

Oct. 13, 1931.

C. E. REDDIG

1,827,402

FLOOR TREATING MACHINE

Filed March 30, 1927

FIG. 1.

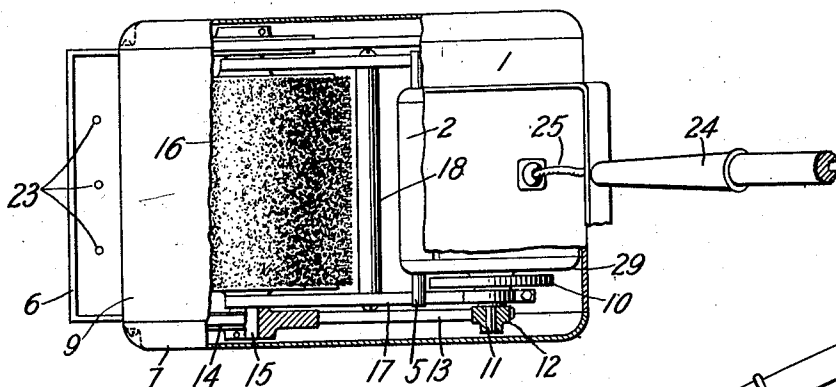


FIG. 2.

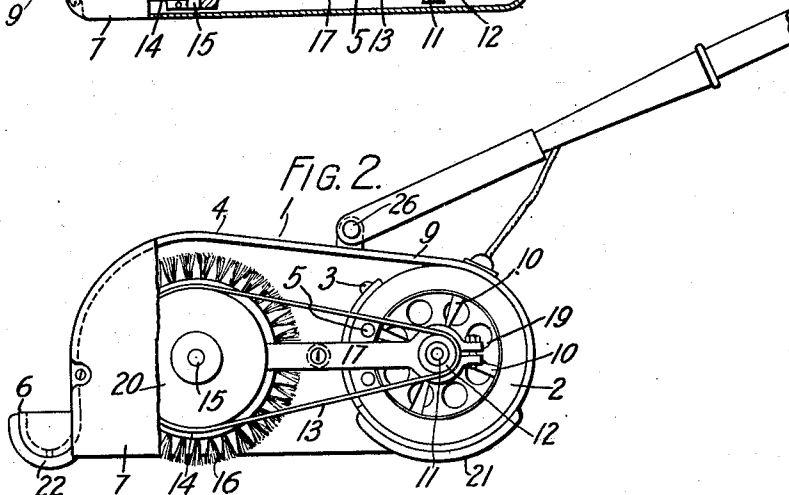


FIG. 3.

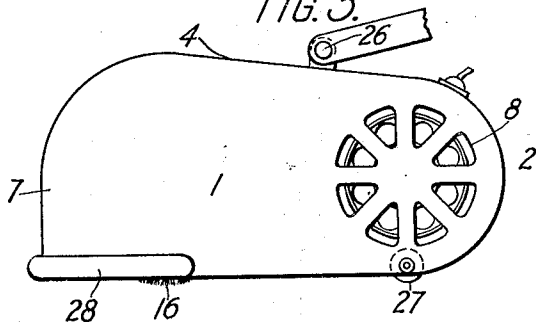
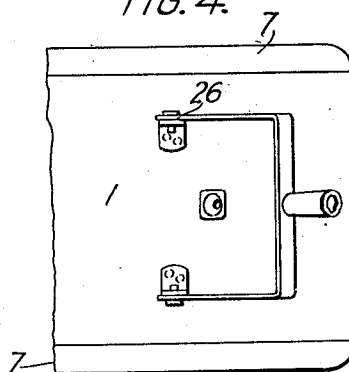


FIG. 4.



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FLOOR TREATING MACHINE

Application filed March 30, 1927. Serial No. 179,456.

This invention relates to a floor treating apparatus, and particularly to a floor polishing machine.

The general object of the invention is to provide a new and improved floor treating machine which will be simple in construction and efficient in operation and particularly to provide a floor polishing machine having a motor driven brush mounted within a housing.

Among the characteristic features of the invention are a housing having a body formed by bending a sheet of metal into the desired shape; an improved arrangement whereby a power operated floor polishing brush is mounted within the housing; a yielding base, such as a pad of lambskin or the like, for the housing and which also serves as a polishing means when moved over the floor; a receptacle on the front supporting base for the purpose of spreading the polishing medium over the floor surface previous to polishing and power driven vanes which operate to exclude dirt and to ventilate the motor.

Other objects and advantages will appear from the following detailed description, taken in connection with the accompanying drawings, in which

Fig. 1 is a top plan view of a floor treating machine, constructed in accordance with the invention parts being broken away to illustrate the interior structure of the machine;

Fig. 2 is an end elevation of the machine partly broken away;

Fig. 3 is an end elevation of a modification, and

Fig. 4 is a partial plan view of the machine showing the handle hinged on the casing.

In a preferred embodiment of the invention illustrated in Figs. 1 and 2 of the drawings, a motor 2 for driving the polishing brush 16 is mounted within a housing 1. The body 9 of this housing is formed by shaping or bending a flat sheet of metal into the desired shape. A metal plate is shaped so that it closely conforms to the contour of the motor 2, this end of the plate being fastened by a bolt 3 or other suitable fastening means to the casing of the motor. There is thus provided a compact arrangement of shell and

motor which can be readily assembled by simply sliding the motor endwise into the shell. This construction also permits the ready removal of the motor, which may be accomplished by loosening the bolt 3 or other fastening means and then sliding the motor endwise from without the shell. From the motor end the plate inclines upwardly as at 4 and is then bent downwardly to form the body 9 of the housing indicated by the reference numeral 1. The extreme forward portion of the plate may be bent into concavo-convex form so as to provide a receptacle 6, which is adapted to receive the polishing medium as will be hereinafter explained.

Side plates 7 provided with openings 8 are suitably fastened to the body plate 9 so as to completely enclose the mechanism within the housing. As is apparent the motor is supported by the casing and is enclosed on all sides by the surrounding plate 9 and the plates 7. A plurality of vanes 10 are preferably mounted on the ends of the motor shaft 11 so that in operation a current of air is forced out through the openings 8 in the side plates 7 at each end of the motor, thus preventing dirt and other foreign matter from entering the motor structure and providing proper ventilation for said motor.

Pulleys 12 fastened on each end of the motor shaft are provided with belts 13 which are in driving connection with pulleys 14 keyed to shaft 15 on which the polishing brush 16 having bristles of suitable thickness is mounted. The shaft 15 is rotatably mounted in radial arms 17 which in turn are pivotally mounted on the hub portions of casing 29. A cross bar 18 may extend between the radial arms so as to provide a rigid frame for the brush. Stops 5, 5 extend from the motor casing 29 to limit the movement of the radial arms within the housing. With this construction, if the radial arms are adjusted so that they pivot loosely on the hub portions the polishing pressure of the brush is equivalent to the weight of the brush. However when the clamping device shown at 19 is tightened so that the radial arms cannot swing on shaft 11 the polishing pressure of brush

16 is equivalent to the weight of the entire machine.

If desired the radial arms may be rigidly fastened to the motor casing 29 thus providing a simple construction wherein the polishing pressure of the brush is always equivalent to the weight of the entire machine. With this construction, instead of having the pulleys 14 mounted on the brush shaft 15 these pulleys may be fastened to or formed integral with the brush core 20, this core being mounted in oilless bearings carried by the radial arms. These arms would be located between the upper and lower runs of the driving belt so that they would not interfere with the brush drive.

Pads 21, 22 of lambskin or other suitable material are placed on the casing beneath the motor and the receptacle 6. These pads resiliently support the mechanism described and also serve as a polishing means when moved over the floor surface. The receptacle 6 is provided with openings 23 through which the polishing medium is distributed onto the pad and thence onto the floor surface. Thus the pad 22 serves to apply the polishing medium to the floor surface and also polish this floor surface.

A handle 24 provided with a cable cord 25 adapted to supply the electrical energy to the motor, is pivotally mounted on the housing at 26. This pivotal mounting is positioned in advance of the center of gravity of the machine so that the operator by increasing the pressure on the handle 24 can increase the polishing pressure of the brush.

Fig. 3 illustrates other features which may conveniently be embodied in the polishing machine of this invention. This machine is constructed as above described with the exception that the receptacle and the resilient pads are omitted. The rear end of this machine is supported by the rollers 27 mounted in the housing while the forward end is supported above the surface of the floor by the brush 16. A bumper 28 of rubber or other suitable material is fastened to the front and sides.

It will, of course, be understood, that while a specific embodiment of the invention has been shown and described, various changes in the details thereof may be made by those skilled in the art and this invention is therefore not to be limited to the structure disclosed but only by the scope of the appended claims.

What is claimed is:

1. A floor treating machine comprising a brush, a motor for driving the brush, a housing for the brush, said housing having a body formed by bending a flat sheet of metal into the desired shape, one end of said body conforming to the contour of the motor and resilient means for supporting said housing.

2. A floor treating machine comprising a brush, a motor for driving the brush, a hous-

ing for the brush, said housing having a body formed by bending a flat sheet of metal into the desired shape, one end of said body conforming to the contour of the motor, the other end bent to form a receptacle, and pads on the opposite ends of said housing to support said housing.

3. In a floor treating machine, a brush, a motor for driving the brush, a housing enclosing the brush and motor, a support for the motor, a polishing material applicator mounted on said housing in front of the brush, and a polishing pad mounted upon said housing, said applicator and housing supporting the entire machine upon the floor.

4. In a floor treating machine, a brush, a motor for driving the brush, a cylindrical housing for the motor having a projecting portion providing a hood for said brush, and polishing pads mounted upon the brush hood and motor housing for supporting the machine upon the floor.

5. In a floor treating machine, a brush, a motor for driving the brush, a housing for the motor, a polishing material applicator mounted forward of the brush, and a polishing pad mounted upon the motor housing behind the brush.

6. In a floor treating machine, a motor, a frame pivoted on said motor, a brush journaled in said frame, driving connections between said motor and said brush, a housing mounted upon said motor and extending over said brush, and a polishing material applicator mounted upon said housing forwardly of said brush and serving to at least partially support said machine upon the floor.

In witness whereof, I hereunto subscribe my name this 14th day of March, 1927.

CHARLES E. REDDIG.