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F. I. SIMPSON

FLOOR POLISHING ATTACHMENT FOR VACUUM CLEANERS

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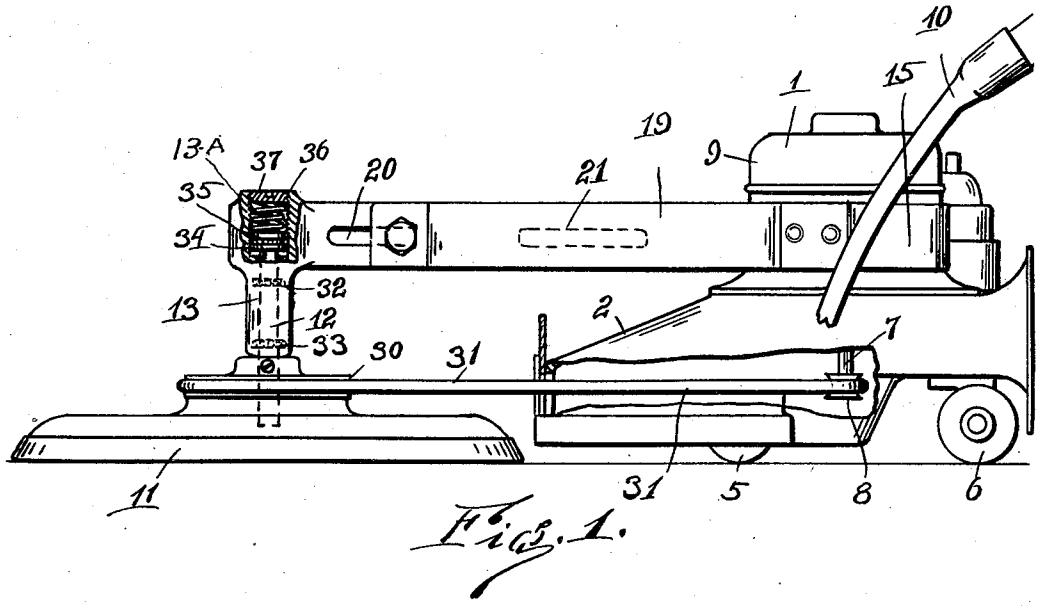


Fig. 1.

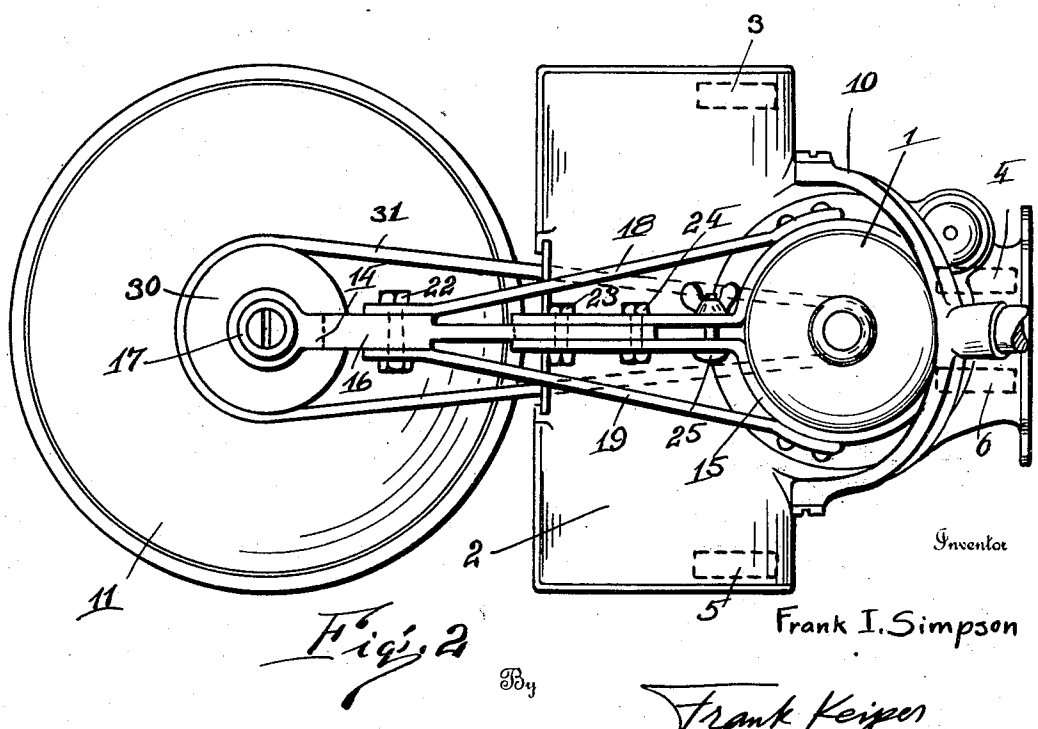


Fig. 2

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UNITED STATES PATENT OFFICE.

FRANK I. SIMPSON, OF ROCHESTER, NEW YORK, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF ONE-FOURTH TO WILLIAM C. STAHLEY AND ONE-HALF TO RICHARD F. STALEY, BOTH OF ROCHESTER, NEW YORK.

FLOOR-POLISHING ATTACHMENT FOR VACUUM CLEANERS.

Application filed July 22, 1925. Serial No. 45,243.

The object of this invention is to provide an attachment for polishing floors that is adapted to be placed on a vacuum cleaner and to be operated in connection therewith and removed therefrom when not in use.

This and other objects of the invention will be fully illustrated in the drawings, described in the specification and pointed out in the claims at the end thereof.

In the drawing:

Figure 1 is a side elevation of a standard make of vacuum cleaner to which has been added my floor polishing attachment.

Figure 2 is a top plan view of the combination shown in Figure 1.

In the drawings like reference numerals indicate like parts.

In the drawings, reference numeral 1 indicates a vacuum cleaner which is provided with a housing 2. The apparatus is supported on four wheels, 3 and 4, and 5 and 6. Reference numeral 7 indicates the shaft that is driven by the electric motor that furnishes power to the vacuum cleaner. On this shaft is provided a small pulley 8 which is driven by the electric motor 9. A handle 10 is provided pivoted on the housing by which the apparatus may be conveniently moved around from place to place.

The floor polishing device comprises the disc 11. This disc is keyed to the shaft 12 that is adapted to rotate in the boss or bearing 13 that is supported on a member 16 in a bracket 14 which in turn is clamped to and supported from the casing of the motor which drives the vacuum cleaner. To provide adjustment and ease of attachment and removal this bracket is composed of several parts which will now be described as follows:

A strap 15 is provided which surrounds the casing of the motor and the ends of which extend forward therefrom parallel to each other. Between these ends is engaged a member 16 which is formed preferably as a casting and which has the boss or bearing 13 formed thereon and above the boss 13 it has an enlarged head 13A containing a circular recess therein. The shank of the member 16 has parallel sides and the rear end of it is of reduced thickness and engages between the parallel ends of the strap 15. The braces 18 and 19 are also provided which braces are attached to the strap at the rear end and are clamped to the shank of the member 16 at the forward end. The shank 16 is provided with slots as indicated at 20 and 21. The bolt 22 passes through the slot 20 and through the forward ends of the braces 18 and 19 and clamp the braces to the shank 16. The bolts 23 and 24 pass through the parallel ends of the straps 15 and through the slot 21 in the reduced end of the shank and clamp the shank to the strap. The bolt and thumb nut 25 passes through the strap close to the casing of the motor and by turning the thumb nut the strap is clamped to the casing of the motor so as to make the bracket and the attachment rigid with the motor and the vacuum cleaner. By turning the thumb nut in the opposite direction the strap is released and springs away from the casing of the motor so that the attachment can be removed.

The disc 11 is provided with a polishing pad on the under side. On top it is provided with a hub 30 which is provided with an annular groove in which the belt 31 runs, which belt is driven by the pulley 8 on the shaft 7 of the motor so that the rotation of the motor causes the polishing disc to turn. The shaft 12 rotates in ball bearings 32 and 33 and has a collar 34 at the top thereof. On top of this collar is a ball bearing which turns against a plate 35 which is held down by the spring 36 on which tension is placed by the adjusting screw 37. This arrangement forms a thrust bearing that permits the shaft 12 to rise and fall in its bearing a little so that the polishing surface of the disc 11 can come firmly and accurately into contact with the floor on which it is working and is held yieldingly in place thereon or in working contact therewith.

The polishing attachment forming the subject matter of this invention is especially adapted for use in polishing floors after they have previously been waxed. The wax is applied to the floor in the usual manner after which the polishing attachment on the vacuum cleaner is run over the waxed surface giving the floor a glossy finish.

I claim:

1. A detachable polishing attachment for vacuum cleaners which comprises a bracket, a clamping device at one end of said bracket adapted to be clamped to the frame of a

vacuum cleaner, an adjustable extension provided on said bracket, a vertical bearing formed at the outer end of said extension, a shaft mounted in said vertical bearing, a polishing disc provided on said shaft, a pulley for rotating said shaft and means for rotating said pulley and said disc on the operation of said vacuum clener.

2. A detachable polishing attachment for vacuum cleaners which comprises a bracket, a clamping device at one end of said bracket adapted to be clamped to the frame of a vacuum cleaner, an adjustable extension provided on said bracket, a vertical bearing formed at the outer end of said extension, a shaft mounted in said vertical bearing, a polishing disc provided on said shaft, a pulley for rotating said shaft and means for rotating said pulley, and said disc on the operation of said vacuum cleaner, a pair of braces connecting said clamping means with said extension to hold said extension rigid during the rotation of said polishing disc.

In testimony whereof I affix my signature.

FRANK I. SIMPSON.