

Nov. 30, 1926.

1,608,857

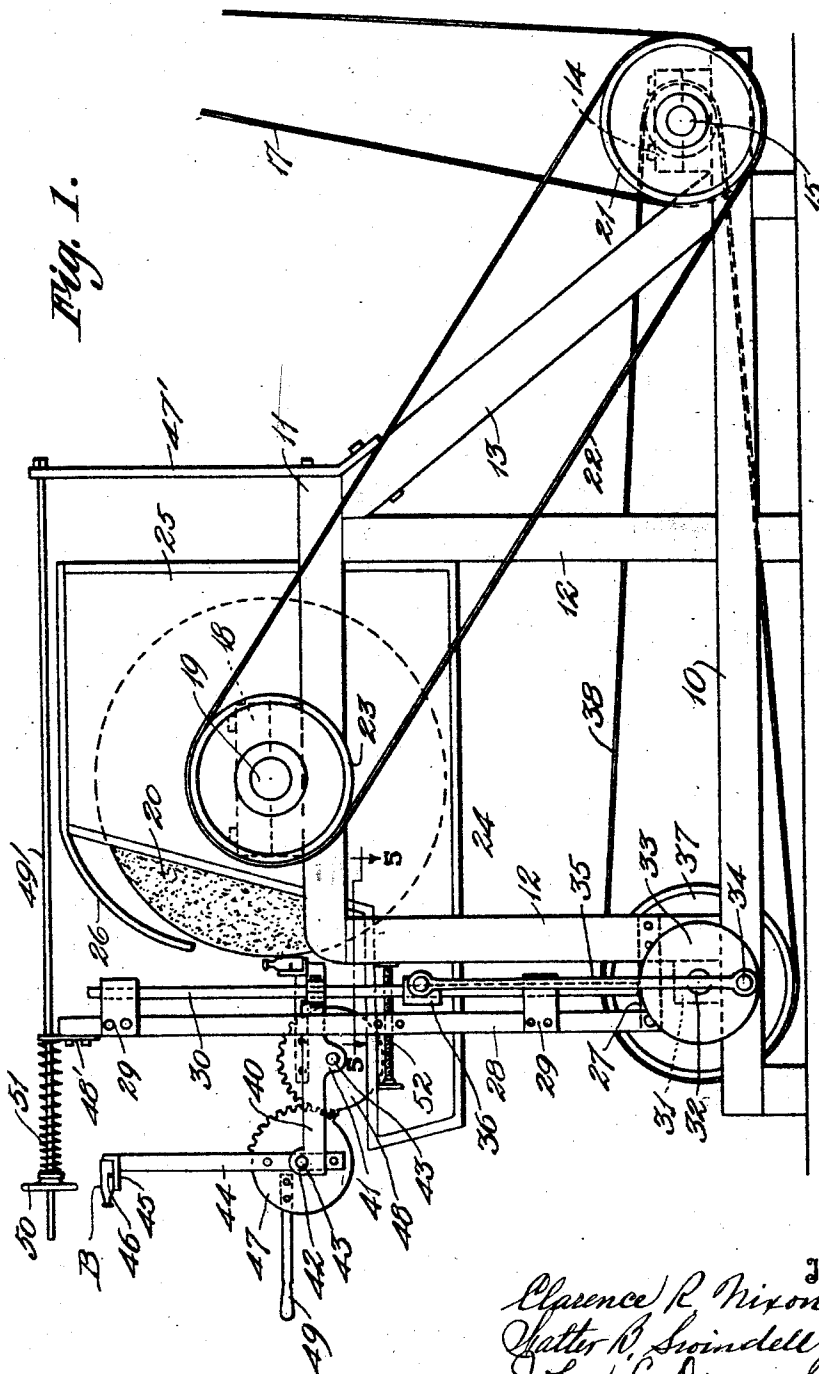
C. R. NIXON ET AL

BOTTLE POLISHING MACHINE

Filed May 23, 1924

4 Sheets-Sheet 1

Fig. 1.



Inventors
Clarence R. Nixon,
Chatter B. Sioindell Jr.,
John L. Dymock,
By E. Chatter Newington,
Attorney

Nov. 30, 1926.

1,608,857

C. R. NIXON ET AL
BOTTLE POLISHING MACHINE

Filed May 23, 1924

4 Sheets-Sheet 2

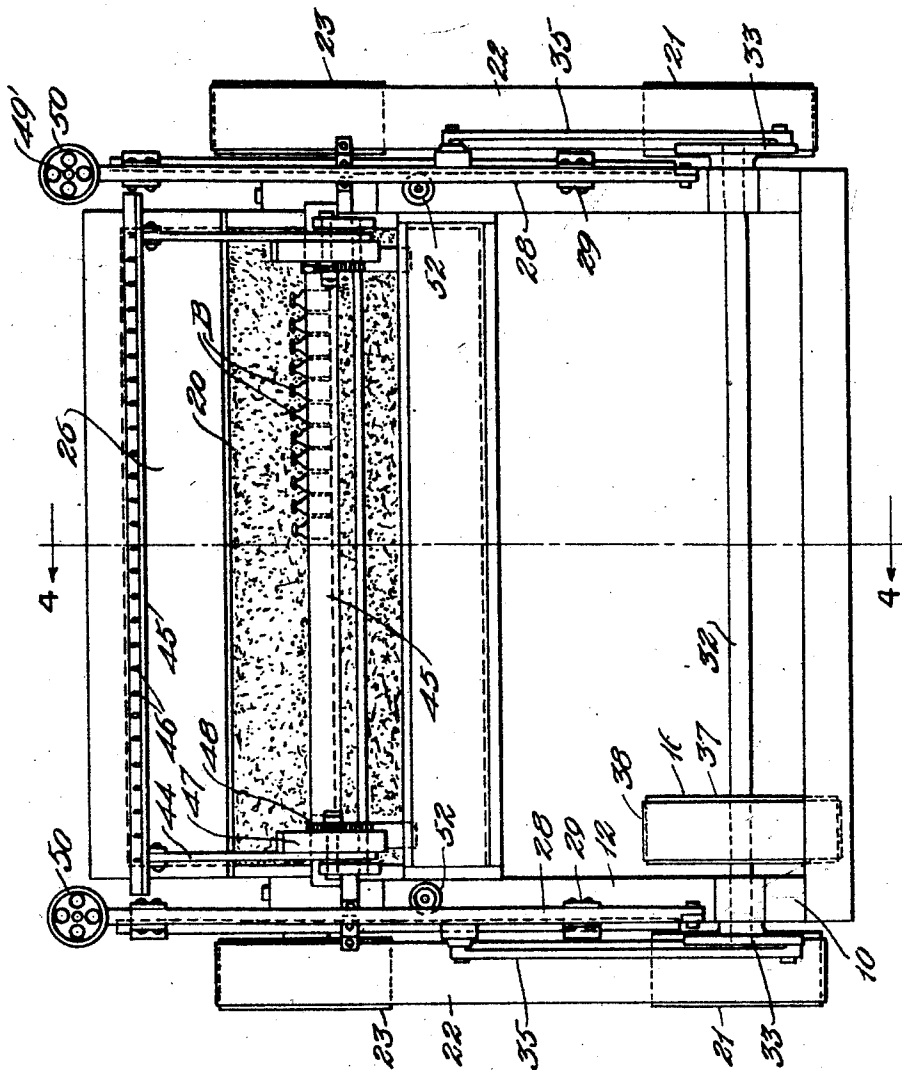


Fig. 2.

Clarence R. Nixon, Inventors.
Walter B. Swindell Jr.
John L. Dymock,
384 C. Walton Brewington,
Attorney

Nov. 30, 1926.

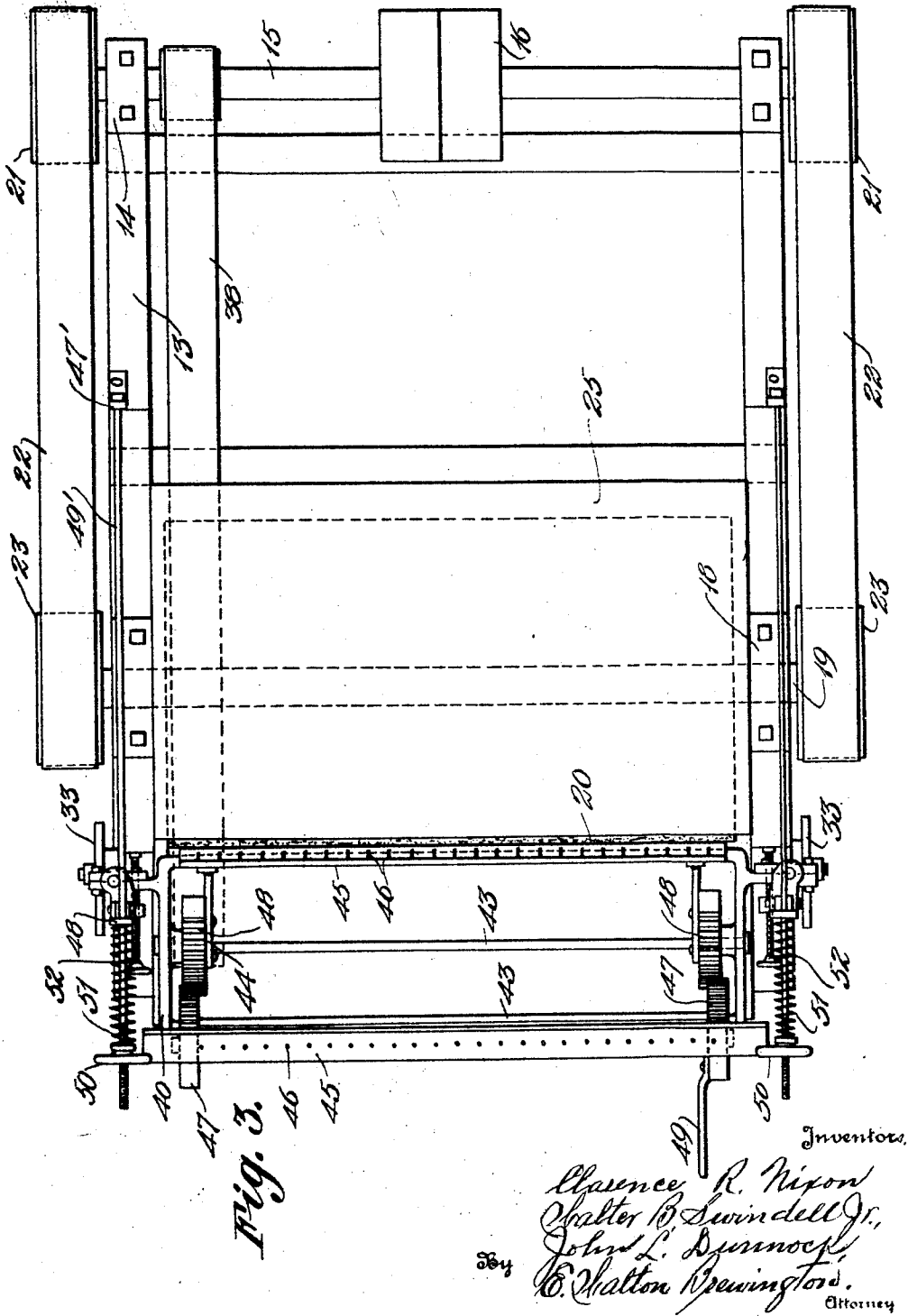
1,608,857

C. R. NIXON ET AL

BOTTLE POLISHING MACHINE

Filed May 23, 1924

4 Sheets-Sheet 3



Nov. 30 , 1926.

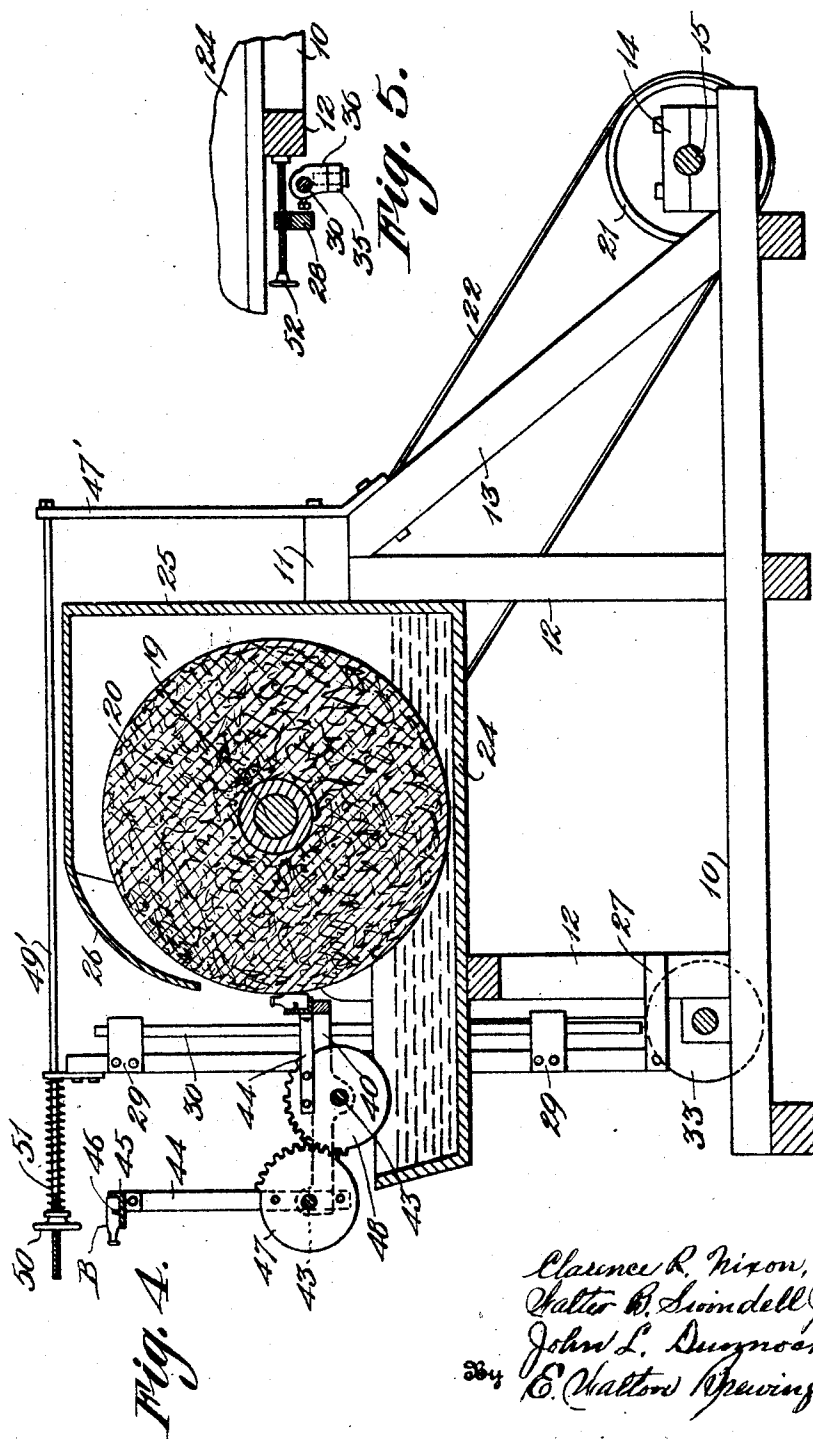
1,608,857

C. R. NIXON ET AL

BOTTLE POLISHING MACHINE

Filed May 23, 1924

4 Sheets-Sheet 4



UNITED STATES PATENT OFFICE.

CLARENCE R. NIXON, WALTER BAYARD SWINDELL, JR., AND JOHN L. DUNNOCK, OF BALTIMORE, MARYLAND, ASSIGNORS TO WALTER B. SWINDELL, CHARLES J. B. SWINDELL, WALTER B. SWINDELL, JR., WILLIAM E. SWINDELL, AND HARRY O. BROWNER, ALL OF BALTIMORE, MARYLAND.

BOTTLE-POLISHING MACHINE.

Application filed May 23, 1924. Serial No. 715,385.

This invention relates to bottle polishing machines and has special reference to a bottle polishing machine particularly designed for polishing a row of bottles at a time.

5 One improved object of the invention is to improve the general construction of devices of this character.

A second important object of the invention is to provide a machine of this class 10 wherein the bottle frame is subjected to reciprocation peripherally of a polishing wheel or drum during the polishing operation.

A third important object of the invention is to provide an improved arrangement for 15 insuring the proper pressure of the bottle against the polishing wheel or drum.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of 20 parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is a side elevation of an improved machine.

Figure 2 is a front view thereof.

30 Figure 3 is a plan view thereof.

Figure 4 is a section on the line 4—4 of Figure 2.

Figure 5 is a detail section on the line 5—5 of Figure 1.

35 In the embodiment of the invention herein illustrated it will be seen that the device is mounted on a frame having like sides, each consisting of a lower longitudinal member 10 and an upper longitudinal member 11 held above the lower member by posts 12, 40 and a diagonal brace member 13. On the rear ends of the lower member 10 are bearings 14, supporting a shaft 15 on which is fixed a driving pulley 16 receiving power 45 through a belt 17 from any suitable mechanism such as motor, line shaft, or the like. Mounted on the upper members 11 are other bearings 18 supporting a polishing drum shaft 19, which carries a polishing 50 drum 20 formed of disks of fibrous material such as felt, cloth, or the like. The shaft 15 is provided at each end with a pulley 21

connected by a belt 22 with a similar pulley 23 on a shaft 19, thus the drum is rotated in such manner that both ends are driven. 55 Supported in the upper part of the main frame is a tank or trough 24 wherein the lower part of the drum 20 dips, this trough holding the polishing material, which is preferably a mixture of suitable abrasive of 60 very finely comminuted character and water to the proper consistency. Over the trough extends a hood or housing 25 and at its front end a broad apron 26. Extending forwardly from the front post 12 are brackets 65 27 and to the forward ends of these brackets are pivoted the lower ends of swinging supports 28, each of which carries a pair of brackets 29 forming guides for a reciprocating bar 30. Mounted in bearings 31, adjacent the front of the machine, is a shaft 70 32, and on each end of this shaft is fixed a disk 33 on which is a crank pin 34 connected by a link 35 with a clamp 36 adjustably secured to the respective bar 30. Also 75 the shaft 32 has keyed thereon a belt pulley 37 which is connected by a belt 38 with a pulley 39 fixed on the shaft 15. Thus actuating the shaft 15 reciprocates the bars 30. Adjustably mounted on each of these bars 80 is a bearing bracket 40, these brackets being provided with alined bearings 41 adjacent the bars 30 and other alined bearings 42 at the front ends of the brackets. In these bearings are journaled the shaft 43 carrying 85 each a U-shaped frame 44, the transverse portions of the frame being in the form of an angle iron as at 45 and provided with stop and clamp pins 46 between which bottles may be positioned. One of these frames is 90 secured to the outside surface of a pair of gears 47 while the other is secured to the inside surfaces of a pair of gears 48 meshing with the gears 47, thus one frame can swing through the space surrounded by the 95 other frame so that by shifting the position of the gears 47 and 48 by means of a handle as at 49, these frames are moved between horizontal and vertical positions. The frames are so proportioned that the 100 movement of either frame to horizontal position brings the bottles, carried by that frame, into operative engagement with the polishing wheel or drum.

Extending upwardly from the diagonal members 13 at the rear of the machine are posts 47' and at the top ends of the swinging guide bars 28 are brackets 48'. Bolts 49' pass through the posts 47' and brackets 48' and have their front ends threaded so that hand wheels 50 may be screwed on the bolts 49' to compress the springs 51 between the said hand wheels and brackets 48', thus adjusting the guide bars 28 toward the polishing drum 20 so that the bottles are held firmly against the periphery of said drum. In order to prevent too great a pressure each of the guide bars 28 carries a limit screw 52 which bears against a front post 12 thus limiting the rearward movement of the upper end of each guide bar 28.

In operation, one of the frames 44 is swung to vertical position and loaded with bottles, it being understood that the machine is in motion and the drum 20 revolving. Then the handle 49 is manipulated to swing the loaded frame into position so that the bottles are engaged by the wheel or drum 20. This brings the other frame into loading position and this frame is loaded while the polishing of the first row of bottles is being carried out, then the handle is moved to its original position and the bottles which have just been polished are removed from the frame while the second frame holds its bottles in polishing position. Thus the frames work alternately and it is to be understood that the crank disks 33 rotate and raise and lower the frame supporting the bottles which are being polished so that the entire face of each bottle next the polishing drum is properly polished.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that minor changes may be made in the form and construction of the invention without departing from the material spirit thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described but it is desired to include all such as properly come within the scope claimed.

Having thus described the invention, what is claimed as new is:

1. A bottle polishing machine including a main frame, a polishing drum rotatably supported on said frame, guide bars pivoted to said main frame to swing toward and from the drum, a bottle holding frame reciprocally mounted on said guide bars,

means to rotate the drum and reciprocate the bottle holding frame simultaneously, spring means urging said guide bars toward said drum, and limit stops having screw connections with the guide bars and bearing against the main frame to form adjustable limit stops for the movement of said guide bars toward the drum.

2. A bottle polishing machine including a main frame, a polishing drum rotatably supported on said frame, guide bars having their lower ends pivotally connected to the main frame and extending upwards in front of said drum, posts extending upwardly at the rear of the main frame bolts passing through said posts and extending forwardly therefrom, said bolts having sliding connection with the upper ends of said guide bars, hand wheels screwed on the forward ends of said bolts, springs on said bolts between the hand wheels and the upper ends of the guide bars, stop screws having screw connection with the bars and bearing against the front of the main frame, a bottle holding frame mounted for reciprocation on the guide bars, and means to reciprocate the bottle holding frame and rotate the drum simultaneously.

3. A bottle polishing machine including a main frame, a polishing drum rotatably supported on said frame, guide bars having their lower ends pivotally connected to the main frame and extending upwards in front of said drum, posts extending upwardly at the rear of the main frame bolts passing through said posts and extending forwardly therefrom, said bolts having sliding connection with the upper ends of said guide bars, hand wheels screwed on the forward ends of said bolts, springs on said bolts between the hand wheels and the upper ends of the guide bars, stop screws having screw connection with the bars and bearing against the front of the main frame, guide brackets carried by the guide bars, rods slidably through said brackets, a bottle holder carried by said rods, a crank mechanism connected to said rods to reciprocate the same, a main shaft journaled on the main frame, and operative connections between said shaft, the drum and the crank mechanism.

In testimony whereof we affix our signatures.

CLARENCE R. NIXON.
WALTER BAYARD SWINDELL, Jr.
JOHN L. DUNNOCK.