A. PERRI.

WIPING MECHANISM.

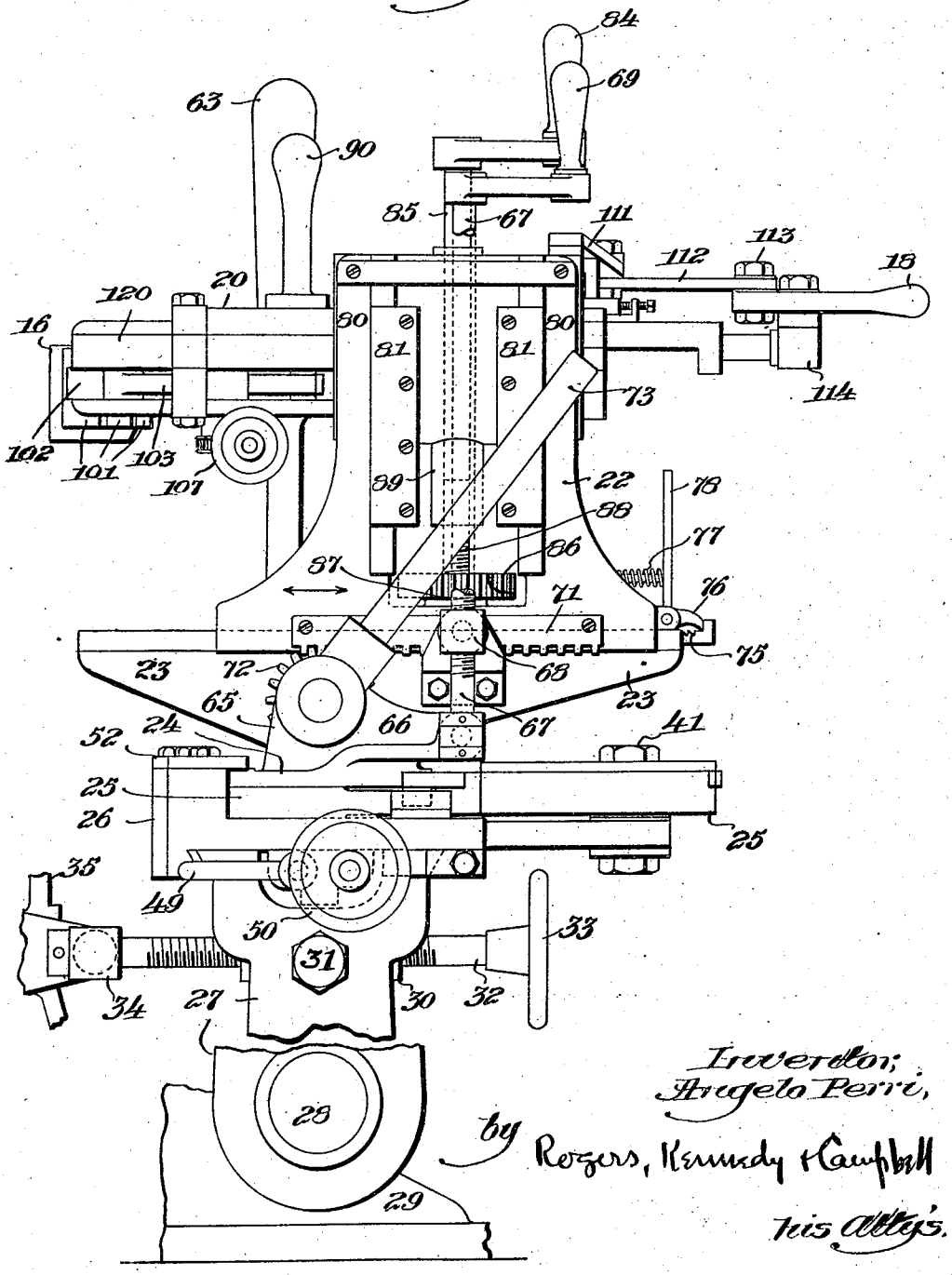
APPLICATION FILED AUG. 14, 1919.

1,420,573.

Patented June 20, 1922.

3 SHEETS—SHEET 1.

Fig. 1.



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3 SHEETS—SHEET 2.

Fig. 2.

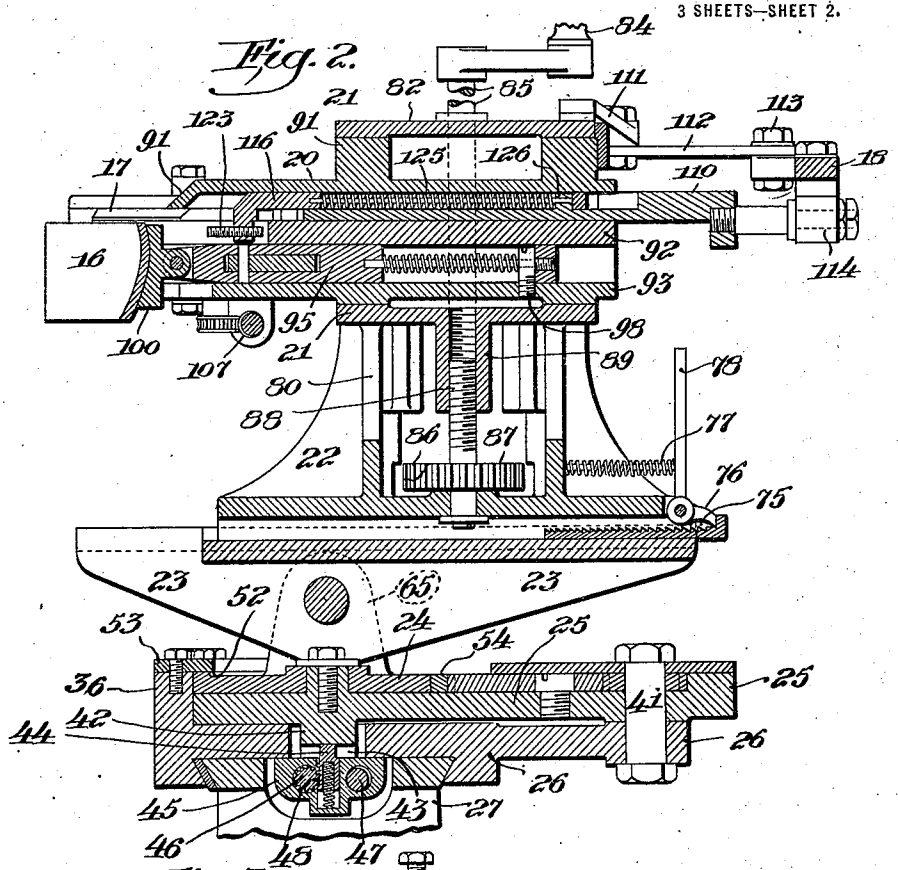
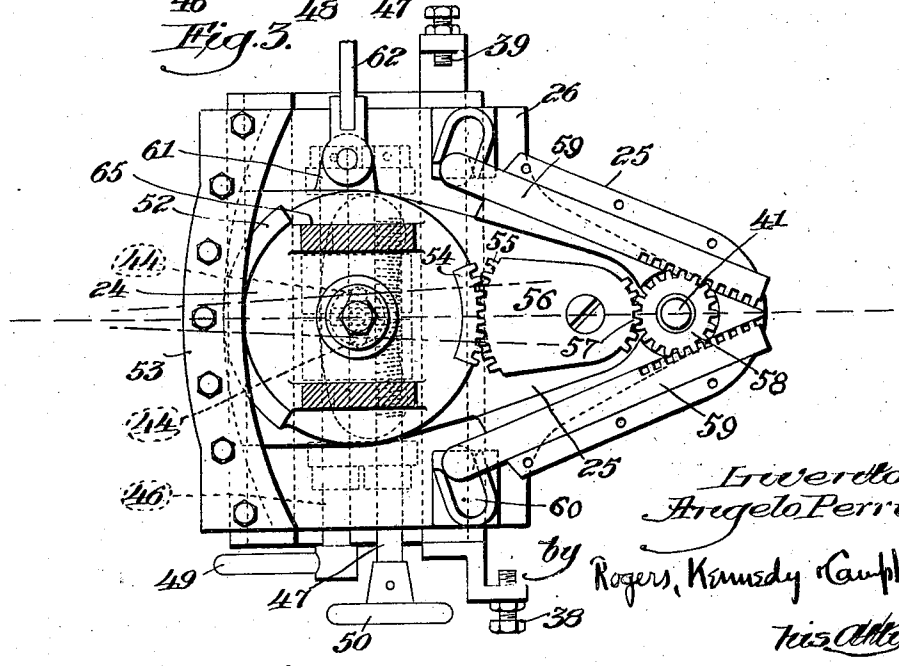


Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 4.

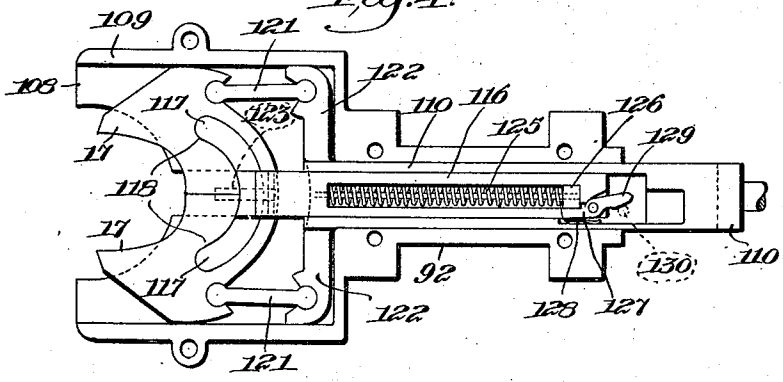


Fig. 5.

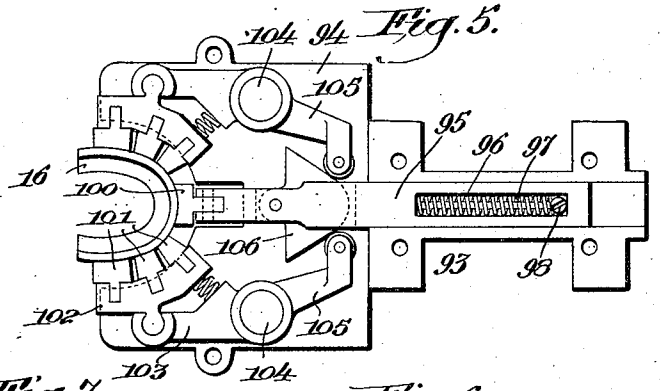


Fig. 7.

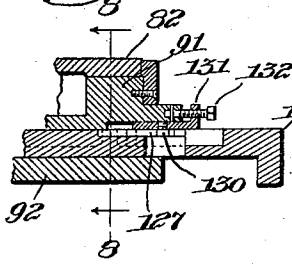


Fig. 6.

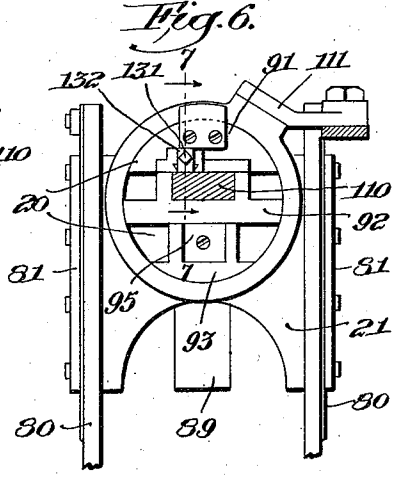
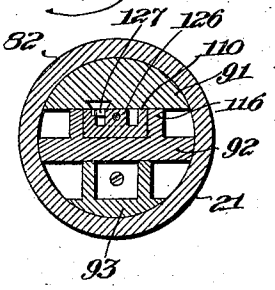


Fig. 8.



Inventor,
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UNITED STATES PATENT OFFICE.

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WIPING MECHANISM.

1,420,573. Specification of Letters Patent. Patented June 20, 1922.

Application filed August 14, 1919. Serial No. 317,499.

To all whom it may concern:

Be it known that I. ANGELO PERRI, a citizen of the United States, residing at Watertown, in the county of Middlesex and State of Massachusetts, have invented a new and useful Wiping Mechanism, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention is a novel wiping mechanism. The present case is a companion to my copending case entitled shoe lasting machine, filed August 14, 1919, Serial No. 317,498, which latter discloses a complete machine embodying pulling-over mechanism, toe and heel wiping mechanisms, and a shoe holding jack shiftable to change the shoe position between pulling-over and wiping. The present case has reference more particularly to the heel wiping mechanism, which is only generally illustrated in said copending case. It is to be understood, however, that, while the present mechanism is designed and adapted more particularly to the wiping of heel ends of shoes, many features might be used in toe wiping mechanisms; and the mechanism herein shown would be useful, not merely in a complete pulling-over and wiping machine, as in said copending case, but also in other forms of lasting machine, for example, the well known bed laster, in which wiping, but not pulling-over is performed; and the scope and utility of the present invention are not intended to be restricted in these respects.

The main object of the present invention is to afford a shoe wiping mechanism operating in a more efficient and convenient manner and with better results in the product, as compared, for example, with the mechanism generally shown in my prior Patent No. 1,260,034, patented March 19, 1918. Another object is to afford an improved construction for symmetrically shifting the wiping mechanism across the axis of the machine to bring it into proper position for acting upon right and left shoes alternately. Other and more particular objects and advantages will be made clear in the hereinafter following description of an embodiment thereof, or will be apparent to those skilled in the art. To the attainment of the above mentioned objects, the present invention consists in the novel machine, mechanism, combinations, devices and arrangements herein illustrated, described or claimed.

In the accompanying drawings, Fig. 1 is a front elevation of a wiping mechanism designed more particularly for the heel end of shoes, and adapted for example, for use in a lasting machine such as is illustrated in said copending case, wherein at the right side of Fig. 1 will be seen the same mechanism as Fig. 1 hereof, the same being shown in appropriate surroundings and with appropriate fittings and adjustments unnecessary to repeat in the present case. Indeed, for convenience in the present case the wiping mechanism has been changed from the inclined position indicated in the copending case, and which it would possess in practice, to a horizontal position to afford more satisfactory illustration and explanation of the structure of the mechanism. It will be understood that the axis of the machine and shoe run generally from left to right in Fig. 1, the wiper plates being at the extreme left of the figure and advancing toward the shoe in a leftward direction.

Fig. 2 is a generally central vertical section of the wiping mechanism hereof, the parts which are shown in elevation being in front view.

Fig. 3 is a top plan view of the lowermost group of parts in Figs. 1 and 2, with everything thereabove supposed to be removed, and the shown parts centrally set.

Fig. 4 is a top plan view of certain parts including the heel wiping plates, their carrier, etc.

Fig. 5 is a top plan view of certain parts including the heel clamping parts, their carrier, etc.

Fig. 6 is a partial right elevation.

Fig. 7 is a section taken on the plane 7—7 of Fig. 6.

Fig. 8 is a section taken on the plane 8—8 of Fig. 7.

In Figure 1, at the left, is shown the heel clamping pad 16 which is pressed against the shoe to hold the wiping mechanism in firm relation with the shoe during the wiping action. The central section, Figure 2, also shows the clamping pad 16 and the wiper plates 17 above it. Without at first going into details of the immediate fittings and actuation of these parts, I will only

here call attention to the operating or wiping handle 18, at the right side of Figure 1, through which the advancing and wiping motions of the plates and their carrying means are effected. These parts are all carried substantially at the top of a series of shiftable or adjustable supporting members which may be termed carriages and which it will be convenient to first enumerate from the top downward, giving their motions, afterwards commencing at the bottom and giving details and structure and fittings of each.

The heel pads and the wiper plates and their immediate carrying parts are supported by a circular carriage 20. This is capable of adjustable rotation for the purpose of altering the lateral tilt or slant of the wiper plates to accord with the position that the shoe may occupy in the holding jack, the shoe seldom or never being horizontal at the heel end.

This laterally tiltable carriage 20, which is seen to be generally cylindrical, is mounted within the second carriage 21, this being adapted to be adjusted bodily, upwardly and downwardly, to bring the wiping mechanism to the correct height.

The rising and falling carriage 21 is in turn mounted on the next carriage 22 which has advancing and receding movements, that is, it shifts or slides longitudinally toward and from the shoe and serves the purpose of bringing the wiping mechanism up into engagement with the heel of the shoe.

This sliding carriage 22 in turn is mounted on the carriage 23 beneath it, the same being tiltable longitudinally so as to enable the wiping plates to be adjusted in this respect to accord with the shoe.

The longitudinally tilting carriage 23 is fulcrumed upon a circular or disklike carriage 24, which is centrally fulcrumed and capable of rotary shifting movements upon the next lower or swinging carriage 25. The rotary carriage enables the direction of wiping action to be reversed for reversal of the machine for right and left shoes alternately. The swinging carriage 25 carries all of the preceding carriages and the wiping mechanism bodily across the axis of the machine from front to rear, and vice versa in the act of reversing the mechanism for right and left shoes.

This swinging carriage 25, with all of the carriages above it, is swingingly supported upon the right hand end of a transversely sliding carriage 26 capable of a substantial bodily movement across the machine from front to rear, and reverse, in the changing over of the machine from right to left shoes and vice versa.

The transversely sliding carriage 26 is dovetailed directly at the top of an upright carriage in the form of a swinging post 27, which by proper adjustment is thus capable of carrying with it toward or from the shoe and jack the entire wiping mechanism with all the intermediate carriages.

The swinging post 27 is fulcrumed at 28 to a base portion 29 of the machine, as more fully shown in the aforesaid copending case. Near its upper part the post is provided with a threaded sleeve or nut 30, centrally pivoted at 31, and engaged by a threaded rod 32 having handle 33 at its right extremity and connected by a universal joint 34 to a fixed part 35 of the machine. By simply turning the handle 33 the whole wiping mechanism is caused to adjust as desired, toward or from the jack and shoe.

The transversely sliding carriage 26 is dovetailed upon the top of the swinging post 27. The carriage 26 has a rightward extension 36, and other parts having to do with the fittings of the next carriage. Secured to the top of the post 27 is a front stop 38 and a rear stop 39 adjustable for determining the extreme transverse positions of the carriage 26. The carriage 26 may be thrown across the machine by hand power, as will be described.

The transversely swinging carriage or table 25 is pear shaped and is fulcrumed at 41 on the extension 36 of the carriage 26. It is a flat, platelike member resting flatly on top of the carriage 26, and its free or left end is adapted to swing forward and rearward. To determine its extreme position, the following stop mechanism may be employed. Through a curved slot in the carriage 26 extends a boss 42, its under side recessed at 43, and into this recess extends upwardly one or the other of a pair of adjustable stops 44. The plan of these is indicated in dotted lines in Figure 3, and the structure of one of them is shown in Figure 2. Each stop 44 is mounted on a carrier 45. A pair of transverse rods 46 and 47 extend through holes in the two carriages. The stops or pins 44 are spring-pressed upwardly to the position shown in Figure 2, and when in this position the swinging carriage 25 is locked against transverse shifting. In order to unlock the same to permit the shifting of the carriages, the stop pins 44 may be pulled down by reason of the tooth and rack engagement 48 between the lefthand rod 46 and the stop pin. At the front end of the rod is a handle 49. This has merely to be lifted to lower the stop pins and thereby free the swinging carriage for its reversing movements. There are symmetrically opposite stop pins, as stated, and these may be symmetrically adjusted toward and from each other by the transverse rod 47, which has right and left threads, as seen in Figure 3, so that when the handle 50 at the front end thereof is turned, the stop pins may be set where desired and thus pre-

determine the amount of swing or throw of the carriage 25 across the axis of the machine. In Fig. 2 the carriage 25 is supposed to have been swung enough for pin 44 to engage slot 43.

The rotary turret or carriage 24 is mounted flatly upon the swinging carriage 25. Its rotation is for the purpose of setting the axis of the wiping devices to the axis of the shoe when the wiping devices are swung across from the front to the rear of the machine or vice versa. As it is necessary that the described parts should be very firm and rigid during the wiping operations, I have provided a machined bearing surface 52 at the left periphery of the turret carriage 24, and above this, screwed to the carriage 26, is a hold-down plate or flange 53 shaped, as shown in Fig. 3, so as to co-operate with the bearing surface 52 in any position of the rotary carriage 24. The need and general plan of swinging and rotating the wiping mechanism to reverse the machine is indicated in Figs. 27 and 28 of said Patent 1,260,034.

It should be explained that, for convenience of illustration, the carriages 25 and 24 are shown in Fig. 3 in a central or neutral position, which they will seldom or never have in practice, as they will be thrown alternately to the far or rear side and the near or front side for right and left shoes. In order to effect the automatic rotation of the carriage 24 when shifted transversely with the carriage 25, the following may be provided. At the right edge of the rotary carriage is provided a curved toothed rack 54. This is engaged by a second rack 55 provided at the left edge of a rotary toothed member 56 mounted directly on the carriage 25. The right edge of member 55, having a rack 57 of smaller radius is engaged by toothed member or pinion 58 which is also mounted upon the underlying carriage 26. When the carriage 25 is swung to the rear or front, the member 56 runs around the pinion 58, which rotates the member, which in turn rotates the rotary carriage 24. Thereby, as the carriage 25 is swung across the machine, the carriage 24 is rotated in the reverse direction so that the axis of the wipers is maintained in the proper relation to the shoe. To increase the swing of the wiping mechanism the pinion 58 may be rotated while it is functioning with the other members 56 and 54. To this end the carriage 25 is provided with ways for opposite sliding racks 59, whose offset left ends engage cams 60 on the underlying carriage. One or the other of the cams acts on the racks during reversal to rotate the pinion and modify the rotation of the carriage 24. The dash lines on Fig. 3 show what the two opposite lines of wiping action may be.

An advantageous feature hereof is the ability to effect all of the reversing motions for right or left shoes by a single motion of a lever or control part. Thus, in Figure 3 is seen at the far side of the carriage 25 a boss 61 from which extends a link 62 rearwardly to an upright reversing lever 63, seen in Fig. 1. When this lever is thrown rearwardly, it first causes the carriage 26 to slide rearwardly until it contacts its stop 39. The continued motion swings the carriage 25 rearwardly until it is brought to rest by the engagement of one of the stops 44 in the recess 43. During this swinging motion the pinion 55 causes the rotation of the carriage 24, which thus also reverses itself. On pulling forwardly the reversing lever 63, the three motions are reversed, namely, the forward sliding of carriage 26, followed by the swinging of carriage 25, and the rotation of carriage 24; although the sliding might occur last.

At the top side of the carriage 24 are a pair of spaced apart ears 65. In Fig. 3 these ears are seen but all parts above them are omitted. In Figure 2, the carriage 23 is shown as trunnioned on the ears 65 as fulcra, so as to permit a rocking or longitudinal tilting in the carriage 23 for the purpose of adjusting the wiper plates in that respect. The following devices are shown in effecting this adjustment. One of the ears 65 upstanding from carriage 24 has a rightward extension 66 within which is engaged a rotatable rod or screw 67. This, as shown in Figure 1, passes through a threaded block 68 swiveled upon the carriage 23, and thence upwardly to where at its upper end it has within convenient access a handle 69. By turning the handle the screw is rotated, and the block and rear end of the tilting carriage are lifted or dropped, as desired.

The top of the tilting carriage 23 forms a slideway in which longitudinally slides the carriage 22. This carriage is adapted to have a large movement to bring the entire wiping head from retracted position up to the shoe. It has to be brought forcibly into place so that the heel clamps will engage snugly in position about the shoe heel. For effecting this movement, the sliding carriage is provided with a toothed rack 71, and this is engaged by a corresponding gear 72 fulcrumed, for convenience, on the same axle with the carriage 23. A long lever or handle 73 may be manipulated, being thrown to the left to advance the wiping mechanism to the shoe. When in position the carriage may be locked as follows, to leave the operator's hands free for the wiping operations. On top of the carriage 23 is a toothed rack or ratchet 75, and this is engaged by a pawl 76 on the carriage 22 so that the pawl en-

gages the ratchet and locks the carriage in its most advanced position. A spring 77 tends to hold the pawl against the ratchet, and a handle 78 is used for unlocking when it is desired to retract the wiping mechanism after the shoe is completed.

The carriage 22 is formed with upwardly extending guides 80 and overlying confining plates 81 within which is mounted and slides vertically the carriage 21. The last mentioned carriage has flat bearing surfaces at the sides to co-operate with the vertical guides, and is shown in Figure 6 as provided with a hollow or shell-like casing or cylinder 82 for containing and tiltingly supporting the parts shown within the same. The up and down adjustment of the carriage 21 is effected by handle 84 provided at the top of a rotatable rod 85 which, at its lower end, is provided with a gear 86, which gear in turn engages gear 87 mounted at the foot of a threaded rod or screw 88 engaging a threaded boss 89 at the under side of the rising and falling carriage 21. By turning the handle 84 the wiping devices are thus adjustably raised or lowered as desired.

The carriage 20, which as a whole is cylindrical, may be rocked within the cylindrical portion 82 of the carriage 21 by means of the upstanding handle 90, secured to the forward part of the carriage. As best seen in Figs. 6 and 8, the carriage 20 is built up, having a top or cover section 91, a middle section 92 and a bottom section 93, shaped to give proper bearing surfaces for the tilting motion, and rigidly interconnected into a unitary member or carriage.

The cover section 91 extends leftward beyond the enclosing cylinder 82, as shown in Fig. 2, and the middle and bottom sections are similarly extended and shaped for the purposes and functions which are to be described. Generally speaking, the middle section 92 affords support for the wiper plate carrier and fittings, shown in Fig. 4, while the bottom section 93 of the carriage 20 forms the support for the heel engaging or clamping devices illustrated separately in Fig. 5.

Referring first to the heel clamping mechanism, the section or support 93, which is shown in plan view in Fig. 5, has rigidly secured to its left end an extension or head 94, which supports the clamping mechanism. Longitudinally slidable in the support 93 is a bar or carrier 95, which at its left extremity carriers part of the heel clamping devices. This carrier bar is centrally slotted at 96, and provided in said slot with a spring 97, tending to press the bar leftward. A pin 98 extends upwardly from the support 93 into the right end of the slot 96, as shown also in Fig. 2, this forming a stop limiting the leftward movement of the carrier 95, and also affording an abutment for the action of the spring 96.

The heel clamping devices comprise, first, the pad 16, which may be of leather or other flexible material, and is backed up and acted upon by a series of clamping blocks, 100 at the heel apex, and 101 at the sides. The apex clamp block 100 is mounted at the left end of the carrier 95 by a pivot allowing play, so that the block may adjust itself in its clamping action. At each side of the clamp pad 16 are three clamp blocks 101, each pivotally mounted on a clamp block carrier 102, which itself is universally pivoted upon a carrier lever 103, fulcrumed at 104 to the head 94, and having an extension 105 for co-operating with a cam 106 mounted on the carrier 95. This mechanism is duplicated at the two sides, and the cam 106 is double or wedge-like, so as to throw outwardly both lever arms 105, and thereby throw inwardly the side clamping blocks against the heel. Symmetrical adjustment of the side clamping parts may be effected, namely, by the right and left screw device 107, shown in Fig. 2, acting to adjustably shift the fulcra 104 toward and from each other.

The action of the heel clamping devices may be as follows. The operator by the handle 73 bodily thrusts the carriages 22, 21 and 20 toward the heel of the shoe. During this action the heel apex clamp block 100 is first brought to a stop by the forcible resistance of the shoe to its further advance. Thereupon the carrier or slide 95 becomes relatively stationary, whereas the support or section 93 with its head 94 continues to be pressed to the left, against the resistance of the spring 96. The cam arms 105 are thrust apart by the wedge cam 106, and thereby the side clamp blocks 101 are brought forcibly toward the shoe at the sides of the heel. When the parts are firmly and snugly in place, the operator may release the handle 73, inasmuch as the locking pawl and ratchet 75, 76 is arranged to hold the parts in their advanced position until after the wiping, when the same are intentionally released by the handle 78. In the meanwhile it will be understood that the wiper plates and mountings, on the middle section or support 92 of the carriage 20, have remained idle, except for the bodily advance of the carriage toward the shoe.

The section or support 92 for the wiper plates and fittings is provided at its left end, as best shown in Fig. 4, with an enlarged extension or head 108. This, like the head 94 of the bottom section 93, is a flat, plate-like structure, but preferably differs in having an upstanding edge flange or rim 109, within which lie the wiper plates 17, 17. The section or support 92 forms a slideway

containing a longitudinally sliding bar or wiper slide 110, which is the part that is advanced and retracted during the actual wiping movements. I will, therefore, first describe the connections for advancing and retracting this slide to operate the wiper plates.

As seen on Figs. 1 and 2, the upper part of the carriage 21 is provided with a rearwardly extending bracket 111, and pivoted to this bracket is a link 112 extending to the right. The wiping handle 18, which has already been mentioned, has its rear extremity pivoted to the link 112 and 113. At an intermediate point the lever or handle is provided with a swivel connection 114 to the rear or righthand extremity of the wiper slide 110. By now swinging the forward end of the handle to left and right, the wiper slide is advanced toward the shoe and retracted.

The reciprocating wiper slide 110 is arranged to effect both the advancing movements of the wiper plates toward the heel, and their in-swinging movements toward each other. In order to enable this to be effected, the plates 17 are themselves mounted, not on the wiper slide 110, but on a wiper carrier 116, which is shown in the form of a bar slidingly mounted within the wiper slide. The wiper carrier at its left end, as shown in Fig. 4, is provided with a pair of curved guides 117, engaging in slots 118, formed in the plates 17. These curved guides and slots are struck about the apex of the wiping contour as a center, so that the plates will swing about their own meeting point and thus preserve continuity of wiping edge, a feature already shown and covered in a prior patent of mine.

In order to effect the swinging movements of the plates toward each other, a pair of links 121 is shown, extending respectively from the two plates rightward to the ends of a cross piece 122, formed on or rigidly secured to the wiper slide 110.

The general plan of action is somewhat similar to that of the clamp blocks already mentioned. When the wiper slide 110 is shown to the left by the wiper handle 18, the plates and their carrier are first brought into wiping position and their leftward advance then ceases. The continued leftward movement of the wiper slide acts through the cross piece 122 and links 121 to cause the wiper plates themselves to swing toward each other. To control this action an important feature of the present mechanism is a stop 123, which causes the wiper carrier 116 to come to rest with the wiper plates in accurate wiping position. This means that the apex of the wiping contour is brought slightly over the shoe, so as to wipe the upper at that place, while the continuing movement of the handle swings the plates in at the sides, so as to complete and perfect the wiping action. I believe it to be new herein to so control the wiper plates that the swinging in or side wiping cannot be effected until the plates have advanced over the heel apex to the most advantageous position.

While the stop 123 might be provided in different places and forms, it is shown as an adjustable screw stop mounted at the extreme forward portion of the wiper carrier 116 in such position as to abut against the heel clamp block 100, as best seen in Fig. 2.

To preserve and restore the normal relation between the wiper slide and the wiper carrier, yet to permit the relative motion referred to, a yielding element or spring 125 is shown, mounted in a longitudinal recess in the carrier 116, its rear end contacting against an upstanding post or stop 126, extending from the slide 110 into the slot of the carrier. Figs. 2 and 4 show the parts in their normal position, whereas during the wiping action the stop or post 126 will move relatively to the left and play in the slot against the resistance of the spring. When the wiping is completed, the release of the handle 118 would permit the spring to thrust the post 126 and wiper slide back to the normal relative position shown in Figs. 2 and 4, but for the following device which serves to retain them slightly advanced, so as to leave the wiper plates slightly over the margins of the shoe at the sides at the completion of the wiping. This has certain advantages, including the temporary holding of the wiped edges in place, during the operation of tacking or otherwise securing the edges. Also the bodily retraction of the wiper devices tends to give a longitudinal smoothing action on the wiped material, somewhat improving the final result. To these ends a latch or trigger 127 is provided, pivoted upon the wiper carrier 116 in such position that the plate spring 128 will act to thrust the latch behind, that is, to the right side, of the post 126, when the latter has been advanced leftward during the wiping. This latch, therefore, acts to block the complete return of the post. In other words, the wiper slide and wiper carrier are prevented from taking their relative position shown, but the slide is held slightly relatively advanced, so as to hold the wiper plates over the edge of the material, as stated. This condition of the parts will be maintained until the wiper handle 18 is thrown completely to the right, when the tail 129 of the latch is struck by a pin or roller 130, standing downwardly from a slide 131, adjustably mounted by a screw 132 on the top portion or section 91 of the carriage 20 as seen in Fig. 7.

The wiping operation may take place somewhat as follows. When the handle 73 is thrown to bring the heel clamping mecha-

nism to the shoe, this brings the wiping mechanism approximately to position. Upon the actuation of the wiper handle 18, the wiper slide 110 is thrown to the left. It carries with it the wiper carrier 116 and the wiper plates. The stop pin 123, however, soon meets the block 100, stopping the advance of the wiper carrier and plates. The continued actuation of the wiper plates and handle 18 continues the advancing of the slide 118, and thereby throws the wiper plates toward each other, they having already been brought accurately to proper wiping position, slightly overlying the heel apex of the shoe. The spring 125 now tends to return the wiper slide to the right, and the operator allows this by letting up the pressure on the handle. When the post 126 contacts the latch 127, the handle may be released and the parts will remain in that position. The wiped margins will now be held by their extreme edges and the tacking or securing of the leather may be performed at leisure. When completed the handle 18 is thrust completely to the right, retracting the wiper slide and wiper carrier and tripping the latch to allow the wiper plates to separate to their normal position, and the parts are in readiness for a new operation.

It will thus be seen that I have described a wiping mechanism embodying the principles and attaining the advantages of the present invention. Since many features of design, arrangement, combination and detail may be variously modified without departing from the novel principles involved, no limitation to such features is intended except in so far as specified in the appended claims.

What is claimed is:

1. In a lasting machine for alternately wiping right and left shoes, a wiping mechanism, an underlying carriage bodily shiftable freely and quickly across the center line of the machine to reverse the machine for right and left shoes respectively, a transversely swingable carriage supported on said first mentioned carriage, the same quickly symmetrically reversible, and a rotatable carriage upon the swingable carriage, carrying the wiping mechanism and adapted to give quick symmetrical angular readjustment of the wiping mechanism for right and left shoes respectively.

2. In a lasting machine, a wiping mechanism, a carriage bodily slidable across the center line of the machine, a carriage swingable across said slidable carriage, a carriage rotatable on said swingable carriage, and a single means for effecting said carriage movement to reverse the machine for right and left shoes.

3. In a lasting machine, a wiping mechanism, a carriage rectilinearly slidable across the center line of the machine, and a carriage swingable across said slidable carriage, and a single means for effecting said carriage movements to reverse the machine for right and left shoes.

4. In a lasting machine, a wiping mechanism, a carriage rectilinearly slidable across the center line of the machine, a carriage rotatable on said swingable carriage, and a single means for effecting said carriage movements to reverse the machine for right and left shoes.

5. In a lasting machine, a wiping mechanism, a carriage rectilinearly slidable across the center line of the machine, a carriage swingable across said slidable carriage, and a single means for effecting said carriage movements to reverse the machine for right and left shoes, consisting of a lever connected to said swinging carriage.

6. In a lasting machine, a wiping mechanism, a carriage slidable across the center line of the machine, a carriage swingable across said slidable carriage, a carriage rotatable on said swingable carriage, and a single means for effecting said carriage movements to reverse the machine for right and left shoes, consisting of a lever connected to said swinging carriage.

7. In a lasting machine, wiping mechanism, a carriage swingable across the center line of the machine, a carriage rotatable on said carriage, and means actuated by the swinging of said swingable carriage for causing said rotatable carriage to rotate.

8. In a lasting machine, wiping mechanism, an underlying support, a carriage on said support swingable across the center line of the machine, a carriage rotatable on said carriage, and means for causing said rotatable carriage to rotate, consisting in a toothed gear (56) on the swingable carriage engaging a toothed member (58) mounted on said support and a toothed member (54) on said rotatable carriage engaging said gear.

9. In a lasting machine, wiping mechanism, an underlying support, a carriage on said support swingable across the center line of the machine, a carriage rotatable on said carriage, and means for causing said rotatable carriage to rotate, consisting in a toothed gear (56) on the swingable carriage engaging a toothed member (58) mounted on said support and a toothed member (54) on said rotatable carriage engaging said gear, and means for varying the action of said rotating means through said independently mounted toothed member.

10. In a lasting machine, a carriage movable toward the shoe, shoe contacting means on said carriage, a stop means positioned by the position of said contacting means, wiper plates and a carrier therefor, adapted to be stopped by said stop means when the plates are in wiping position, and means for actuating said wiper plates in such position.

11. In a lasting machine, wiper plates, a carrier for advancing them to the shoe, means positioned by the shoe itself for stopping said carrier in position with the wiper plates overlapping the shoe edge, and means for then actuating said plates.

12. In a lasting machine, a wiper plate carrier, a slide for advancing said carrier, yielding means between slide and carrier, means to stop the carrier in wiping position, means whereby continued advance of the slide against said yielding means actuates the wiper plates, and a latch device for abbreviating the return movement of said slide.

13. In a lasting machine, a wiper plate carrier, a slide for advancing said carrier, yielding means between slide and carrier, means to stop the carrier in wiping position, means whereby continued advance of the slide against said yielding means actuates the wiper plates, a latch device for abbreviating the return movement of said slide, and means for unlatching said latch device and retracting slide, carrier and all.

14. In a lasting machine for alternately wiping right and left shoes, a wiping mechanism, a carriage therefor transversely shiftable bodily rectilinearly across the center line, and symmetrically opposite stops for determining the effective opposite positions of said carriage for right and left shoes.

15. Lasting machine as in claim 14 and wherein are means for locking said carriage in each of its effective positions, and means for releasing said locking means.

16. Lasting machine as in claim 1 and wherein are symmetrically opposite stops to determine the effective positions of said carriages for right and left shoes.

17. In a lasting machine, wiper plates, a shoe clamp means, a carriage supporting both thereof, means for bodily moving the carriage toward the shoe to cause the clamp to contact the shoe, means to lock the carriage there, a wiper plate carrier and a wiper plate actuator both relatively movable on said carriage toward and from the shoe, a yieldable connection between said carrier and actuator, stop means for stopping the advance of the carrier with the plates in wiping position, and means whereby continued advance of the actuator throws the wiper plates toward each other.

18. In a lasting machine, wiper plates, a mechanism for advancing them bodily to the shoe, mechanism for giving them wiping movements inward and outward over the shoe margins, and a device for locking said plates against complete outward movement before their bodily retraction from the shoe.

In testimony whereof, I have affixed my signature hereto.

ANGELO PERRI.