

I. K. ROBY.
CLEANING AND POLISHING MACHINE.
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1,053,320.

Patented Feb. 18, 1913.

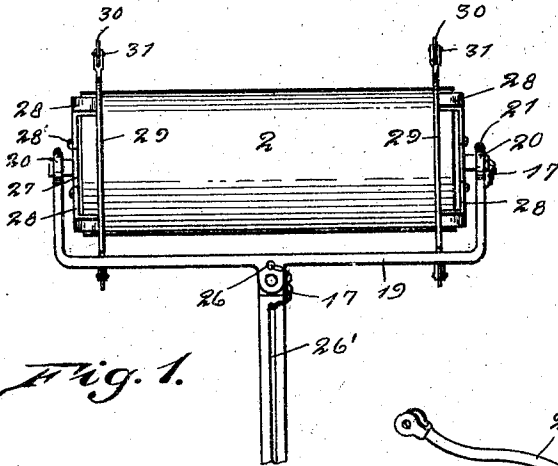


Fig. 1.

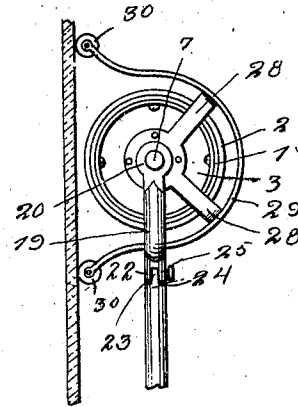


Fig. 2.

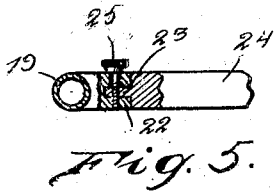


Fig. 5.

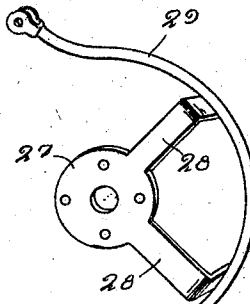


Fig. 4.

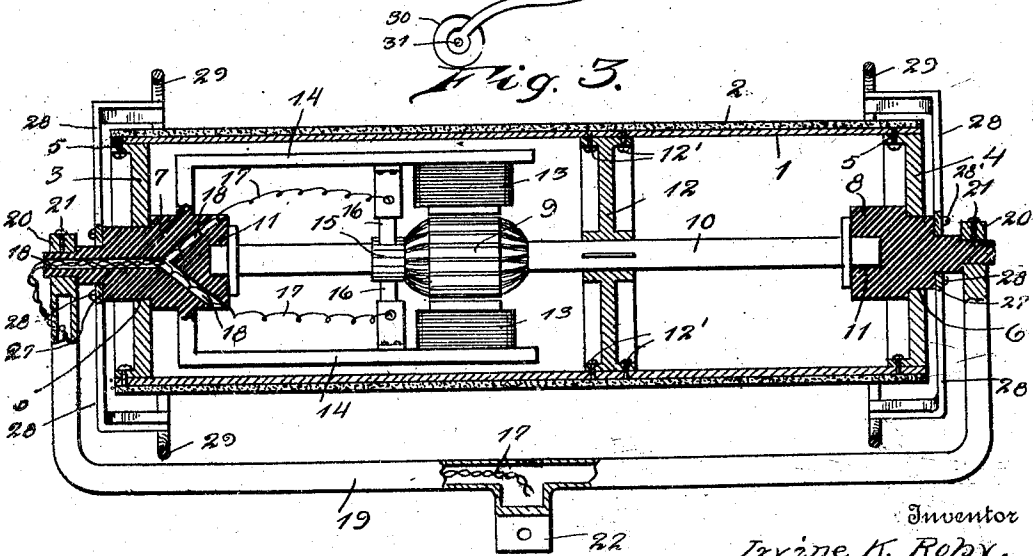


Fig. 3.

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UNITED STATES PATENT OFFICE.

IRVINE K. ROBY, OF STAUNTON, VIRGINIA.

CLEANING AND POLISHING MACHINE.

1,053,320.

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To all whom it may concern:

Be it known that I, IRVINE K. ROBY, a citizen of the United States, residing at Staunton, in the county of Augusta and State of Virginia, have invented certain new and useful Improvements in Cleaning and Polishing Machines, of which the following is a specification.

The present invention relates to a machine for cleaning and polishing panes of glass or other surfaces.

An important object of the invention is to provide a machine of the above mentioned character, which is quick and reliable in operation, saving both time and labor.

A further object of the invention is to provide a cleaning and polishing machine of the above mentioned character, which is compact, simple in construction, and easy to operate.

A further object of the invention is to provide a novel arrangement of the means for rotating the cleaning cylinder.

A further object of the invention is to provide a cleaning and polishing machine of the above mentioned character, which is portable, light, and neat in appearance.

A further object of the invention is to provide novel means to guide the machine during its operation in cleaning a pane of glass or the like.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same, Figure 1 is a plan view of the machine, Fig. 2 is an end view thereof, Fig. 3 is an enlarged central longitudinal section taken through the machine, Fig. 4 is a perspective view of one of the end guide brackets, and Fig. 5 is a detail section taken through a portion of the handle.

In the drawings wherein is illustrated a preferred embodiment of my invention, the numeral 1 designates a cylinder, preferably formed of sheet-metal and covered with a strip of felt 2 or other fibrous material. The opposite ends of the cylinder 1 are closed by heads 3 and 4, having rigid connection with the cylinder 1, as shown at 5. The heads 3 and 4 are provided centrally thereof with openings 6, for receiving respectively, relatively stationary bearings 7

and 8, as shown. These heads are free to rotate about the bearings. Disposed within the cylinder 1 is a motor comprising an armature 9, having connection with an armature shaft 10, the ends of which are journaled in openings 11 formed in the relatively stationary bearings 7 and 8, as shown. A wheel or disk 12 is disposed within the cylinder 1 near one end of the armature 9, is keyed or otherwise fixed upon the armature shaft 10, and is rigidly connected with the cylinder 1 by screws 12' or the like, as shown. It is thus seen that this wheel constitutes the means for imparting rotation from the shaft 10 to the cylinder 1.

The numeral 13 designates the field magnets of the motor, which are rigidly mounted upon supporting arms 14, which in turn are rigidly connected with the stationary bearing 7, being preferably formed integral therewith, as shown.

The numeral 15 designates the ordinary commutator engaged by the brushes 16, which are connected with the supporting arms 14. Current is supplied to these brushes through wires 17, which extend through a Y-shaped opening 18 in the relatively stationary bearing 7.

The numeral 19 designates an approximately U-shaped main frame, which straddles the cylinder 1, as shown. The frame 19 is preferably tubular and receives the wires 17, as shown. At its ends the frame 19 is provided with solid heads 20, apertured as shown, for receiving reduced end portions of the stationary bearings 7 and 8, and clamping screws 21 or the like are provided to rigidly connect such bearings with the heads 20. The main frame 19 is provided intermediate its ends with a forked head 22, for receiving a tongue 23, formed upon a handle 24. This handle is pivotally connected with the head 22 by a clamping bolt 25 passing through the head 22 and the tongue 23, as shown. It is thus seen that the handle 24 may be swung longitudinally of the cylinder 1 and clamped in adjustment at desired angles with relation thereto. The head 22 is provided with an opening 26, through which pass the wires 17, which extend within a slot 26' formed in the handle 24.

Rigidly connected with each of the relatively stationary bearings 7 and 8, outwardly of the heads 3 and 4, by means of screws 28' or the like are preferably circular plates 27.

Formed upon each plate 27 are upwardly extending arms 28, bent inwardly at right angles at their upper ends and connected with a curved spring-metal rod 29, as shown. The free ends of these spring-metal rods are forked, as shown, for receiving guide rollers 30, preferably formed of rubber and connected with such forked ends by axles or pins 31.

10 The operation of the machine is as follows:—When the circuit is closed the armature shaft 10 is rotated, which rotation is imparted through the medium of the wheel 12 to the cylinder 1. When the machine is run along a pane of glass or the like, the guide rollers 30 travel on the pane of glass or the like. By pressure exerted on the handle, the spring-metal rods 29 will yield to permit of the proper engagement of the felt covered surface of the cylinder 1 with the pane. The cleaning or polishing material may be applied to the felt covered surface of the cylinder by any suitable means. The handle may be angularly adjusted with relation to the cylinder to render the operation of the machine more handy. When pressure is removed from the handle it is obvious that the spring-metal rods 29 will automatically move the cylinder 1 away from the pane. This construction enables the operator to easily and accurately control the desired degree of frictional engagement between the felt covered surface of the cylinder 1 and the pane of glass.

35 I wish it understood that the form of my invention herewith shown and described is to be taken as a preferred example of the same and that certain changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the sub-joined claims.

Having thus described my invention, I claim:—

45 1. In a machine of the character described, spaced stationary bearings provided with

contracted portions forming shoulders, disks rigidly connected with such contracted portions of the bearing and carrying outwardly extending radial arms, inverted U-shaped spring rods attached to the outer ends of said radial arms, rollers carried by the ends of the U-shaped spring-rods, heads having central openings to receive the contracted portions of the stationary bearings and to slidably engage the shoulders of the same and thereby prevented from moving inwardly toward each other, a shaft disposed between and having its ends disposed in openings formed in the stationary bearings, a cylindrical shell connecting said heads, and means disposed within the shell to effect its rotation.

2. In a machine of the character described, spaced stationary bearings formed in a plurality of portions having different diameters which decrease outwardly, an approximately U-shaped bracket rigidly connected with the outermost portions of the stationary bearings, a rotatable shaft having its ends mounted within openings formed in the bearings and serving the function of positively preventing the bearings having perceptible movement toward each other, wheeled spring means rigidly mounted upon the intermediate portions of the stationary bearings, heads having central openings to rotatably receive such intermediate portions and slidably engage the innermost portions of the stationary bearings whereby such heads are prevented from movement in opposite directions with relation to each other, a cylindrical shell rigidly connected with the heads, means disposed within the shell to rigidly connect the same with the shaft, and means disposed within said shell to rotate the shaft.

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

IRVINE K. ROBY.

Witnesses:

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