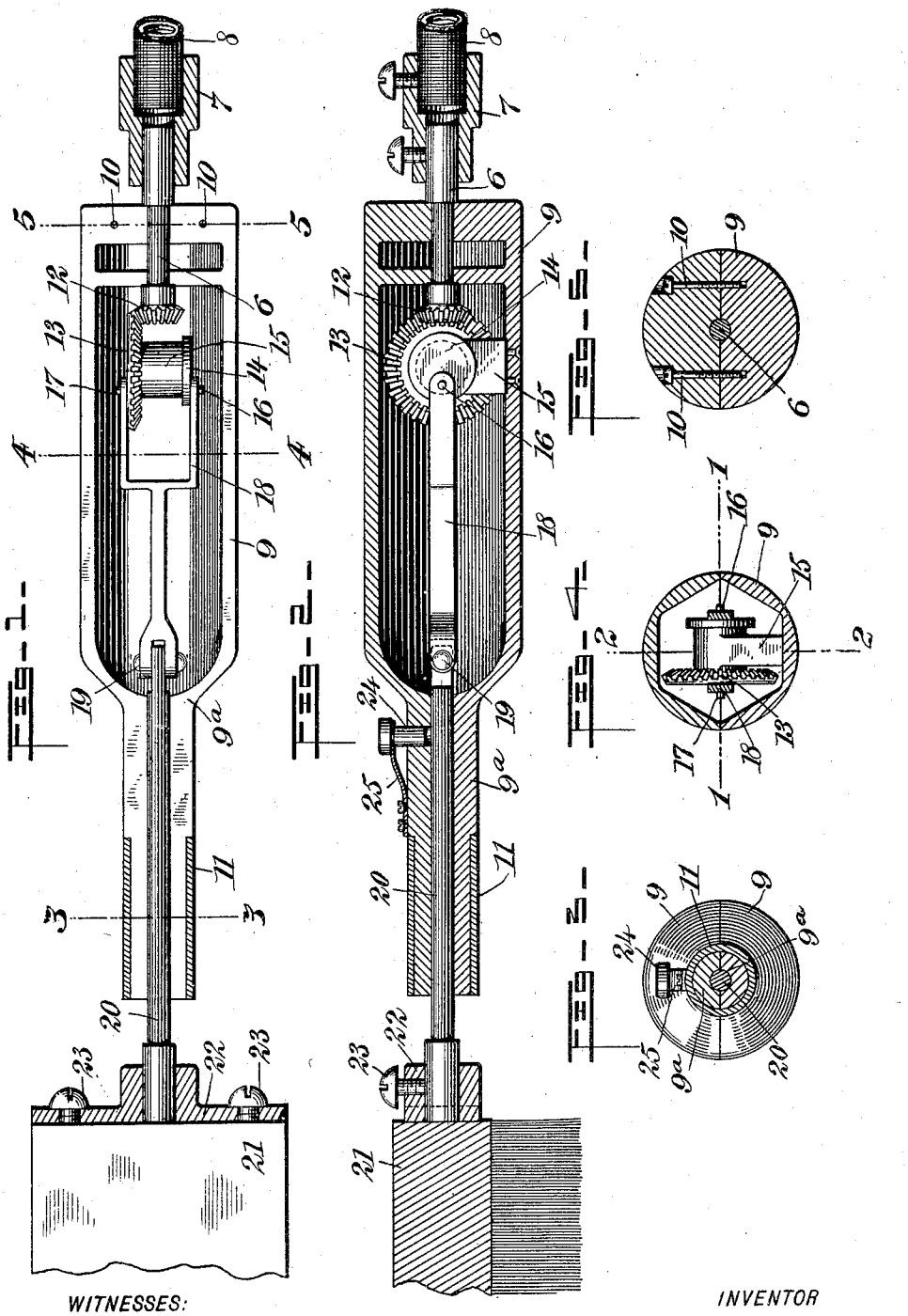
No. 793,587. PATENTED JUNE 27, 1905.

A. C. JOHNSON.

BRUSHING OR POLISHING MACHINE.

APPLICATION FILED APR. 27, 1904.



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No. 793,587. Patented June 27, 1905.

UNITED STATES PATENT OFFICE.

ANDREW CHARLES JOHNSON, OF BAKER CITY, OREGON.

BRUSHING OR POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 793,587, dated June 27, 1905.

Application filed April 27, 1904. Serial No. 205,078.

To all whom it may concern:

Be it known that I, ANDREW CHARLES JOHNSON, a citizen of the United States, and a resident of Baker City, in the county of Baker and State of Oregon, have invented a new and Improved Brushing or Polishing Machine, of which the following is a full, clear, and exact description.

My invention relates to a device for brushing, polishing, and performing similar operations which is capable of general use and is especially adapted for cleaning and polishing shoes, as well as for brushing clothing, hats, and the like. It is to be understood, however, that my invention is not limited to the specific uses mentioned.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a longitudinal sectional view of a preferred form of my invention on the line 1 1 of Fig. 4. Fig. 2 is a longitudinal sectional view of the same, taken at right angles to Fig. 1 on the line 2 2 of Fig. 4. Figs. 3, 4, and 5 are sectional views taken on the lines 3 3, 4 4, and 5 5, respectively, of Fig. 1.

In the drawings, 6 represents a rotary shaft operated, by means of a coupling 7, from a flexible shaft 8, which may be constructed in any manner in which flexible shafts are commonly made.

9 is a casing for containing the working elements of the machine, and it is provided with a contracted neck portion 9^a, which is solid except for a bearing-passage, as will be described. The casing 9 is composed of two parts substantially alike, which are connected together by means of bolts 10 10 and a ferrule 11, although any other way of connecting these parts could be employed without departing from the spirit of my invention.

Upon the inner end of the shaft 6, which has a bearing in the end of the casing 9, is located a driving device, (represented in the drawings by the bevel-pinion 12,) which meshes with a bevel-gear 13, rotating on a shaft at right angles to the shaft 6. Mounted on the same shaft is a drum 14. This drum, the gear 13, and the shaft connecting them are mounted upon a standard 15, secured to the inner wall of the casing 9. Upon the drum 14 is a pin 16, and upon the gear 13 is a pin 17. These two pins being offset from the center of the shaft act as eccentrics for the operation of a connecting-rod 18, which by means of pivots 19 is connected to a reciprocatory rod 20, which passes through and has a bearing in the contracted neck 9^a. To the rod 20 is preferably attached a brush, (shown in the drawings as a shoe-brush 21.) In the present instance this brush is secured to the rod 20 by means of a yoke 22 and screws 23.

24 is a pin acting as a brake upon the rod 20 and is normally held out of engagement with the rod by means of a spring 25.

It will be obvious that upon the rotation of the shafts 8 and 6 the pinion 13 and the drum 14 will be caused to rotate, which through the operation of the connecting-rod 18 will reciprocate the shaft 20 and the brush 21. Owing to the lack of friction and the free manner in which the device operates, it is desirable to have a brake such as that shown at 24 to slow the brush down when the work is finished.

It will be seen that my invention affords a very simple, convenient, and inexpensive brushing-machine, that by means of the flexible shaft 8 it may be applied in any desired position or at any desired angle, that it will be operated with a small amount of power, and, in short, that it will be a most convenient device for the purposes in hand.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a brushing and polishing machine, the combination of a two-part casing having a contracted end constituting a bearing, and also having a bearing in the opposite end thereof, a rotary shaft in the last-mentioned bearing, a flexible shaft connected with the rotary shaft, a rotatable member within the casing, a pair of cranks on said rotatable member, a connecting-rod engaging with said cranks, means for connecting said rotary shaft with said rotatable member, a recipro-

catory rod connected with the connecting-rod and mounted in the bearing in the contracted end of the casing, and a brush secured to the reciprocatory rod.

2. In a brushing and polishing machine, the combination of a two-part casing, means for securing the parts thereof together, said casing having a contracted end constituting a bearing and having a bearing in the opposite end thereof, a rotary shaft in the last-mentioned bearing, a flexible shaft secured to the rotary shaft, a pinion upon the rotary shaft within the casing, a gear meshing with the pinion, a rotatable member upon which said gear is mounted, a pair of cranks on said rotary member, a connecting-rod engaging with said cranks, a reciprocatory rod pivotally connected with the connecting-rod and mounted in the bearing in the contracted end of the casing, and a brush secured to the reciprocatory rod.

3. In a brushing and polishing machine the combination of a two-part casing, means for securing the parts thereof together, said casing having a contracted end constituting a bearing, a reciprocatory member in said bearing having means for securing a brush thereto, and means in said casing for converting a rotary motion into a reciprocatory motion and imparting such reciprocatory motion to the reciprocatory member.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANDREW CHARLES JOHNSON.

Witnesses:
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C. H. MCCOLLOCH.