July 29, 1924.

1,503,048

B. HUBER

FLOOR POLISHING MACHINE

Filed July 16, 1923

2 Sheets-Sheet 1

Fig. 1.

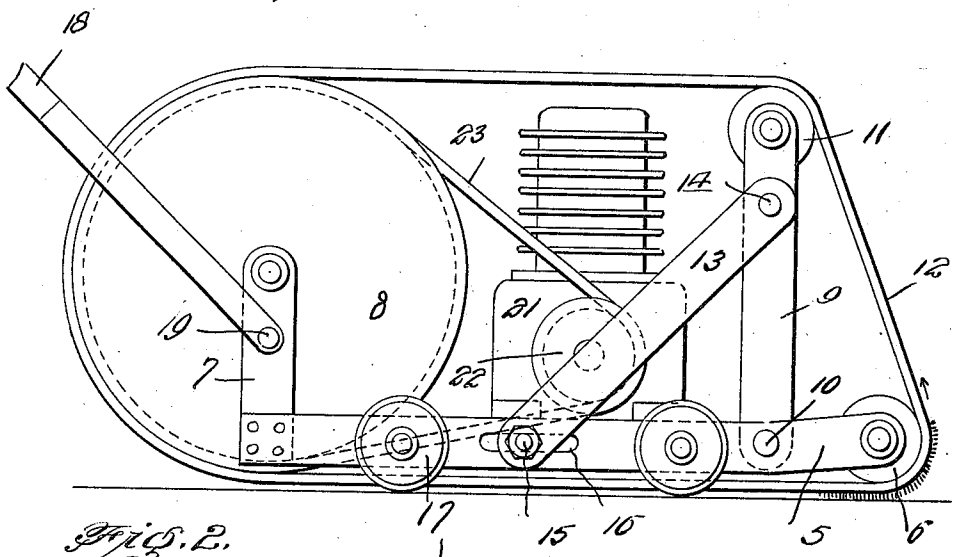
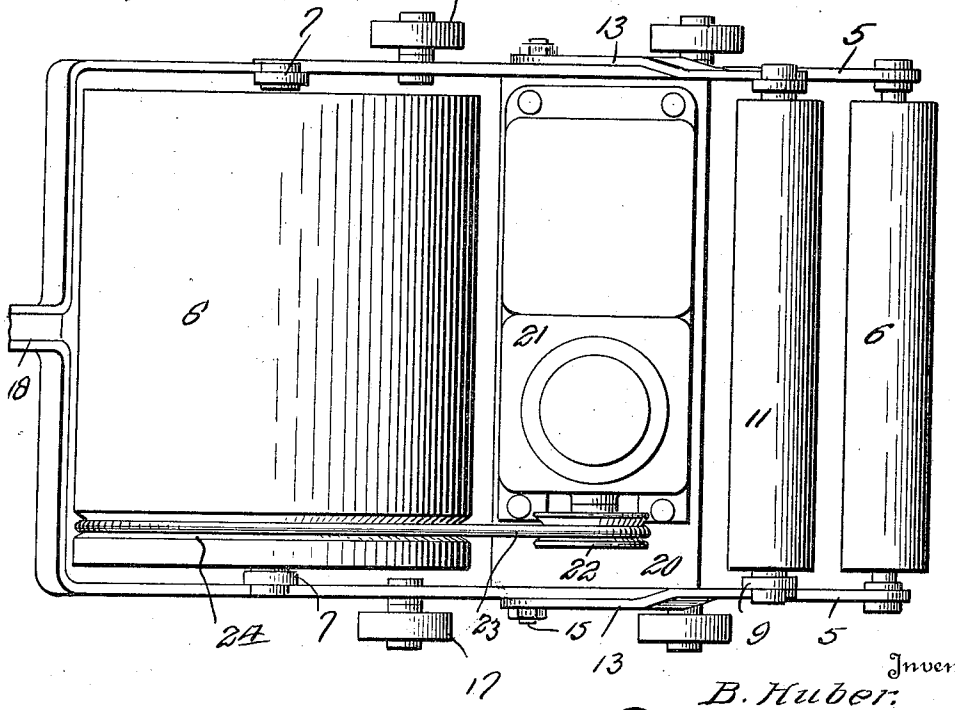


Fig. 2.



Witness.
F. C. Gibson.

Inventor
B. Huber.

By Clarence O'Brien
Attorney

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2 Sheets-Sheet 2

Fig. 3.

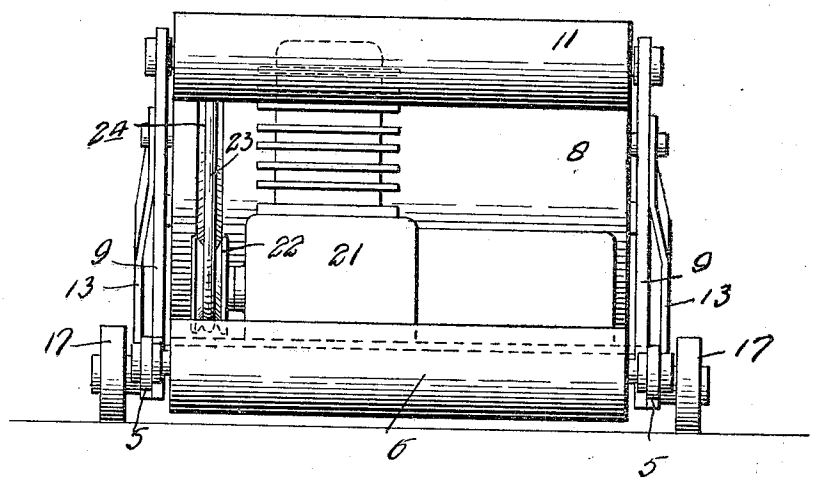
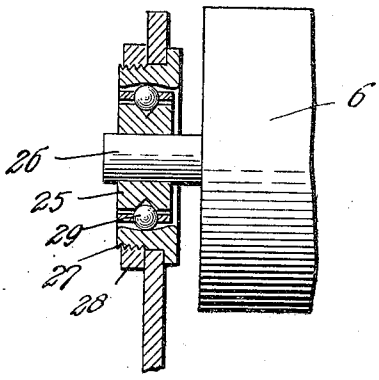


Fig. 4.



Witness.
F. C. Gibson.

Inventor
B. Huber.
By Clarence O'Brien.
Attorney

Patented July 29, 1924. 1,503,048

UNITED STATES PATENT OFFICE.

BERNARD HUBER, OF OAKLAND, CALIFORNIA.

FLOOR-POLISHING MACHINE.

Application filed July 16, 1923. Serial No. 651,824.

To all whom it may concern:

Be it known that BERNARD HUBER, citizen of the United States, residing at Oakland, in the county of Alameda and State of California, has invented certain new and useful Improvements in Floor-Polishing Machines, of which the following is a specification.

This invention relates to certain new and useful improvements in floor polishing machines of that type employing an endless longitudinally arranged polishing belt which passes around suitable rollers journaled in a wheeled frame having a guiding handle.

The primary object of the invention is to generally improve and simplify floor polishing machines of the above kind whereby the same may meet with all the requirements for a successful commercial use.

Another object is to provide a simple and improved construction wherein the polishing belt is driven by a motor for assisting in the travel of the machine over the floor, and wherein simple and effective means are provided for maintaining the polishing belt tight.

Other objects will appear as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawings, and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views,

Figure 1 is a side elevational view of a polishing machine constructed in accordance with the present invention,

Figure 2 is a top plan view of the device shown in Figure 1, with the polishing belt removed,

Figure 3 is a front elevational view of the device shown in Figure 2, and

Figure 4 is an enlarged fragmentary view partly in section and partly in elevation and showing the preferred form of anti-friction bearing employed for the rollers around which the polishing belt passes.

Referring more in detail to the several views, the invention embodies a pair of spaced parallel longitudinal side frame bars 5 in the forward ends of which are suitably journaled the ends of the shaft of a roller 6 of relatively small diameter, upright frame members 7 being rigidly attached to the rear ends of the frame bars 5 and having bearings in the upper ends thereof in which are journaled the ends of the shaft of a relatively large roller 8. Immediately in back of the roller 6 are a pair of upstanding arms 9 having their lower ends pivoted as at 10 to the frame bars 5 for longitudinal swinging movement, and the ends of the shaft of another small roller 11 are suitably journaled in the upper ends of these arms 9. A suitable polishing belt 12 of endless form passes around the rollers 6, 8 and 11, and this belt is maintained in tight condition by swinging the roller 11 forwardly and maintaining it in such position by means of rearwardly inclined links 13 which have their upper forward ends pivoted as at 14 to the arms 9 beneath the roller 11 and which have their lower ends adjustably connected as at 15 to the side frame bars 5. The adjustable connection 15 preferably embodies bolts extending through the arms 13 and through longitudinal elongated slots 16 in the frame bars 5, whereby the lower ends of the links 13 may be moved longitudinally of the frame bars and effectively clamped in any desired adjusted position.

The frame bars 5 are provided with four outwardly projecting stub shafts upon which suitable supporting wheels 17 are journaled, the diameter of these supporting wheels 17 being such as to support the frame bars 5 at the required elevation above the floor so that the nap of the polishing belt 12 will engage the surface of the floor with sufficient pressure.

A suitable handle 18 is provided at the rear of the machine including a bifurcated inner end portion, the arms of which are respectively attached as at 19 to the upright frame members 7 beneath the bearings of the roller 8. The connections 19 are pivotal ones so that the handle 18 may swing vertically to the desired height as required for the particular person operating the machine.

The width of the belt 12 is substantially equal to the length of the rollers 6, 8 and 11, and the latter extend substantially entirely across the space between the side frame bars 5. These frame bars 5 are connected intermediate their ends by means of a platform 20 which is rigidly attached thereto, and a suitable driving motor 21 is mounted upon this platform within the path traveled by the belt 12. The drive shaft of the motor 21 has a pulley 22 fixed

thereon, and a belt 23 passes around this pulley 22 and also around the roller 8, a groove 24 being provided in the periphery of the roller 8 in which the belt 23 is positioned beneath the polishing belt 12. By means of this construction, the belt 12 is motor driven for assisting in the travel of the machine over the floor, in a simple and practical manner.

As shown in Figure 4, the members which support the ends of the roller shafts are provided with suitable openings in which anti-friction bearings are mounted. These bearings preferably include inner raceways 25 fixed upon the adjacent shaft end 26 and associated with an outer raceway 27 which is in the form of a flanged bushing, the flange of which engages one face of the supporting member, and the other end of which is screw threaded to receive a screw ring 28 whereby the outer raceway is effectively clamped to the supporting member. The bearings 29 are disposed between the raceways in a well known manner.

The construction and operation of the invention will be readily understood from the foregoing description, and it is to be understood that minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

1. In a floor polishing machine of the class described, a pair of parallel spaced side frame bars, a roller having a shaft with its ends journaled in the forward ends of the side frame bars, upstanding frame members rigid with the rear end of said frame bars, a second relatively large roller having a shaft with the ends of the same journaled in the upper ends of said frame members, a pair of upstanding arms having their lower ends pivoted to the forward portion of the side frame bars directly rearwardly of the first named roller, for movement longitudinally of the machine, a roller having a shaft with its ends journaled in the upper ends of said arms, a motor, a platform upon which said motor is mounted rigidly connecting the intermediate portions of the side frame bars, a polishing belt passing around the rollers above and below said motor, means operatively connecting the second named roller and the motor for driving said polishing belt, means associated with said pivoted arms and with the side frame bars for adjusting said arms in any desired swung position for maintaining the polishing belt tight, and relative small supporting wheels carried by said side frame bars.

2. In a floor polishing machine of the class described, a pair of parallel spaced side frame bars, a roller having a shaft with its ends journaled in the forward ends of the side frame bars, upstanding frame members rigid with the rear end of said frame bars, a second relatively large roller having a shaft with the ends of the same journaled in the upper ends of said frame members, a pair of upstanding arms having their lower ends pivoted to the forward portion of the side frame bars directly rearwardly of the first named roller, for movement longitudinally of the machine, a roller having a shaft with its ends journaled in the upper ends of said arms, a motor, a platform upon which said motor is mounted rigidly connecting the intermediate portions of the side frame bars, a polishing belt passing around the rollers above and below said motor, means operatively connecting the second named roller and the motor for driving said polishing belt, means associated with said pivoted arms and with the side frame bars for adjusting said arms in any desired swung position for maintaining the polishing belt tight, and relative small supporting wheels carried by said side frame bars, the means for adjusting the swinging arms including rearwardly inclined links pivoted to the upper portions of the arms, and bolts attaching the lower ends of the links to the side frame bars, said side frame bars having longitudinal elongated slots in which said bolts are movable.

In testimony whereof I affix my signature.

BERNARD HUBER.