April 20, 1926. 1,581,687

L. R. PAPE

MACHINE FOR POLISHING FLOORS

Filed May 19, 1924

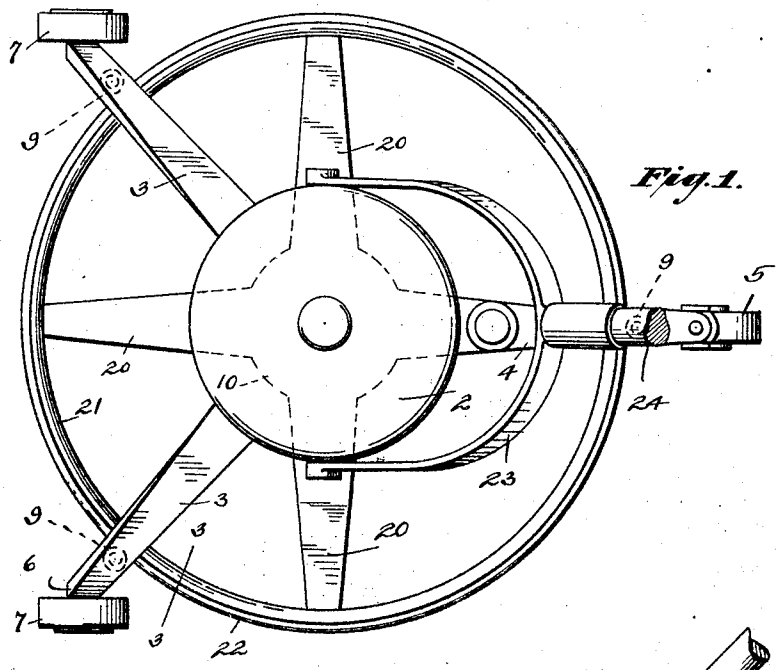


Fig. 1.

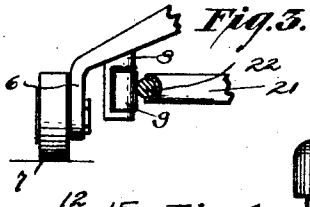


Fig. 3.

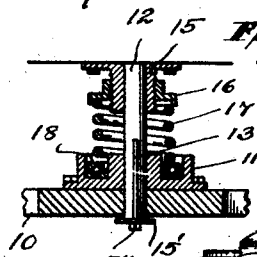


Fig. 4.

Fig. 2.

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Patented Apr. 20, 1926. 1,581,687

UNITED STATES PATENT OFFICE.

LOUIS ROBERT PAPE, OF COLUMBUS, OHIO.

MACHINE FOR POLISHING FLOORS.

Application filed May 19, 1924. Serial No. 714,242.

To all whom it may concern:

Be it known that I, LOUIS ROBERT PAPE, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Machines for Polishing Floors, of which the following is a specification.

The present invention is directed to improvements in machines for polishing floors or the like.

The primary object of my invention is to provide a machine of this character so constructed that the floor engaging brushes can be rotated rapidly to effectively polish hard wood floors and the like.

A further object of my invention is to provide a device of this nature so constructed that the danger of marring furniture is positively eliminated, and further to provide means to prevent strain upon the motor driven shaft should the brush head strike an article of furniture or other obstruction.

A still further object of my invention is to provide a machine of this character so constructed that the downward pressure of the revolving brush head may be adjusted as desired.

With these and other objects in view, as will appear as the description proceeds, my invention consists in the novel features of construction, combinations of elements and arrangements of parts, hereinafter to be fully described and claimed.

In the accompanying drawing:

Figure 1 is a plan view of the complete device,

Figure 2 is a side elevation view thereof,

Figure 3 is a vertical section taken on the line 3—3 of Figure 1, and

Figure 4 is an enlarged fragmentary vertical section view.

Referring to the drawing in detail, wherein like parts are designated by similar reference numerals throughout the several views, 1 designates a frame for supporting a conventional form of electric motor 2, said frame having downwardly inclined radially arranged legs 3—3 and 4, the latter or rear leg having attached thereto a castor wheel 5 which enables the device to be conveniently guided over a floor or other surface. The legs 3 have vertical terminals 6 and rotatably supported thereby are wheels 7 which serve in conjunction with the castor wheel 5 to support the device and permit the same to travel over a floor or the like.

The legs 3 and the leg 4 are each provided with brackets 8 which rotatably support the vertically disposed rollers 9, the purpose of which will later appear. The brush head 10 has a vertically disposed sleeve 11 carried thereby for slidably receiving the lower end of the motor shaft 12, said sleeve and shaft having complementary slots therein to receive the key 13 to prevent accidental disengagement of the brush from said shaft but at the same time compelling the sleeve and thus the brush head to rotate with the shaft. The slot in the shaft 12 and the key 13 resting therein, extend a considerable distance past the sleeve 11 toward the motor when said sleeve is in its lowest position to permit the brushes 14 to accommodate themselves to any unevenness in the surface being polished.

The sleeve 15 secured to the under side of the frame 1 and through which the motor shaft 12 passes is provided with external threads to adjustably secure the collar 16 in position. The compression spring 17 encircling shaft 12 has its upper end in engagement with the collar 16 and its lower end pressing down upon the anti-friction device 18 disposed in the sleeve 11. It is to be noted that the downward pressure on the brush head 10 is increased and decreased as the collar 16 is lowered and raised respectively and the set screw 19 serves to maintain said collar in any desired position on the sleeve 15. End plates 15′ secured to the end of motor shaft 12 by screw 15″ serves to prevent disassociation of the parts.

The brushes 14 are carried by the radial arms 20 which are preferably cast integral with the brush head 10 and preferably four in number.

A ring 21 of channel metal is connected with the outer ends of the arms 15 and secured in the channel of said ring is a rubber or felt band 22, the band being engaged with the rollers 9, said band eliminating marring of furniture or the like should it come in contact therewith.

Since the band 22 is in contact with the rollers 9 and the rollers located at three points, any shock to which the brush head 10 is subjected will be absorbed by the band and consequently shock to the motor shaft 12

is reduced to such an extent that injury thereto is positively eliminated.

A bail 23 is pivotally connected to the frame 1 and has the lower end of the operating handle 24 fixed thereto. This handle serves to move the device over the surface as the brushes 14 contact therewith during the polishing operation.

What is claimed is:

1. A floor polishing machine comprising a frame, a motor supported by the frame and having its shaft depending below the frame, radially disposed legs carried by said frame, surface engaging wheels carried by the legs, rollers supported by brackets connected with the legs, a brush head connected with the motor shaft, a ring secured to and confining the brush head, and a rubber band carried by the ring and engaged with said rollers as and for the purpose set forth.

2. In a floor polishing machine, a wheeled frame, a motor on said frame, a brush including a circular head provided with depending vertically disposed bristles, a driving connection between said motor and said brush permitting of relative movement in a vertical plane between said brush and said frame, and anti-friction guides carried by said frame and arranged in engagement with the outer edge of said brush head throughout all operating positions of relative movement between said brush and said frame.

In testimony whereof I affix my signature.

LOUIS ROBERT PAPE.