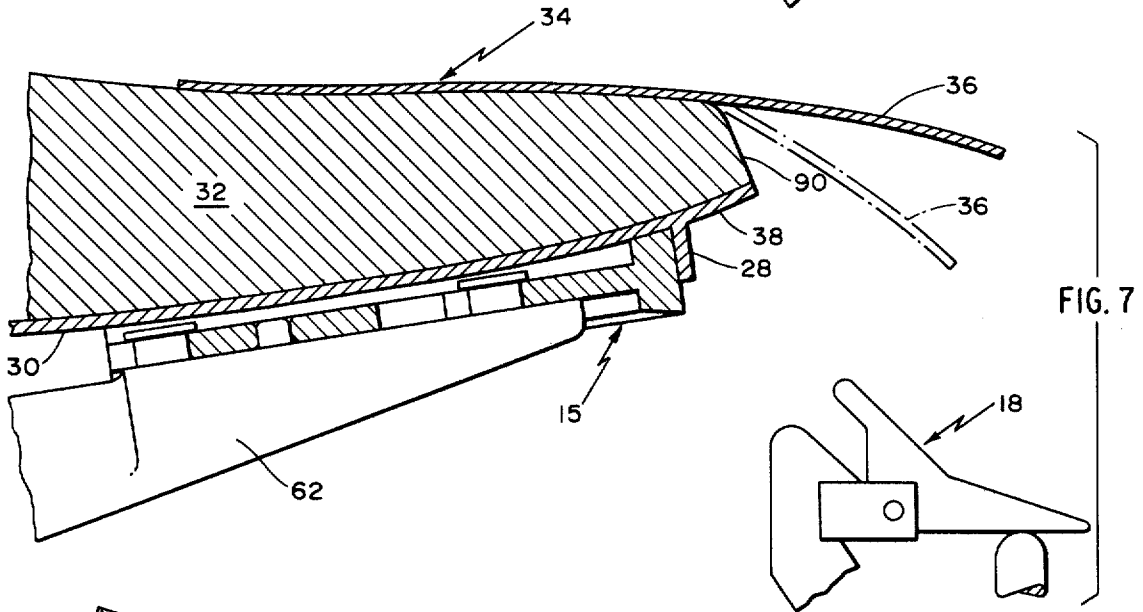
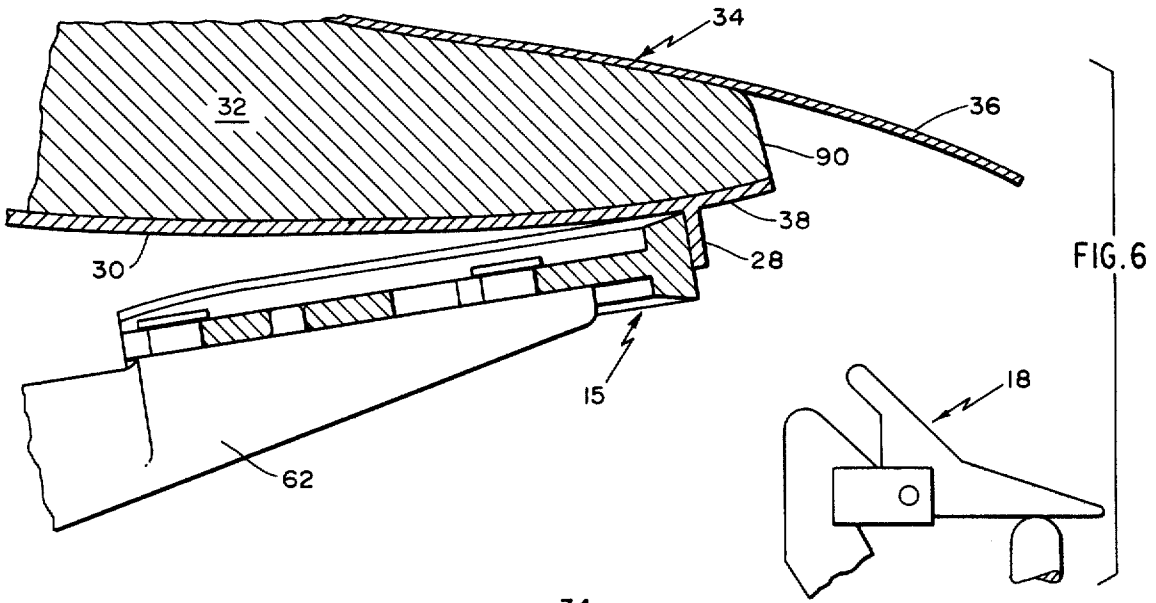


FIG. 3







## SHOE SUPPORT FOR LASTING MACHINE

## BACKGROUND OF THE INVENTION

This invention relates to improvements in machines and methods for pulling over and cement lasting a shoe upper during the manufacture of a welt-type shoe. In the manufacture of welt shoes, the insole is provided with a rib which extends downwardly from and along the insole bottom, generally parallel to the edge of the insole but spaced somewhat inwardly therefrom. Typically, the shoe upper is stretched and pulled over and about the last and the lower marginal portion of the shoe upper is wiped under the marginal region of the insole and is secured thereto by an appropriate thermoplastic cement. The machine includes a shoe supporting member which is of generally horseshoe-shaped peripheral contour and which is arranged to support the bottom of the shoe insole with the insole rib surrounding the periphery of the shoe support which backs the rib firmly during the subsequent pulling over and wiping operations. In prior machines, the shoe support typically has been mounted in fixed position in the machine so that it is at the proper height and attitude for the pulling over and lasting operations at all times, including the time at which the shoe assembly is presented initially to the machine. Because of the close proximity of the shoe operating instrumentalities, and particularly the pincer jaws to the shoe support, considerable difficulty often is encountered when inserting the shoe assembly into the machine and orienting it in a proper attitude with respect to the pincers and other shoe operating instrumentalities. The difficulty is increased further when the shoe assembly is of the type in which the periphery of the last has a "high wall" which tends to make it quite difficult to simultaneously place the welt shoe assembly properly on the shoe support while inserting the toe portion of the margin of the shoe upper into the toe pincer, as is the usual practice. The typical manner in which a welt shoe is placed on the shoe support is first to locate the shoe assembly so that the inner surface of the insole rib surrounds and is backed by the peripheral wall of the shoe support, while manipulating the toe end of the upper margin so that it can be inserted properly into the open toe pincers. Where the toe pincers and toe end of the shoe support are disposed very close to each other considerable awkwardness results. It is among the primary objects of my invention to provide an improved technique for supporting a welt shoe assembly in a pulling over and lasting machine which facilitates proper presentation of the shoe assembly to the shoe operating instrumentalities in the machine.

## SUMMARY OF THE INVENTION

My improved support is located at the shoe operating station of the machine and is surrounded by a cement applicator which also is of generally horseshoe shape. A plurality of pincer jaws are spaced about and surround the cement applicator. The parts are arranged so that when a shoe having a welt rib is placed properly in the machine, the region of the insole within the rib will rest on the support with the rib extending downwardly and about the support. During positioning of the shoe assembly in the machine the adhesive applicator is in a lowered, out-of-the-way position. When the adhesive applicator is raised, it will be disposed below the peripheral margin of the insole and outwardly of the in-

sole rib of a properly placed shoe assembly. The marginal portion of the upper extends outwardly beyond and over the cement applicator so that it may be inserted into and received by the pincer jaws.

My shoe support is pivotally supported at its heelward end to enable the toward end of the support to be swung between its lowered working position in which the surrounding shoe operating instrumentalities can effectively operate on the shoe assembly and an upper, idle position in which at least the toe end of the shoe support is elevated with respect to the working position. Means are provided for biasing the shoe support in its idle position under a force which is relatively light so that it may be overcome manually by the operator. When in the idle position, the toe end of the shoe support is sufficiently above its working position and is disposed in relation to the pincer jaws so that the bottom of the insole of the shoe assembly can be placed easily on at least the toe end of the support without interference from the toe pincer. The shoe assembly may be placed somewhat towardly of its intended final position, and then be drawn heelwardly to bring the toe region of the insole rib into firm engagement with the toe end of the support, thus locating the shoe assembly longitudinally of the shoe support in its proper position. The elevation of the toe end of the support in relation to the toe pincer is such that when the shoe assembly has been placed on the idle shoe support, the toe end of the insole rib as well as the toe region of the upper margin are disposed above the open toe pincer. This enables the operator to locate the toe end of the insole rib with respect to the support and shoe operating instrumentalities by "feel" rather than by visually determining their proper position. In this regard, it should be noted that visual determination of the proper placement of the insole rib with respect to the shoe support ordinarily is, at best, difficult because the shoe is placed bottom down and also because the margin of the upper usually extends over the pincers and obscures them.

After the shoe has been placed on the idle support the operator then urges the shoe assembly downwardly to rotate the shoe support to its lowered, working position while simultaneously guiding the toe end of the upper margin into the open toe pincer. The toe pincer then can be closed to begin the pulling over operation and the remaining sequential operational steps of the machine may be continued with some assurance that the shoe has been properly positioned.

A further aspect of the invention relates to a modified mode of operation of the shoe machine incorporating the invention described above in which the machine has means for adjusting the initial position of the pincer jaws. With some types of lasts having unusually high peripheral walls, it may be desirable to make an adjustment to the machine to locate the pincer jaws somewhat towardly of their usual starting, idle position. This provides still further room for the operator to manipulate the toe end of the upper margin into the open toe pincer. During the subsequent pulling over operation the pincer jaws are pulled both downwardly and then heelwardly.

It is among the objects of the invention to provide an improved method for presenting a welt shoe assembly to a pulling over and lasting machine.

A further object of the invention is to provide a method and apparatus of the type described which facilitates greatly the proper positioning of the various

parts of the shoe assembly with respect to the shoe operating instrumentalities and, particularly with respect to the pincer jaws.

### DESCRIPTION OF THE DRAWINGS

The foregoing and other objects and advantages of the invention will be understood more fully from the following further description thereof, with reference to the accompanying drawings wherein:

FIG. 1 is a somewhat diagrammatic side elevation, partly broken away, showing a typically pulling and lasting machine in which the invention may be employed;

FIG. 2 is a plan view of the shoe operating station showing the relative locations of the shoe support, cement applicator, toe pincers and wipers;

FIG. 3 is an enlarged illustration similar to FIG. 1 but showing with more particularity the shoe support of the invention;

FIG. 4 is a sectional elevation showing the shoe support in section as seen along the lines 4—4 of FIG. 2;

FIG. 5 is a plan view of the support member as mounted to the end of the arm;

FIG. 6 is a somewhat diagrammatic illustration of the shoe support in an idle position showing a high wall last being placed on the shoe support;

FIG. 7 is an illustration similar to FIG. 6 showing the last after placement on the shoe support and having been drawn heelwardly;

FIG. 8 is an illustration of the relative configuration of the shoe assembly, shoe support and toe pincer after the shoe assembly and support have been pivoted downwardly from their idle to their working position;

FIG. 9 is a somewhat diagrammatic illustration of the relative position between the toe pincer and the shoe assembly as may be employed in a machine having the capability of toewardly adjustment of the idle position of the pincer jaws; and

FIG. 10 is an illustration of the machine, set up in the manner shown in FIG. 9 after the upper has been pulled tightly about the last.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGS. 1, 2 and 3 show, somewhat diagrammatically, a pulling over and lasting machine of the type shown in U.S. Pat. No. 3,376,592 in which the invention may be employed. However, it should be understood that the invention and its principles may be employed in other pulling over and lasting machines of the same general type. The machine includes a frame 10, a portion of which defines a table 12 which is inclined to the horizontal. Many of the various machine elements are mounted to and about the table 12 and move in directions which are generally parallel or perpendicular to the table. Thus, for ease of explanation, directions which parallel the table will be referred to as "horizontal," "forward" or "rearward" and directions perpendicular to the table 12 will be referred to as "vertical," "up" or "down."

FIGS. 2 and 3 show some of the shoe operating instrumentalities, including the improved shoe support, in more detail except that in FIG. 3 some of the side pincers have been removed for clarity. These instrumentalities include, generally, a shoe support mechanism 14, a cement applicator 16, a toe pincer 18, a number of side pincers 20, a pair of wipers 22, a toe

holddown member 24 and a heel clamp 26 (see FIG. 1). While the precise sequence and manner of operation of various lasting machines of this type may vary from one machine to another, the general operation is that the shoe first is placed on the shoe assembly support and is oriented in a position in which the shoe upper is disposed evenly over and about the last with the margins of the upper inserted into the open jaws of the pincers 18, 20. The pincers then typically are closed and are moved generally downwardly relative to the supported shoe assembly (or in some cases the shoe assembly is moved up relative to stationary pincers) to stretch the upper and draw it tightly about the last. At or about this time the cement applicator 16 is raised into position and is operated to deposit molten thermoplastic adhesive along those regions of the insole and/or upper margin which are to be bonded. The wipers 22, which lie in and are movable in a horizontal plane to enable them to engage the pulled over margin of the upper and wipe it inwardly and under the insole, then are advanced heelwardly and inwardly in their wiping stroke. Just prior to the time that the wipers advance inwardly in their wiping stroke the toe hold-down 26 is advanced in engagement with the vamp portion of the shoe assembly and the heel clamp 24 is moved toewardly to bear against the heel end of the shoe assembly. At some time during the wiping action of the wipers, the pincers 18, 20 release their grip on the upper so as not to interfere with the advancing wipers to enable the margin to be fully wiped and be bonded to the underside of the shoe. In some machines, the shoe support mechanism 14 thereafter may be withdrawn downwardly from its shoe supporting position so that the lasted margin is pressed fully against the wipers 22 in an operation sometimes referred to as application of "bedding pressure." The toe hold-down 24 may be urged downwardly under an increased force to increase the bedding pressure. After the bedding pressure has been held for a time sufficient to enable the adhesive to fully cure and harden the various instrumentalities return to their initial positions and the lasted shoe assembly is removed. After the shoe assembly has been lasted, the height of the insole rib and upper portion bonded thereto is trimmed, leaving a strong anchor to which the welt of the shoe may be sewn.

As indicated above, placement of a welt type of shoe assembly in the shoe operating station of the machine is somewhat difficult because of the requirement that the insole rib be disposed fully about the shoe support while the marginal portions of the upper are inserted properly into the open pincer jaws. The awkwardness results primarily from the typical prior construction in which the sole support is at all times at its working position which leaves little clearance between the periphery of the shoe support and the pincers to receive the insole rib. This may be appreciated more fully from an understanding of the diagrammatically illustrated construction of such a welt type shoe assembly which includes a rib 28 extending downwardly from the insole 30. The shoe assembly includes the last 32, insole 30 with rib secured thereto and an upper 34 having a marginal portion 36 (FIG. 4). The rib 28, which is illustrated only diagrammatically, may be formed by any of a variety of well known techniques. It extends generally parallel to the edge of the insole 30 and is spaced inwardly from the edge to define an insole margin 38.

The shoe support mechanism 14 is mounted, at its heelward end to a threaded post 46 which is supported by a vertically movable slide 50. The relative height of the shoe support 14 in the machine may be varied by varying the location of a collar arrangement 47 which is threaded about the post 46 and which rests on the slide 50. The shoe support member 15 may be swung heelwardly from its idle position shown in FIG. 3, about the pivot 48, upwardly and away from the shoe operating instrumentalities to provide access to those instrumentalities for maintenance or adjustment purposes in a manner described below. The slide 50 is movable vertically and is guided by the vertical gibs 52 supported on the frame 10. The entire shoe supporting mechanism 14 may be moved upwardly and downwardly by operation of a linkage 54 which may be actuated by any well known drive means, for the purpose of lowering the shoe support mechanism after the wipers 22 have wiped the upper margin and to provide the bedding pressure referred to above.

The shoe support mechanism 14 includes the support member 15 which has a generally horseshoe-shaped peripheral wall 56. The upper surface of the support member 15 may be formed to define a central depressed region 58 and an upper peripheral surface 60 which extends upwardly from the central depressed region. The peripheral configuration of the wall 56 is substantially the same as the configuration of the insole rib 28 with which it is to be used so that the shoe insole 30 may be placed on the upper peripheral surface 60 of the support 15 with the downwardly extending insole rib 28 surrounding and being engageable with the peripheral wall 56.

The shoe support member 15 is supported at the outer end of an arm 62, the other end of the arm being pivoted to the upper end of the threaded post 46 at pivot 48. In the embodiment shown, the shoe support member 15 is mounted to the arm so that it may be detached and replaced easily with a similar support member 15 having a peripheral wall 56 of different configuration for use with other size and/or style shoe assemblies. As shown, the mounting arrangement for the support member 15 includes the formation of a keyhole slot 64 formed through the central depressed region 58 of the member 15 and a heelwardly opening slot 66 formed at the heelward edge of the central region 58 of the member 15. A detent hole 68 is formed through the central region 58 of the member 15 between the slots 64, 66. The member 15 is detachably secured to the arm by a pair of spaced pins 70, 72 secured to the upper surface of and extending upwardly from the arm 62. The pins 70, 72 are dimensioned and spaced in relation to the slots 64, 66 on the support member so that the support member may be detached by placing the enlarged end of the keyhole slot 64 over the pin 70 and then sliding the entire support member 15 heelwardly to engage the pin 72 with the heelward slot 66 and also engage the narrow end of keyhole slot 64 with the pin 70. Each of the pins 70, 72 includes an enlarged flange at its upper end which engages and retains the upwardly facing surface of the central region 58 of the support member 15. The support member 15 is retained in this position by a spring biased locking pin 74 carried by the arm 62 which snaps upwardly into the detent hole 68 when the member 15 has been drawn to its full heelward position. The support member 15 may be removed, when desired, by depressing the upper end

of the locking pin 74, through the detent hole 68 to enable the support member 15 to slide toewardly. It should be understood that the foregoing description of the support member is intended merely for purposes of illustration and other types of support members may be employed.

The entire arm 62 with the support member 15 carried thereon is movable between the idle position shown in FIGS. 3, 4, 6 and 7 in which the arm 62 is disposed in an upwardly and toewardly inclined attitude and a working position in which the arm 62 is disposed in a more horizontal attitude. The idle position on the arm is such that at least the bight at the toe end of the toe end of the support member 15 is located above its working position to an extent sufficient to enable the insole bottom to be placed at least on the bight region of the upper surface of the support member 15 and then be drawn heelwardly to be engaged by the inner surface of the toe region of the insole rib, without interference between the insole rib and the toe pincer 18. The heightwise position of the bight of the support member 15 should also be sufficient so that, after the shoe has been properly located on the support the operator then may manipulate the toe portion of the upper margin into proper position with respect to the toe pincer 18.

The arm 62 is normally biased in its idle position, for example, by a leaf spring 76 secured to the upper end of the post 46. The leaf spring 76, as shown, is of substantially L-shaped configuration and has a free end which extends downwardly along the post 46 between the post 46 and the inner surface 78 of the clevis 80 which is formed integrally with the arm 62 and by which the arm is pivoted at pivot 48 to the post. The spring 76 is of a configuration and shape so that its free end will bear against the lower region of the surface 78, below the level of the pivot 48. The spring is designed so that it is sufficiently strong to bias the arm 62 and the support 15 carried thereby to its upwardly, toewardly inclined idle position.

The extent of upward and toeward inclination of the arm 62 and member 15 can be varied by means of an upper limit plate 82 which is secured to the upper end of the post 46 by the locking screw 83 which also secures the fixed end of the leaf spring 76 to the post 46. The upper limit plate extends in a heelward-toeward direction where it has a longitudinal slot 84 formed therein. Its toeward end may be bent slightly upwardly as shown at 86. The limit of the upwardly and toewardly inclined idle position of the arm 62 is controlled by varying the extent that the end 86 of the plate 82 extends over the arm 62. The adjustment may be made simply by loosening the lock screw 83 and moving the plate 82 to the desired longitudinal position. The attitude of the arm 62 and support member 15 when in its lowered, working position similarly may be adjustably controlled by a stop bolt 86 which is threaded through the post 46 so that its toeward end 87 will be butted by the lower end of the leaf spring 76.

In operation, the support member 15 of the desired shape and configuration first is selected with regard to the particular shoe assembly to be lasted. Depending upon the type of shoe assembly, last shape, upper shape and margin width, the operator may wish to make some adjustments to the idle and/or working attitudes of the support member 15 and arm 62. The ability of the support member 15 to be disposed at an idle attitude in

which its toeward end is disposed above the height of at least the toe pincer **18** significantly reduces the manipulation heretofore required to place the shoe assembly properly in the machine. As described above, typical prior machines maintained the support member **15** at the same height and attitude with respect to the other shoe operating instrumentalities, including the toe pincer **18**, which corresponds to the "working" position described herein. As can be seen from FIG. **8**, when the support member **15** is at the working position during presentation of the shoe assembly to the machine, there is substantially less space for the operator to manipulate the insole rib **28** about the support member **15** while simultaneously inserting the toe end of the upper margin into the open toe pincer. In contrast, the present invention enables the operator to place the insole at the upwardly protruding toe end of the support without interference from the other shoe operating instrumentality

In operation, the welt shoe assembly is presented to the machine as shown in FIG. **6** in which the bottom of the insole is brought into engagement with the upwardly extending toe end of the support. As shown in FIG. **7**, the operator then draws the shoe assembly heelwardly to bring the inner surface of the toe region of the insole rib into engagement with the bight **63** at the toe end of the support **15** which locates the shoe assembly longitudinally in the machine. The operator then may visually position the heelward portions of the shoe assembly laterally to their desired orientation and may also manipulate the upper margin and particularly the toe end of the upper margin into alignment with the then open pincer jaws. When the operator is satisfied with the positioning of the sole he then urges the shoe assembly and support **15** downwardly about the pivot **18** to its working position while guiding the upper margin **36** into the open pincer jaws (FIGS. **7** and **8**). Having satisfied himself that the shoe parts and shoe operating instrumentalities are in proper orientation at this stage he then activates the machine to continue the pulling over and lasting operation in the usual manner as described above.

While the invention is of significant assistance with most types of welt shoes, it is of particular aid when used with shoe assemblies having a "high wall" lasts as shown in the drawings. Such lasts include a relatively high, generally vertical, wall **90** extending about its periphery. A shoe assembly including this type of last is the most awkward and troublesome to manipulate into proper position in the typical prior art machines described above. Where the last is of the high wall variety it is extremely awkward to simultaneously locate the insole rib about the support member and place the upper margin in the open pincer jaws.

While the foregoing shoe support is of significant aid in the proper placement of many types of welt shoe assemblies, including some with high wall lasts, there may be some instances in which the shape, size or configuration of the high wall last is such that some awkwardness still may be encountered in the placement of the upper margin into the toe pincers. This may be remedied when the invention is incorporated into a machine in which the pincer jaws **18, 20** or shoe support mechanism **14** are mounted for relative adjustment as to their heelward-toeward spacing while in an idle position. Such a machine is shown in FIGS. **1** and **2**, portions of which are described more fully in U.S. Pat. No.

3,404,416. The machine supports the pincer jaws, including the toe pincer **18** on a carrier plate **100** which, in turn, is secured to the upper end of a cylinder **102**. The cylinder **102** includes a fixed piston **104** and a downwardly extending piston rod **106** which is pivoted at **108** to the frame of the machine for heelward-toeward movement, thus enabling the carrier plate **100** and all of the pincer jaws **18, 20** to be moved heelwardly and/or toewardly in a controlled manner, as desired. The extent of toeward movement (away from the shoe support) is controlled by an adjustable stop which may take any of a variety of forms such as the one shown. In the illustrative embodiment the stop mechanism includes an arm **110** mounted in the machine and extending heelwardly toward the outside of the cylinder **102**. The arm may have a roller **112** rotatably secured to its end. The extent of toeward pivoting of the cylinder and, therefore, the pincer jaws, is limited by engagement of the cylinder **102** with the roller **112**. The arm **110** may be longitudinally adjustable to vary the extent of toeward movement of the pincer jaws by mounting its heelward pivot support **114** for slidable adjustment to the frame. The cylinder **102** may be pivoted about its pivot by operation of a fluid cylinder **116** supported in the frame on the opposite side of the cylinder **102**. The cylinder **116** includes a piston **118** which has a roller **120** pivoted to the end thereof which is urged toewardly and against the exterior of the cylinder.

The control circuitry of the foregoing machine may be set up so that when it is in an idle position, ready to receive a shoe assembly, the piston **118** is urged toewardly to pivot the cylinder **102** against the stop **112** which was previously adjusted to locate the pincer jaw, and particularly the toe pincer **18**, toewardly of its usual idle position (shown in phantom in FIG. **9**). After the shoe assembly has been placed on the support mechanism **14** and is rotated to its working position, the more toeward location of the open toe pincers **18** facilitates insertion of the upper margin into the toe pincer. After all of the pincer jaws have been closed to grip the shoe upper the cylinder **102** is operated to draw the pincers downwardly to stretch the upper about the last. It is desirable, however, that the upper be stretched in a manner such that, when the stretching operation is completed, the pincer jaws are located substantially and directly below the normal idle position. This is desirable in order to avoid wrinkles in the upper which may occur if the net effect of the pulling over operation is other than in a substantially straight, downward direction. To this end, the pulling over motion of the pincer jaws from their more toeward idle position is both downwardly and heelwardly and may follow the path suggested by the arrow **120** in FIG. **9**. With the specific machine described for illustration herein, this may be accomplished by providing a cam **122** on the cylinder **102** which, as the cylinder **102** moves downwardly, will engage the roller **112** on the adjustable arm **110** to urge the cylinder **102**, and pincers **18, 20** carried thereby about the pivot **108** to the more heelward position suggested in FIG. **10**. The piston **118** of cylinder **116** retracts yieldably during such motion. The time at which the pincers **18, 20** begin to move heelwardly can be varied somewhat by an eccentric cam **122** which can be adjusted to raise or lower the free end of the arm **110**. By employing the foregoing arrangement and technique, the pincer jaws are lo-

cated in a more advantageous initial position to receive the upper margin of a high wall last while enabling the pulling over operation to be effected without undue wrinkling of the shoe upper.

It should be understood that the foregoing description of the invention is intended merely to be illustrative thereof and that other embodiments and modifications may be apparent to those skilled in the art without departing from its spirit.

Having thus described the invention what I desire to claim and secure by Letters Patent is:

1. In a machine for pulling over and lasting a welt shoe assembly which includes a last, an insole at the bottom of the last, and an upper draped about the last, the insole having a rib secured to the bottom thereof and extending downwardly therefrom in generally horseshoe-shaped configuration, said machine having a plurality of shoe operating instrumentalities disposed about a shoe operating station, said instrumentalities including pincer jaws for gripping and pulling the upper over said last, an improved shoe support comprising:

a support member mounted at said shoe operating station and having a generally horseshoe-shaped periphery, said member having a heelward end and a toward end, the bight of said horseshoe-shaped periphery being disposed at the toward end of said member;

said pincer jaws being mounted in said machine to generally surround said periphery of said support member in a substantially horseshoe-shaped array; and

means mounting said support member in said machine for movement between a working position in which said shoe assembly disposed on said support member is located at a position in which said shoe operating instrumentalities may perform their respective operations on said shoe assembly and an idle position in which at least the toe end of said support member is disposed above said working position to an extent in which the toe region of said insole rib is disposed above at least the most toward of said pincer jaws.

2. A machine as defined in claim 1 further comprising:

means biasing said support member toward said idle position.

3. A machine as defined in claim 2 further comprising:

means for adjustably limiting the range of movement of said support member between said working and idle positions.

4. A machine as defined in claim 1 when said means mounting said support member in said machine comprises:

a post mounted in said machine heelwardly of said shoe operating station;

an arm pivotally mounted to said post and extending towardly therefrom for pivotal movement in a substantially heightwise direction between said working and idle positions;

means mounting said support member to the arm; bias means operably associated with said post and said arm for urging said arm toward said idle position; and

means operatively associated with said post and said arm for limiting the range of movement of said arm between said idle and working positions.

5. A machine as defined in claim 4 wherein at least one of said means for limiting the extent of movement of said arm is so constructed and arranged to permit said limit to be adjustably varied.

6. A machine as defined in claim 4 further comprising:

said bias means being secured to said post having a portion thereof movable and engageable with said arm.

7. A machine as defined in claim 6 further comprising:

said biasing means including a leaf spring, secured to said post at one end thereof, the other, free end of said leaf spring extending between said post and a surface of said arm and engaging said surface of said arm at a location below said pivot.

8. A machine as defined in claim 7 further comprising:

means for varying, adjustably, the working position of said support arm comprising:

a stop member mounted to said post and having an abutment surface facing the free end of said leaf spring, said leaf spring being movable toward said surface and into abutting engagement therewith to preclude further movement of said leaf spring and said arm.

9. In a machine for pulling over and lasting a welt shoe assembly which includes a last, an insole at the bottom of the last, and an upper draped about the last, the insole having a rib secured to the bottom thereof and extending downwardly therefrom in generally horseshoe-shaped configuration, said machine having a plurality of shoe operating instrumentalities disposed about a shoe operating station, said instrumentalities including pincer jaw means for gripping and pulling the upper over said last, an improved shoe support comprising:

a support member mounted at said shoe operating station and having a generally horseshoe-shaped periphery, said support member having a heelward end and a toward end, the bight of said horseshoe-shaped periphery being disposed at the toward end of said member;

said pincer jaws means including a toe pincer jaw mounted in said machine towardly of the bight of said support member; and

means mounting said support member in said machine for movement between a working position in which said shoe assembly disposed on said support member is located at a position in which said shoe operating instrumentalities may perform their respective operations on said shoe assembly and an idle position in which at least the toe end of said support member is disposed above said working position to an extent that the toe region of said insole rib will be disposed above the level of said toe pincer jaw.

10. A machine as defined in claim 9 further comprising:

means biasing said support member towards said idle position.

11. A machine as defined in claim 1 further comprising:

means for moving said pincer jaws downwardly with respect to said shoe operating station to stretch said upper about said last and being constructed and arranged so that said pincer jaws are disposed

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at a predetermined heelward-toeward location with respect to said last when said pulling over operation is complete; and

means for locating said pincer jaws at a position which is toewardly of said predetermined position when said pincer jaws are in their upward idle position thereby to facilitate insertion of said upper margin into said pincer jaws at said shoe operating station.

12. A method for presenting and supporting a welt shoe assembly to the shoe operating station of a shoe lasting and pulling over machine, said shoe assembly including a last, an insole at the bottom of the last and an upper draped about the last, the insole having a rib secured to the bottom thereof in generally horseshoe-shaped configuration, said machine having a plurality of shoe operating instrumentalities which include pincer jaw means for gripping and pulling the upper over said last, said method comprising:

providing a support member having a generally horseshoe-shaped periphery and having a heelward end and a toeward end, the toeward end of said support member defining said bight of said horseshoe-shaped periphery;

orienting said support member so that its toeward end is disposed above the height of at least the most toeward of said pincer jaws;

placing said shoe assembly, bottom down on said shoe assembly support with said rib surrounding said support and with at least the toeward end of said support in engagement with the inner surface of the toe region of said insole rib;

thereafter urging said shoe assembly and said support member to a more downward position in relation to said pincer jaws and aligning the margin of said shoe upper with said pincer jaws while said jaws are in an open, receptive configuration; and thereafter closing the most toeward of said pincer jaw means to grip said upper.

13. A method as defined in claim 12 wherein said step of orienting said support member further comprises:

locating said toeward end of said support member

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55  
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above the height of said toeward of said pincer jaws by a distance which is at least equal to the height of said insole rib.

14. A method for presenting, supporting and pulling over a welt shoe assembly, said shoe assembly including a last, an insole at the bottom of the last and an upper draped about the last, the insole having a rib secured to the bottom thereof in generally horseshoe-shaped configuration, said method comprising:

providing a support member having a generally horseshoe-shaped periphery and having a heelward end and a toeward end, the toeward end of said support member defining the bight of said horseshoe-shaped periphery;

providing pincer jaw means constructed and arranged to grip the marginal portion of said upper; orienting said support member so that its toeward end is disposed above the height of at least the toeward of said pincer jaw means;

locating said pincer jaw means in a predetermined heelward-toeward location with respect to said support member;

placing said shoe assembly, bottom down on said support member with said rib surrounding said support member and with at least the toeward end of said support member in engagement with the inner surface of the toe region of said insole rib;

thereafter urging said shoe assembly and said support member to a more downward position in relation to said pincer jaws and aligning the margin of said shoe upper with said pincer jaws while said jaws are in an open, receptive configuration;

thereafter closing said pincer jaw means to grip the marginal portion of said upper; and

thereafter moving said pincer jaw means downwardly and heelwardly to stretch said upper about said last, said predetermined location of said pincer jaw means being forwardly of the heelward-toeward location of said pincer jaw means after completion of said heelward component of movement of said pincer jaw means.

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