This invention relates to a polisher member adapted to be used in a motor-driven polisher for polishing a floor or the like.

This application is a division of my co-pending application, Serial No. 34,516, filed June 22, 1948, now United States Patent No. 2,665,439, issued January 12, 1954.

In the above co-pending application of which this application is a division, there is disclosed and claimed a motor-driven polisher for use in polishing floors, and so constructed that the full weight of the polisher, as well as the propelling force, is taken up by the rotating polisher member which bears against the floor. In such an arrangement it is very important that the polisher member be balanced and that the polishing material be of substantially uniform thickness so as to avoid uneven vibration which will cause noise, thumping and uneven polishing action.

I have successfully solved the above problem of providing a balanced polisher member by providing a member including a strip of buffer material arranged on the outer surface of the polisher body, with this material being arranged in helical contacting coils on the cylindrical surface of the body. The adjacent edges of the coils contact and it is only necessary that the ends of the buffer material be attached to the polisher body, thus eliminating the seams formerly used. With this arrangement the buffer material is easily provided with a uniform thickness so that a well-balanced polisher body is produced, thereby avoiding excessive vibration and noise and providing an even polishing action.

The invention will be described as related to the embodiment shown in the accompanying drawings. Of the drawings:

Figure 1 is a longitudinal section through a rotatable polisher member embodying this invention; and

Figure 2 is an end elevation of the polisher member, taken from the right-hand end of Figure 1.

The polisher member 27 which is rotatably mounted on an axle 28, comprises a substantially cylindrical body portion 30 having a buffer member 31 attached to the outer surface thereof. This buffer member comprises a backing portion 31A with fibers 31b of cotton, wool or the like attached thereto. The buffer member 31 is preferably in the form of an elongated strip of material as indicated at 31a, arranged in helical coils on the surface of the body portion 30. The adjacent coils are preferably in contact with each other so as to provide a continuous buffering surface that is preferably seamless.

One end of the strip 31a is attached to a depressed portion 30b at one end of the body portion 30, while the other end of the strip is attached to a similar depressed portion 30b at the other end of the body portion 30. These ends are preferably held in place by means of small screws 32. With this arrangement the buffer member 31 may be easily removed from the body portion 30 of the polisher member when it is necessary to replace the buffer. Although such is not necessary, it is preferred that the backing portion of the buffer 31 be attached to the body portion by means of an adhesive such as rubber cement.

The end of the body portion 30 of the buffer member that is adapted to be placed adjacent to the motor shaft is provided with a spindle or drive engaging member 33. The relationship of the buffer member to the motor as well as to the other parts of the polisher is illustrated in applicant's above mentioned co-pending application Serial No. 34,516.

Between the spindle 33 and the adjacent end of the axle 28 there is provided a frictionless bearing support 35, here shown as a ball bearing structure. This ball bearing structure is held in place by means of an expansion ring 36 in the manner well known in the art. The opposite end of the axle 28 has a reduced cross-section and is held in a friction bearing support, here shown as a sleeve 37 of bearing metal. With this arrangement the frictionless bearing is provided only at that end of the polisher member which is contacted by the driving belt.

In order that the body portion 30 will be strong yet light in weight, the longitudinal wall 30c thereof is made progressively thicker from the end adjacent the bearing 37 to the end adjacent the frictionless bearing 35. Thus, the body portion is made stronger on the spindle end as greater forces are applied here, while the other end is of light weight construction.

Having described my invention as related to the embodiment shown in the accompanying drawings, it is my intention that the invention be not limited by any of the details of description unless otherwise specified, but rather be construed broadly within its spirit and scope as set out in the accompanying claim.

1 claim:
A polisher member rotatable about an axis, comprising: a body having a substantially cylindrical buffer receiving outer surface and a drive engaging member on said body at one end of said surface adapted to receive a drive means, the mass of said body progressively decreasing from a relatively heavy mass at said drive engaging member to said one end toward a relatively light mass at the opposite end of said body; a frictionless bearing support for said polisher member substantially coplanar with a transverse plane passing through said drive engaging member at substantially a right angle to said axis; a bearing support at said opposite end of said body; and a buffer member on said outer surface.

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