

J. A. BEAN.
SHOE BLACKING AND POLISHING MACHINE.
APPLICATION FILED DEC. 9, 1910.

1,030,702.

Patented June 25, 1912.

4 SHEETS-SHEET 1.

Fig. 1.

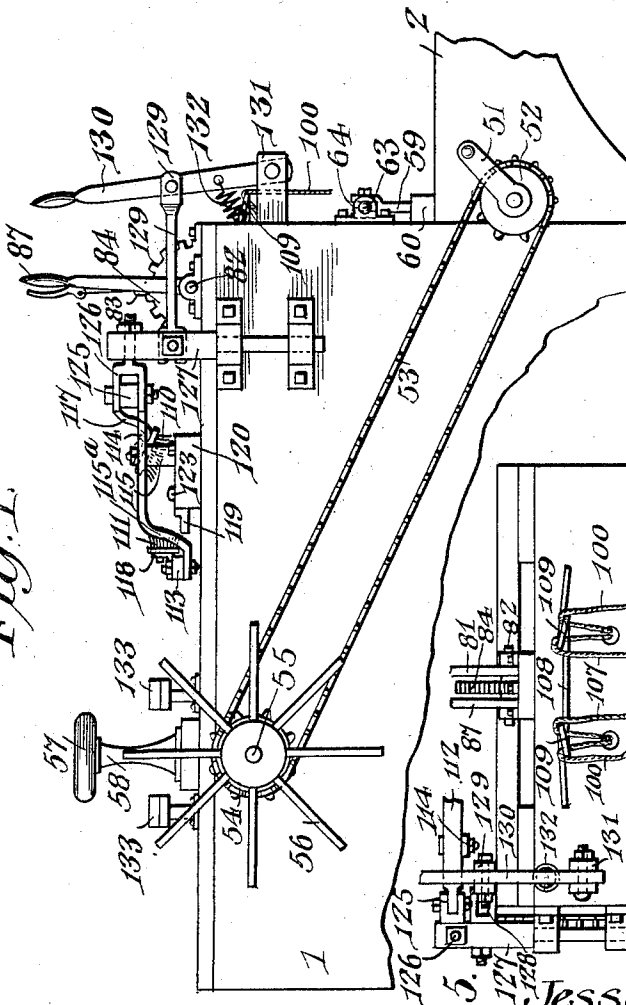


Fig. 8.

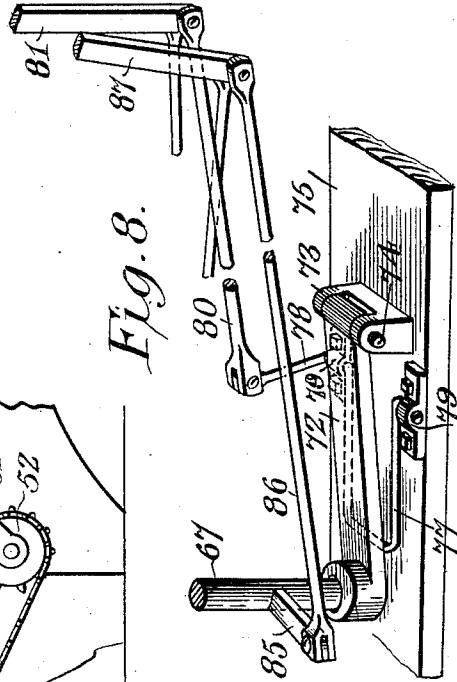
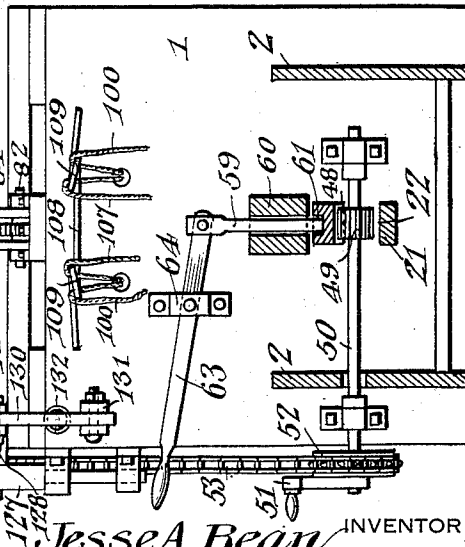


Fig. 5.



WITNESSES

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4 SHEETS—SHEET 2.

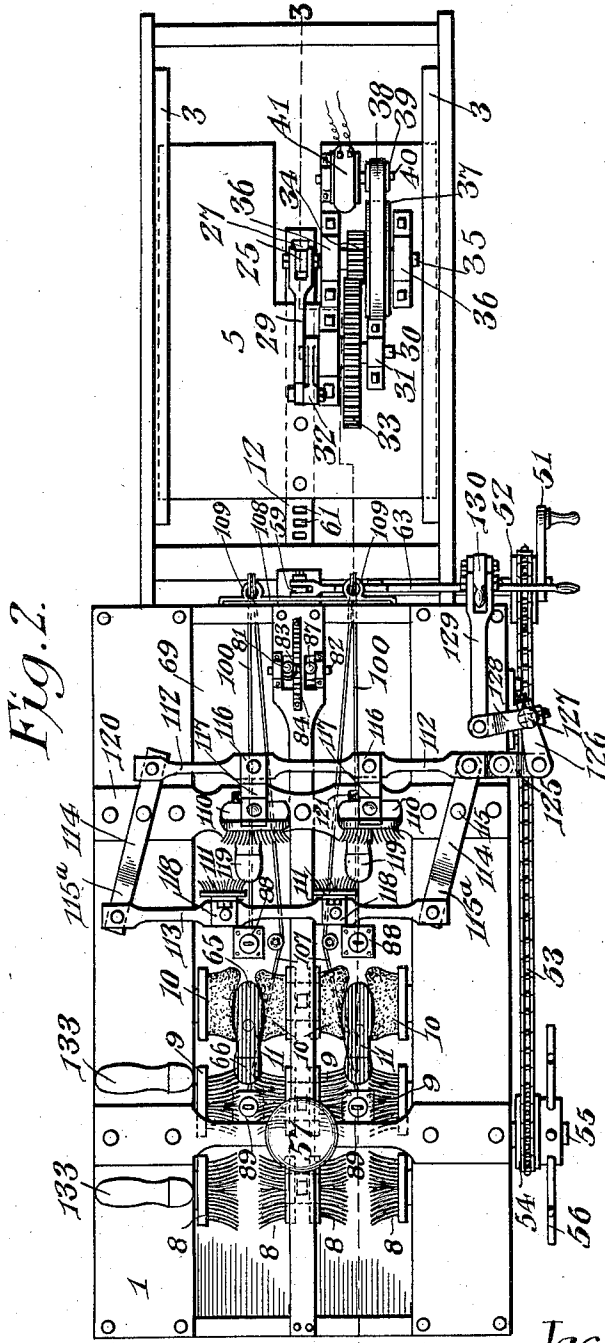


Fig. 2.

WITNESSES

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4 SHEETS-SHEET 3.

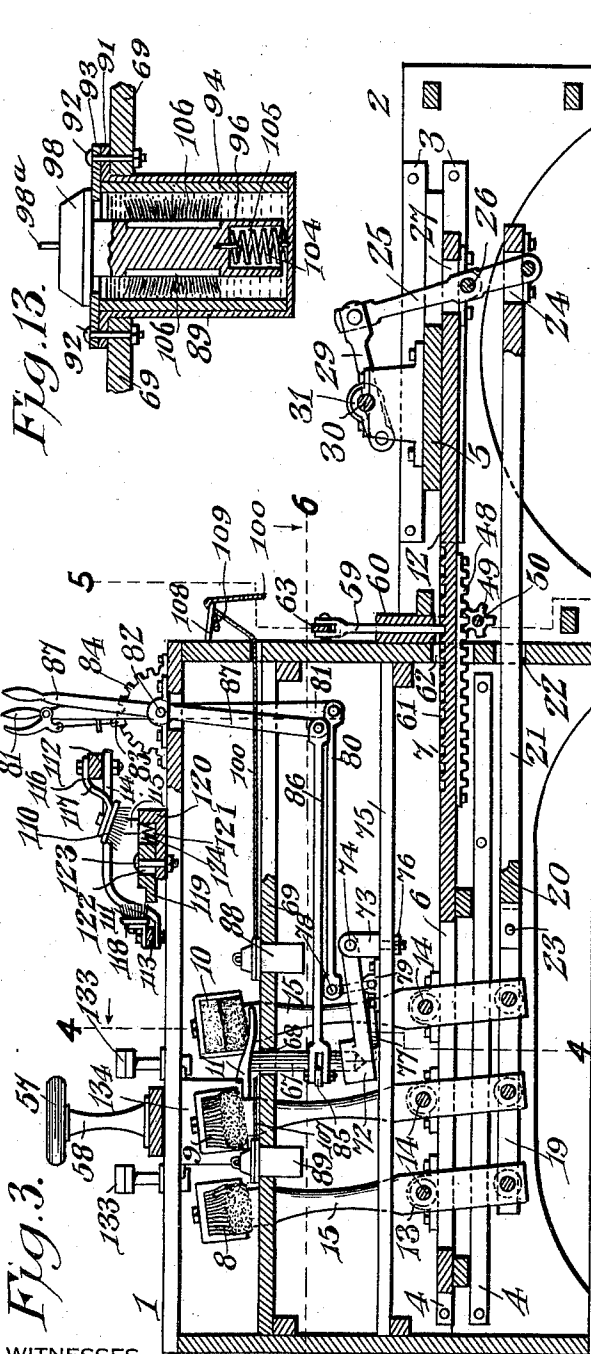


Fig. 3.

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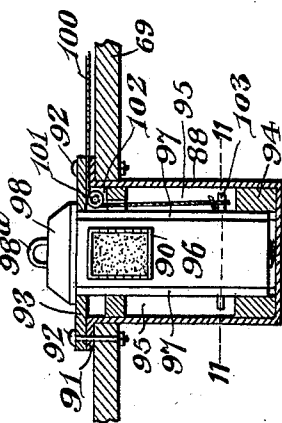
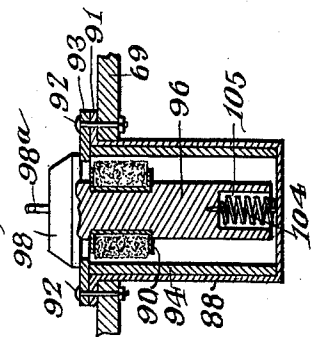
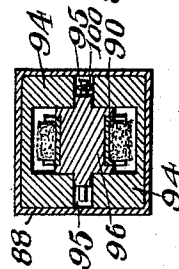
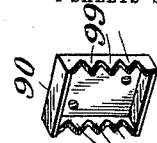
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Fig. 12.

Fig. 11.

Fig. 10.

Fig. 9.



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4 SHEETS—SHEET 4.

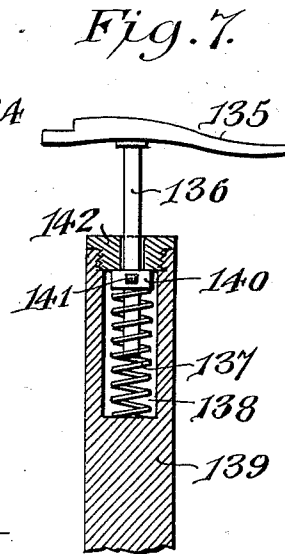
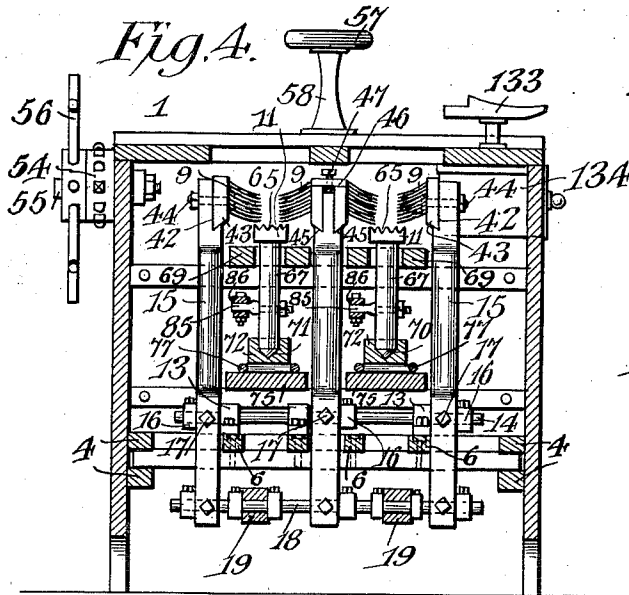
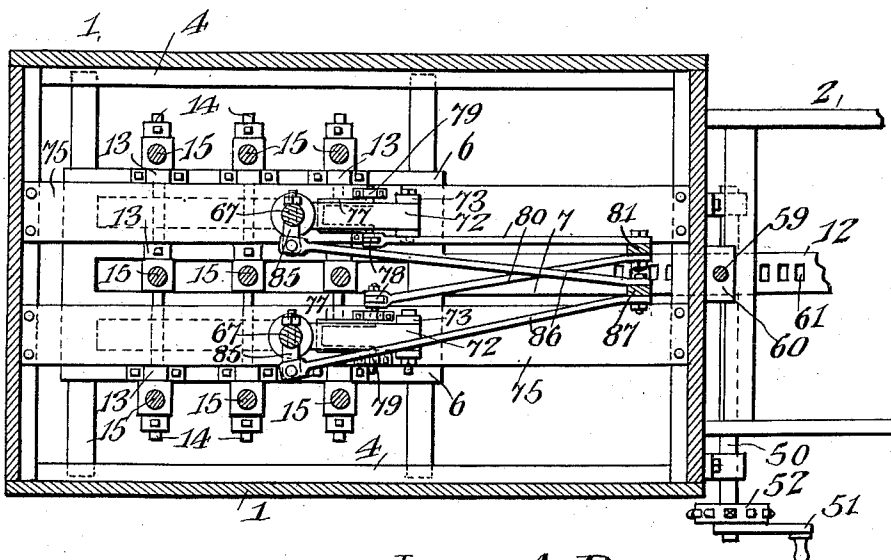


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

JESSE ALFONSO BEAN, OF TEXARKANA, TEXAS.

SHOE BLACKING AND POLISHING MACHINE.

1,030,702.

Specification of Letters Patent.

Patented June 25, 1912.

Application filed December 9, 1910. Serial No. 596,549.

To all whom it may concern:

Be it known that I, JESSE A. BEAN, a citizen of the United States, residing at Texarkana, in the county of Bowie and State of Texas, have invented a new and useful Shoe Blacking and Polishing Machine, of which the following is a specification.

The invention relates to improvements in shoe blacking and polishing machines.

10 The object of the present invention is to improve the construction of shoe blacking and polishing machines, and to provide a simple efficient and comparatively inexpensive machine, adapted to be operated by
15 any suitable power and equipped with a plurality of longitudinally reciprocable brushes, capable, without stopping the machine, of adjustment to present them successively in position to operate upon the
20 shoes for cleaning the same, applying blacking thereto and finally polishing the shoes.

A further object of the invention is to provide a shoe blacking and polishing machine having foot rests or supports, capable
25 of vertical and lateral adjustment to raise and lower the shoes and to arrange them either in parallelism with the reciprocable brushes, or at an angle thereto, so that the brushes may operate effectively on all portions of the shoes.

30 With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted
35 to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a side elevation of a shoe blacking and polishing machine, constructed in accordance with this invention. Fig. 2 is a plan view of the same. Fig. 3 is a longitudinal sectional view on the line 3—3 of Fig. 2. Fig. 4 is a transverse sectional view on the line 4—4
45 of Fig. 3. Fig. 5 is a similar view on the line 5—5 of Fig. 3. Fig. 6 is a horizontal sectional view on the line 6—6 of Fig. 3. Fig. 7 is a detail vertical sectional view, illustrating another form of the support for the main foot rest. Fig. 8 is a detail perspective view of the means for adjusting

the main foot rests. Figs. 9 and 10 are vertical sectional views of one of the front paste receptacles. Fig. 11 is a horizontal sectional view on the line 11—11 of Fig. 9. Fig. 12 is a detail perspective view of one of the paste carrying devices. Fig. 13 is a vertical sectional view of one of the blacking receptacles.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

In the accompanying drawings in which is illustrated the preferred form of the invention, 1 designates a casing preferably in the form of a stand open at the top, and while provision is made for the accommodation of one person only, it will be readily apparent that the shoe blacking and polishing machine may be constructed of any desired size and the mechanism may be duplicated to accommodate any desired number of persons. The casing, which may be constructed of any suitable material, is provided with a front extension 2, and it has front and rear horizontal guides 3 and 4, located at opposite sides of the casing and receiving front and rear portions 5 and 6 of a longitudinally adjustable or shiftable support 7, which carries the longitudinally movable reciprocable brushes 8, 9 and 10, and the mechanism for actuating the same, whereby the brushes may be adjusted with respect to main foot rests 11 to present the different brushes to the shoes for the purpose of cleaning the same, applying blacking or paste thereto and finally polishing the shoes. The front extension 2 of the casing is of a width less than the casing, and the front and rear guides 3 and 4 preferably consist of upper and lower longitudinal bars, spaced apart to form grooves or ways to receive the front and rear portions 5 and 6 of the adjustable support. The front portion 5 of the support consists of a platform, and is connected by a central longitudinal bar or portion 12 with the rear portion 6, which is preferably in the form of an open frame, provided with suitable bearings 13 for the reception of transverse shafts 14.

Mounted upon the transverse shafts are upright brush holding levers 15, provided at points intermediate of their ends with openings for the reception of transverse shafts 14 and fulcrumed by the same to form upper and lower arms. The brush carrying levers are maintained in proper position by adjustable

set collars 16, and may be clamped to the transverse shafts by set screws 17. The collars are arranged at the sides of the brush carrying levers and are provided with set screws for engaging the transverse shafts. The lower arms of the brush carrying levers are provided with transversely alined openings for the reception of transverse rods 18, and they are connected by spaced links 19 with the rear end 20 of a longitudinal connecting bar 21, extending through an opening 22 in the front wall of the casing into the front extension thereof. The rear end of the connecting bar, which is enlarged, is forked or bifurcated and is pivoted to the links by a transverse bolt 23. The front end of the connecting bar 21 is provided with a slot 24 for the reception of the lower arm of an upright actuating lever 25, fulcrumed at an intermediate portion to the platform 5 by a transverse pivot 26, and extending through an opening 27 of the platform. The pivot 26 is located at the lower face of the front portion or platform 5 of the support and is maintained in suitable bearings thereof, and the lever 25 extends above and below the said platform 5. The upper arm of the lever 25 is connected by a pitman 29 with a crank shaft 30, journaled in spaced bearings 31, and equipped at its inner end with a crank element 32 to which the pitman 29 is connected. The crank shaft 30 carries a gear wheel 33, keyed or otherwise secured to the crank shaft 30 and arranged between the spaced bearings 31 and meshing with a pinion 34 of a counter-shaft 35. The counter-shaft 35, which is also journaled in spaced bearings 36, has keyed or otherwise secured to it a pulley 37, which is connected by a belt 38 with a relatively small pulley 39, mounted on the shaft 40 of an electric motor 41, but any other suitable motive power may be employed for operating the brush carrying levers. The gearing for connecting the motor with the crank shaft may be varied to secure the desired speed in the reciprocation of the brushes 8, 9 and 10. When the motor energizing circuit is closed, rotary motion is communicated to the crank shaft, which, through its connections with the brush carrying levers, oscillates the latter and reciprocates the brushes, which are mounted at the upper ends of the brush holding levers. The brushes 8, 9 and 10 are arranged in pairs, and three sets of brush holding levers are employed, a pair of brushes being mounted on each of the intermediate brush holding levers. The outer brush holding levers are provided at the inner faces of their upper ends with recesses 42, having undercut lower end walls and receiving the lower beveled edges 43 of the outer brushes 8, 9 and 10, which are preferably secured to the outer brush holding levers by horizontal

bolts 44, or other suitable fastening devices. The intermediate levers are provided at both their side faces with recesses 45, which receive the inner brushes 8, 9 and 10. The inner brushes, which are arranged in pairs, have beveled lower edges to fit the recesses 45, and are connected by top portions or pieces 46, which are secured to the intermediate brush holding levers by vertical screws 47, piercing the top portions or pieces and engaging threaded openings in the upper ends of the intermediate brush carrying levers.

The brushes 8 and 9 are preferably equipped with bristles, and the brushes 10 are provided with pads of flannel, felt, or other polishing or buffing material, but they may be provided with bristles similar to the brushes 8 and 9 if desired. The bristles of the brushes 8 and 9 are set at an inclination and extend downwardly and inwardly so as to engage the sides and project over the top of the shoes supported by the foot rests 11. The brushes 8, 9 and 10 are spaced apart to operate at opposite sides of the foot rests, and through the longitudinal adjustment of the support 7, any one of the sets of brushes 8, 9 and 10 may be arranged at the sides of the foot rests in position for operating on the shoes, and this adjustment of the brushes may be effected without stopping the electric motor, or other means that may be employed for actuating the brush holding levers.

The longitudinal adjustment of the support is effected by means of a rack 48 and a pinion 49. The rack is suitably secured to the lower face of the longitudinal connecting bar or portion of the support, but the teeth may be formed integral therewith if desired. The pinion 49, which meshes with the rack 48, is mounted on a transverse shaft 50, journaled in suitable bearings of the extension of the frame and extending through the space between the support and the connecting bar 21, and having one end projecting beyond the side of the extension 2 and equipped with a crank handle 51 by means of which the shaft 50 may be rotated for moving the support 7 backwardly and forwardly. The shaft 50 is also equipped at its outer end with a sprocket wheel 52, which is connected by a sprocket chain 53 with a sprocket wheel 54, mounted on a stub shaft 55 and connected with a hand wheel 56. The hand wheel 56 is located at one side of the casing and is in convenient reach of a seat 57. The seat 57, which is supported by an upright standard 58, is arranged upon the top of the casing centrally of the space between the foot rests 11 and in rear of the same, so that a person sitting upon the seat will be in convenient position for placing his feet upon the foot rests 11. The hand wheel is provided for the purpose of enabling an operator or demonstrator to adjust the sup-

port while seated upon the stand, so that the machine may be demonstrated for advertising or other purposes without the operator leaving his seat. The machine is also
 5 equipped with locking mechanism, consisting of a vertically movable bolt 59, guided in a casing or housing 60 and located above connecting bar or portion of the longitudinally adjustable support and engaging with
 10 recesses 61 thereof. The recesses 61, which are arranged in a longitudinal series, are formed in the upper faces of the said connecting bar or portion, which extends through an opening 62 in the front wall of
 15 the casing 1. The housing or casing 60 for the bolt 59 is suitably secured to the outer face of the front wall of the casing at the top of the opening 62, and the bolt 59 is connected to the inner arm of a transversely
 20 disposed operating lever 63, fulcrumed at an intermediate point of its length in a bracket or support 64, which is secured to the outer face of the front wall of the casing 1. The outer end of the lever 63 is
 25 shaped into a grip or handle, and any suitable means, such as a pin or key may be provided for holding the latch bolt in an elevated position, while the support is being adjusted by the hand wheel.

30 The main foot rests, which are shaped to conform to the configuration of a shoe, are provided at their rear ends with heel receiving recesses and have front and rear longitudinally disposed grooves 65 and 66, forming
 35 longitudinal ribs and adapted to prevent the feet from slipping laterally. The foot rests 11 are suitably secured at a point intermediate of their ends to the upper ends of upright shafts or pivots 67, extending
 40 through and guided in openings 68 of spaced upper shelves 69 and having lower tapered ends 70, stepped in sockets 71 of arms 72, extending longitudinally in advance of the upright pivots or shafts 67, and pivoted at their
 45 front ends between spaced upwardly projecting ears of supports 73 by a transverse pin or pivot 74, which pierces the ears of the supports 73 and the front ends of the arms 72. The supports, which are mounted on
 50 spaced lower shelves 75, are preferably provided with depending threaded shanks, piercing the shelves 75 and secured to the same by nuts 76, which engage the lower faces of the shelves 75, but bolts or any other
 55 suitable means may be employed for securing the supports 73 upon the lower shelves. The lower shelves, which may be braced in any suitable manner, are supported at their ends by horizontal bars or cleats to which
 60 they are suitably secured. The arms 72 are adapted to swing upwardly and downwardly on their pivots 74 to permit the foot rests 11 to be raised and lowered, and the upright pivots 67 are capable of rotary
 65 movement in the sockets of the arms to

permit the foot rests to be turned laterally to expose the shoes completely to the action of the opposed brushes 8, 9 and 10. The sockets 71 are enlarged or flared upwardly
 70 to permit the arms 72 to be arranged at slightly different angles to the shafts or pivots incident to the vertical adjustment of the foot rests.

The vertical adjustment of the foot rests is effected by means of bell cranks or levers, consisting of loops 77 and arms 78, arranged
 75 at substantially right angles to the loops, which extend beneath the arms 72, as clearly illustrated in Fig. 8 of the drawings. The bell cranks or levers are provided at opposite
 80 sides of the loops with bearing portions, which are journaled in suitable bearings 79, and the arms 78, which extend upwardly, are connected by rods 80 with an upright operating lever 81. The upright operating
 85 lever 81 is fulcrumed at a point intermediate of its ends at the top of the case on a suitable pivot 82, which is mounted in spaced bearings. The operating lever 81 extends through an opening in the top of the case,
 90 and it is equipped with a dog or detent 83, arranged to engage a toothed segment 84 and controlled by a suitable latch lever, mounted on the operating lever 81 at the
 95 upper handle portion thereof, as clearly illustrated in Fig. 3 of the drawings. When the upper arm of the operating lever 81 is moved backwardly or forwardly, the bell cranks or levers with which they are connected are oscillated and the arms 72 raised
 100 and lowered, carrying with them the foot rests 11. In practice the foot rests will be locked in an elevated position above the plane of the brushes 8, 9 and 10, and when a person places his foot on the foot rests, the
 105 latter will be lowered by the operator to the proper position to be operated on by the brushes. The foot rests are then locked in such adjustment.

The shafts or pivots upon which the foot
 110 rests are mounted are provided with horizontally projecting arms 85, connected by rods 86 and an operating lever 87, mounted on the pivot 82 and extending through an
 115 opening in the top of the frame and projecting upwardly and downwardly from the said pivot and having its lower arm pivoted to the front ends of the rods 86, which extend rearwardly from the operating lever to the arms of the upright pivots 67. Both
 120 arms 85 preferably extend from the right hand side of the pivots, so that when the operating lever is oscillated, the foot rests will be simultaneously moved laterally in the same direction. A rearward movement of
 125 the upper portion of the lever 87 operates to swing the front portions of the foot rests to the left, and a forward movement of the upper portion of the operating lever moves the foot rests in the opposite direction. By 130

this construction the toe portions and the heel portions of the shoes are thoroughly subjected to the action of the brushes for cleaning the shoes, applying blacking or
5 paste to the same and for polishing the shoes.

Supported by the upper shelves in suitable openings thereof are front and rear receptacles 88 and 89, arranged in alignment with the foot rests 11 and designed for holding paste and liquid blacking, or other
10 suitable polishing material, and adapted to supply the same to opposite brushes between which the blacking applying means is arranged when elevated, as hereinafter described. The front receptacles 88 are preferably employed for supplying paste for
15 polishing the shoes after the same have been cleaned and blacked, but they may contain liquid blacking or other suitable material and be equipped with brushes, or other suitable means for bringing up the liquid blacking instead of with paste holders 90. The
20 said receptacles 88, which are preferably rectangular in cross section, are constructed of sheet metal, or other suitable material, and are provided at their tops with horizontal attaching flanges 91, supporting the receptacles 88 in openings in the top shelves
25 and secured to the same by bolts 92, or other suitable fastening devices, which also fasten top plates 93 in position over the receptacles. Within the receptacle 88 is secured a rectangular shell or lining 94, provided with
30 opposite vertical guide grooves 95 and forming guides for a vertically movable carrier 96 to which the paste carrying devices 90 are secured. The vertically movable carriers 96, which have opposite flat faces to receive the
35 paste holders 90, are provided at their side edges with vertical ribs 97, which are guided in the grooves 95 of the shell or lining 94. The upper end of the carrier 96 extends through an opening in the top plate 93 and
40 is provided with a head 98, which engages the upper face of the top plate when the carrier is in its lowermost position and forms a closure for the receptacle.

The paste holders, which are preferably
50 constructed of sheet metal, consist of shallow metallic boxes or casings secured by screws, or other suitable fastening means to the side faces of the carrier 96 in recesses thereof, and open at the front to expose the
55 paste to the bristles of the intermediate brushes 9, and provided in their vertical side walls with recesses forming rounded spaced projecting portions 99, which permit the passage of the bristles through the paste carrying devices without injury to the brushes. The front carriers 96 are elevated by means
60 of cords 100, or other suitable flexible connections, extending rearwardly from the front of the casing through openings in the front walls thereof and passing over pulleys

101, mounted in recesses 102 in the shells or linings, as clearly shown in Fig. 9 of the drawings. The rear ends of the cords 100 extend downwardly from the pulleys 101 and are connected to pins 103 or projections, extending from the ribs 97 and preferably located at the opposite edges of the carriers to enable the cords to be attached at either side edge thereof. When the cords 100 are pulled forwardly or outwardly, the carriers 96 are raised and coiled springs 104 may be employed for returning the carriers to their closed position. The heads 98 of the carriers are also provided with eyes 98^a for enabling a cord, or any other suitable means to be connected with the carriers for lifting them from the top. The coiled springs 104, which are arranged in recesses or sockets 105 in the lower ends of the carriers 96, are secured at their upper ends to the upper walls of the socket 105 and at their lower ends to the bottom of the receptacles 88.

The rear receptacles 89 are constructed the same as the front receptacles with the exception that they are equipped with brushes 106 for conveying liquid blacking to the brushes 9. The vertically movable carriers of the rear receptacles are operated by cords 107 extending through the openings in the front walls of the casing, which is equipped at its outer face with a suitable bracket 108, having loops or eyes 109 forming guides for and receiving the outer portions of the operating cords.

The machine is equipped at one side of the casing with fixed laterally disposed foot rests 133, designed to be used for supporting the feet while tan or other polish not contained within the receptacles is being applied to the shoes by the operator. A suitable drawer 134 is mounted in the casing below the laterally disposed foot rest for containing various materials.

The operation of the device is as follows:—The feet are placed upon the main foot rests 11 and the latter are lowered to arrange the shoes in proper position to be operated on by the brushes 8, 9 and 10. The longitudinally adjustable support is then moved backwardly or forwardly to arrange the rear brushes 8 in position to operate on the shoes for cleaning the same. During this operation and the subsequent operations, the foot rests 11 are adapted to be moved laterally on their pivots to expose all portions of the shoes to the action of the brushes. After the shoes have been properly cleaned, the longitudinal support is adjusted rearwardly to bring the intermediate brushes in position for acting on the shoes, and the holders of the rear receptacles are raised to supply the intermediate brushes with liquid blacking, which is applied to the shoes through the reciprocation of the intermediate brushes. When the shoes have been partially polished

by the intermediate brushes, paste is applied to them by elevating the carriers of the front receptacles and permitting the intermediate brushes to move across the paste holders.

5 After the paste has been thoroughly rubbed on the shoes, the longitudinal support is adjusted to bring the front buffing or polishing brushes in position to operate on the shoes, which are thereby highly polished.

10 Although only three sets of side brushes are shown in the drawings, the number of sets may be varied to adapt the machine for the use of various kinds of polishing material, and special dauber brushes may be employed solely for applying the liquid black-
15 ing and the paste or other polishing material to the shoes, so that the other brushes will be used for cleaning or polishing the shoes.

20 In some machines it may be desirable to permit the user to adjust the main foot rests so as to project all portions of the shoes to the action of the brushes, and in Fig. 14 of the drawings, the foot rest 135 is mounted
25 upon a vertically movable stem 136, yieldingly supported by a coiled spring 137, arranged within an opening or socket 138 of a support 139. The stem 136 is equipped with an adjustable collar 140, seated upon the
30 upper end of the spring 137 and provided with a set screw 141 for adjusting the foot rests vertically with respect to the spring. The support is provided with a suitable cap or closure 142, consisting of a screw plug
35 engaging interior threads of the opening or socket 138 and having a central opening through which the stem 136 passes. Ball bearings, or any other suitable antifriction devices may be employed for mounting the
40 longitudinally adjustable support, the front foot rests, or any other part of the machine for reducing the friction to a minimum.

Having thus fully described my invention, what I claim as new and desire to secure by
45 Letters Patent, is:—

1. An apparatus of the class described including a foot rest, separate sets of simultaneously reciprocable brushes arranged in alinement, and means for adjusting the
50 series to present any set of brushes to the foot rest.

2. An apparatus of the class described including a foot rest, separate sets of simultaneously reciprocable brushes arranged
55 in alinement, a support common to all of the brushes, and means for adjusting the support to present any set of brushes to the foot rest.

3. An apparatus of the class described including a casing, a foot rest arranged in the casing, a plurality of brushes arranged in longitudinal alinement and disposed in co-
60 operative relation with the foot rest, a common adjustable carrier operating in the casing below the plane of the brushes for mov-

ing the same to different positions, and actuating means connected with all the brushes for operating the same.

4. An apparatus of the class described including a relatively fixed foot rest, separate
70 sets of brushes arranged in alinement, the brushes of each set being spaced apart to operate at opposite sides of the foot rest, means for simultaneously adjusting the
75 brushes to present any set to the foot rest, and means for actuating the brushes.

5. An apparatus of the class described including a relatively fixed foot rest, separate
80 sets of brushes arranged in alinement, the brushes of each set being spaced apart to operate at opposite sides of the foot rest, means for simultaneously adjusting the
85 brushes to present any set to the foot rest, and means for simultaneously reciprocating the brushes.

6. An apparatus of the class described including a foot rest, separate sets of brushes
85 arranged in longitudinal alinement, a support common to all of the brushes, and means for adjusting the support to present
90 any set of brushes to the foot rest.

7. An apparatus of the class described including a foot rest, a support, a series of reciprocable shoe brushes adapted to be
95 successively presented at the foot rest, a plurality of oscillatory levers mounted upon the support and carrying the brushes, and means for oscillating the levers.

8. An apparatus of the class described including a casing, a foot rest mounted within
100 the casing, a shiftable support having portions arranged interiorly and exteriorly of the casing, a plurality of oscillatory levers located within the casing and mounted upon
105 and extending above and below the support, brushes carried by the upper portions of the levers, a motor arranged exteriorly of the casing and mounted upon the support, and
110 means for connecting the lower portions of the levers with the motor.

9. An apparatus of the class described including a foot rest, a support adjustable with
115 respect to the foot rest, a plurality of reciprocable brushes carried by the support, a motor mounted on the support and operatively connected with the brushes for reciprocating the same, a rack also carried by
120 the support, a gear meshing with the rack for actuating the support to present any of the brushes to the foot rest, and means for rotating the gear.

10. An apparatus of the class described including a foot rest, a support adjustable
125 with respect to the foot rest and provided at its upper face with a plurality of recesses and having a rack at its lower face, a series of reciprocable brushes carried by the support, means mounted on the support for actuating the brushes, a pinion located
130 below the support and meshing with the

rack for adjusting the support to present any of the brushes to the foot rest, operating means for rotating the pinion, and a latch located above the support and arranged to engage with the said recesses for locking the support in its adjustment.

11. An apparatus of the class described including a foot rest, upright levers mounted in pairs on opposite sides of the foot rest, inwardly projecting opposed brushes carried by the levers and arranged in sets and operating at opposite sides of the foot rest, means for adjusting the levers to present any set of brushes at the foot rest, an actuating lever, and connections between the actuating lever and the brush carrying levers.

12. An apparatus of the class described including opposite reciprocable brushes, a pivotally mounted foot rest arranged between the brushes, and operating mechanism connected with the foot rest for swinging the same laterally with respect to the brushes.

13. An apparatus of the class described including spaced reciprocable brushes, a foot rest pivotally mounted between its ends between the brushes and arranged to oscillate horizontally to arrange it either in parallelism with the brushes or at an angle to the same.

14. An apparatus of the class described including spaced reciprocable brushes disposed in pairs, pivotally mounted foot rests located between the brushes and arranged to swing horizontally, and operating mechanism connected with the foot rests for moving the same in unison.

15. An apparatus of the class described including spaced reciprocable brushes, a foot rest located between the brushes and provided with a vertical pivot having an arm, and an operating lever connected with the arm of the pivot for oscillating the foot rest.

16. An apparatus of the class described including spaced reciprocable brushes disposed in pairs, foot rests arranged in the spaces between the brushes and provided with vertical pivots having arms extending in the same direction, a lever, and connections between the lever and the arms for simultaneously moving the foot rests in the same direction.

17. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged between the brushes and having a vertical pivot, operating mechanism connected with the pivot for rotating the same to swing the foot rest horizontally, and means for raising and lowering the pivot.

18. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged between the brushes and having a vertical pivot, operating mechanism

connected with the pivot for rotating the same to swing the foot rest horizontally, means for raising and lowering the pivot, and a locking device for holding the latter means in its adjustment.

19. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged between the brushes and having a vertical pivot, a pivotally mounted arm having a bearing receiving the foot rest, and operating mechanism connected with the arm for adjusting the foot rest.

20. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged between the brushes and having a vertical pivot, a pivotally mounted arm arranged to swing upwardly and downwardly and provided with a bearing receiving the pivot of the foot rest, operating mechanism connected with the arm for raising and lowering the same, and separate operating mechanism connected with the pivot of the foot rest for rotating the said pivot.

21. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged between the brushes and having a vertical pivot, a pivotally mounted arm arranged to swing upwardly and downwardly and provided with a bearing receiving the pivot of the foot rest, a bell crank loosely receiving the pivoted arm, a lever connected with the bell crank for oscillating the same, and operating mechanism connected with the pivot of the foot rest for turning the latter.

22. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged between the brushes and having a vertical pivot provided with a projecting arm, a pivotally mounted arm arranged to swing upwardly and downwardly and provided with a bearing receiving the pivot of the foot rest, a bell crank having a loop loosely supporting the pivoted arm and journaled at opposite sides thereof, and separate operating levers connected with the bell crank and with the projecting arm of the pivot.

23. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged between the brushes and having a vertical pivot provided with a projecting arm, a pivoted arm arranged to swing upwardly and downwardly and having a socket receiving the lower end of the pivot of the foot rest, a bell crank loosely receiving the pivoted arm, separate operating levers connected, respectively, with the bell crank and with the projecting arm of the pivot, and a locking device for the lever, which is connected with the bell crank.

24. An apparatus of the class described including a pair of foot rests provided with vertical pivots and having projecting arms, spaced reciprocable brushes located at

opposite sides of the foot rests, pivotally mounted arms arranged to swing upwardly and downwardly and provided with bearings receiving the lower ends of the vertical pivots, bell cranks arranged to actuate the pivoted arms, a lever connected with each of the bell cranks for simultaneously raising and lowering the foot rests, and a separate lever connected with each of the projecting arms of the pivots for simultaneously turning the foot rests.

25. An apparatus of the class described including a foot rest, separate sets of brushes arranged in longitudinal alinement, blacking supplying means movable into and out of the path of the brushes, and means for adjusting the brushes to present any set to the foot rest and to present one of the sets to the blacking supplying means when the latter is arranged in the path of the brushes.

26. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged in the space between the brushes, blacking applying means located at the space between the brushes in advance of the foot rest and comprising a receptacle, a carrier movable upwardly and downwardly in the receptacle and provided at opposite sides with means for applying material to the brushes, a guide arranged at the upper portion of the receptacle, and a flexible connection connected with the carrier at the lower portion thereof and extending upwardly therefrom to the guiding means and adapted to be pulled to elevate the carrier into position to be engaged by the brushes.

27. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged in the space between the brushes, and blacking applying means located at the space between the brushes in advance of the foot rest and comprising a receptacle, a shell or lining mounted within the receptacle and slidable in opposite

guides, a vertically movable carrier having ribs slidable in the said guides, means located at opposite sides of and mounted on the carrier for applying material to the brushes, and means for elevating the carrier into position to be engaged by the brushes.

28. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged between the brushes, and blacking applying means located at the space between the brushes in advance of the foot rest and comprising a casing mounted below the plane of the brushes, an inner shell or lining having opposite guides, a vertically movable carrier slidable in the said guides and provided at the upper end with a head forming a closure for the receptacle, means mounted on the carrier at opposite sides thereof for conveying material to the brushes, a spring connected with the carrier and with the receptacle for maintaining the head of the former in its closed position, and means for elevating the carrier into position to be engaged by the brushes.

29. An apparatus of the class described including spaced reciprocable brushes, a foot rest arranged in the space between the brushes, and blacking applying means located at the space between the brushes in advance of the foot rest and movable into and out of the path of the brushes and having a blacking carrying device consisting of a box open at the front and provided at opposite sides with open spaces or recesses to expose the contents of the box at the sides thereof.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JESSE ALFONSO BEAN.

Witnesses:

F. O. CASSIDY,
R. C. RAGLAND.