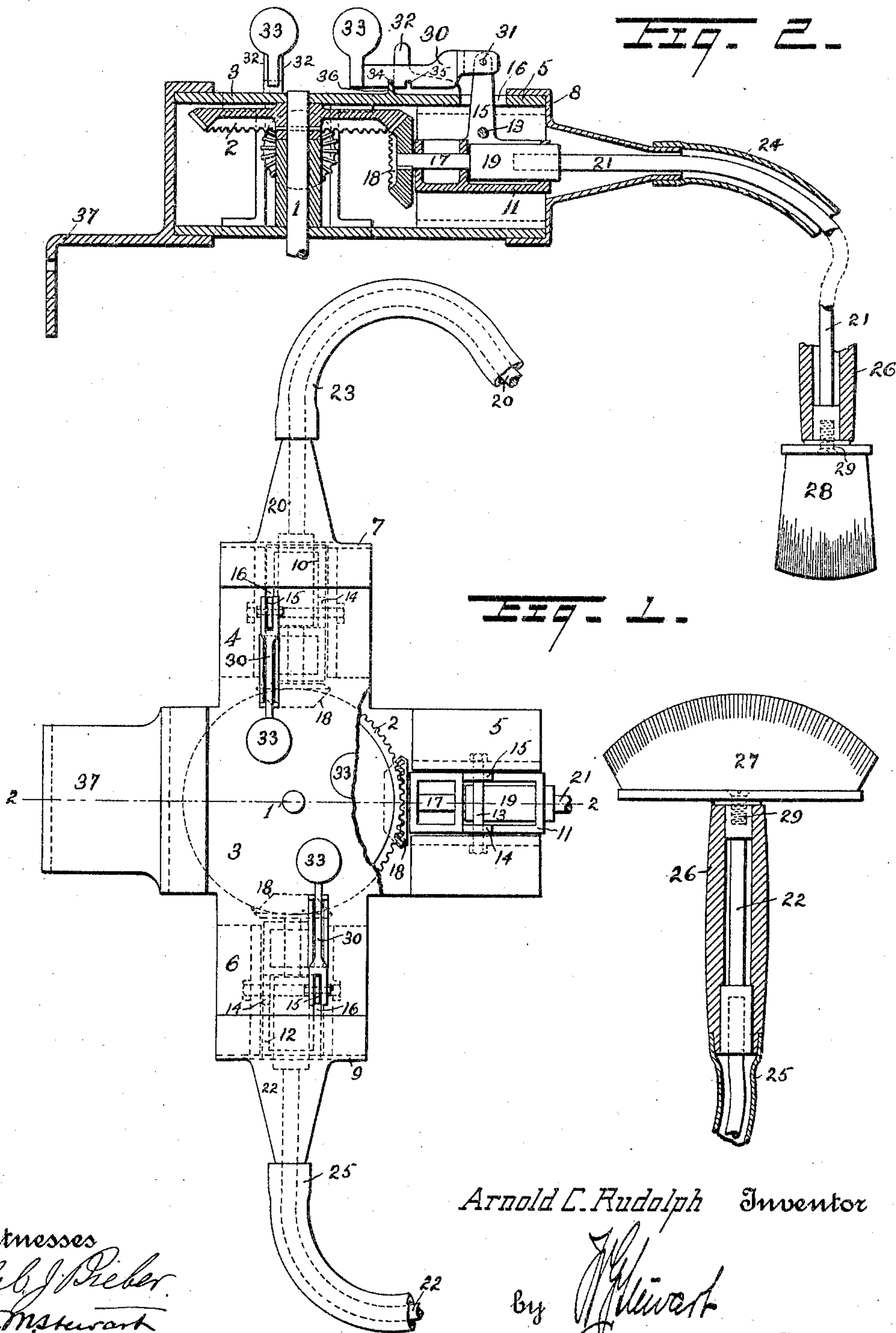


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PATENTED MAY 9, 1905.

A. C. RUDOLPH.  
GEARING FOR SHOE POLISHING MACHINES.  
APPLICATION FILED JAN. 14, 1905.



Arnold C. Rudolph Inventor

By *[Signature]*  
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Witnesses  
*Caleb J. Pieber*  
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# UNITED STATES PATENT OFFICE.

ARNOLD C. RUDOLPH, OF READING, PENNSYLVANIA.

## GEARING FOR SHOE-POLISHING MACHINES.

SPECIFICATION forming part of Letters Patent No. 789,385, dated May 9, 1905.

Application filed January 14, 1905. Serial No. 241,116.

*To all whom it may concern:*

Be it known that I, ARNOLD C. RUDOLPH, a citizen of the United States, residing in the city of Reading, county of Berks, and State of Pennsylvania, have invented certain new and useful Improvements in Gearing for Shoe-Polishing Machines, of which the following is a specification.

My invention relates to shoe and boot polishing machines, and my object is to provide a simple and convenient apparatus of compact form, as fully shown in the accompanying drawings, and specifically set forth in the claims.

Figure 1 is a plan view of an apparatus embodying my invention, and Fig. 2 is a sectional view on the line 2 2 of Fig. 1.

As shown in the drawings, 1 is the main shaft, which may be driven in any preferred manner. Upon this shaft is fixed a gear-wheel 2 within the casing 3. Said casing has extensions 4, 5, and 6 for the different brush-driving gears, and each extension is provided with end closures 7, 8, and 9. Within the extensions 4, 5, and 6 are bearing-boxes 10, 11, and 12, swung on the pivot-pins 13, mounted in lugs 14, and rocker-arms 15 on the boxes, the arms 15 projecting through the casing in a slot 16. In the bearing-boxes 10, 11, and 12 are mounted shafts 17, having the bevel-gears 18 at their inner ends and the enlarged portions 19 at their outer ends, into which enlarged portions of flexible shafts 20, 21, and 22 are fixed. To the opposite end of these flexible shafts are attached brushes or other polishing devices. Flexible casings 23, 24, and 25 are attached to the end closures 7, 8, and 9 and cover the flexible shafts, ending in hand-grips 26 for convenient operation. The brushes or polishing devices 27 may be of any preferred shape, and I preferably use one of smaller size (marked 28) as a dauber for the blacking or polish. These brushes may be attached in any manner—as, for instance, by the screw 29—so that their ready removal or displacement may be quickly and conveniently made.

The bearing-boxes 10, 11, and 12 may be rocked on the pivot-pins 13 to respectively

engage or disengage the several gears 18 with the gear 2 on the shaft 1. In order to lock these gears in either position, I provide the shifting-levers 30. These levers are pivoted at 31 to the projecting rocker-arms 15 of the boxes 10, 11, and 12 without the casing and are guided between the uprights 32. These levers are provided with handles 33, and each has the locking-teeth 34 and 35 to engage projections 36 on the casing 3. As shown in Fig. 2 of the drawings, the gear 18 is in mesh with the gear 2, but by raising the lever 30 to disengage the locking-tooth 34 with the projection 36 the bearing-box 11 may be rocked to draw the gear 18 away from gear 2, when the locking-tooth 35 may be made to engage the projection 36 and hold the said gears in inoperative position.

My machine may be readily attached to a support by means of the arm 37, as to a wall, or it may be placed under a chair and the brushes at the end of the flexible shafts brought to any desired position. It will be readily seen that my apparatus may be driven singly or a number may be conveniently mounted in series and driven from a common power-shaft through any suitable means—as, for instance, belting or gearing. (Not shown.)

As shown in the drawings, I preferably make one brush of smaller size than the others for the dauber to apply the blacking or dressing, and as speed is not as essential or desirable for this operation as for cleaning or polishing I usually make this gear larger in diameter than the gears that drive the other shafts, so as to reduce the revolutions.

In operating my machine the brushes are grasped by the hand-grips 26 and brought to the desired position in contact with the boot or shoe, the flexible shafts permitting great freedom in movement and pressed with the necessary force to produce the desired friction, the application of the polish or dressing being done with the slower-speed brush and the cleaning or polishing by either or both of the higher-speed brushes. When not in use, any one of the brushes may be thrown out of operation, as desired, by the shifting-levers 30, previously described.



What I claim is—

1. In a shoe-polishing machine the combination with a casing and main drive-gear therein, of a pivotally-mounted bearing-box  
5 within said casing, a shaft mounted in said bearing-box and a gear at one end thereof, and means for rocking said box to engage or disengage said gear thereon with said main drive-gear.
- 10 2. In a shoe-polishing machine the combination with a casing and main drive-gear therein, of a pivotally-mounted bearing-box within said casing, a shaft mounted in said bearing-box and a gear at one end thereof,  
15 means for rocking said box to engage or disengage said gear thereon with said main drive-gear, and means for locking said box in adjusted position.
- 20 3. In a shoe-polishing machine the combination with a casing and main drive-gear therein, of a pivotally-mounted bearing-box within said casing, a shaft mounted in said bearing-box and a gear at one end thereof, a

rocker on said bearing-box projecting through said casing, and a shifting-lever, whereby 25 said bearing-box may be rocked to engage or disengage said gear thereon with said main drive-gear.

4. In a shoe-polishing machine the combination with a casing and main drive-gear 30 therein, of a pivotally-mounted bearing-box within said casing, a shaft mounted in said bearing-box and a gear at one end thereof, a rocker-arm on said bearing-box projecting through said casing, a shifting-lever pivoted 35 to said rocker-arm and having locking-teeth to engage or disengage a projection on said casing whereby said bearing-boxes may be rocked to engage or disengage said gears and locked in adjusted position. 40

In testimony whereof I affix my signature in the presence of two witnesses.

ARNOLD C. RUDOLPH.

Witnesses:

D. M. STEWART,  
W. G. STEWART.