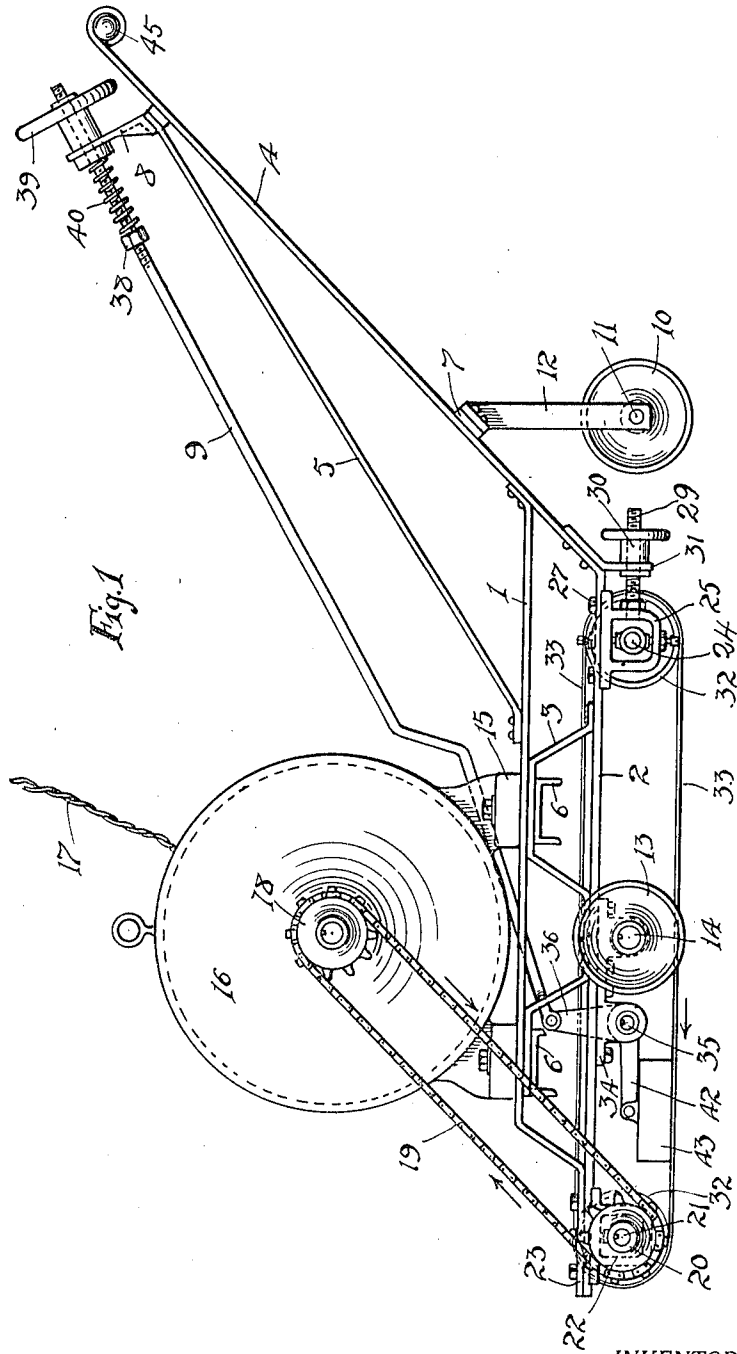


A. GUSTAFSON, R. ENSZLIN & J. M. REYNOLDS.
 SANDPAPERING AND POLISHING MACHINE.
 APPLICATION FILED MAY 6, 1908.

949,181.

Patented Feb. 15, 1910.

2 SHEETS—SHEET 1.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ALFRED GUSTAFSON, RUDOLF ENSZLIN, AND JOHN M. REYNOLDS, OF SAN FRANCISCO, CALIFORNIA.

SANDPAPERING AND POLISHING MACHINE.

949,181.

Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed May 6, 1908. Serial No. 431,237.

To all whom it may concern:

Be it known that we, ALFRED GUSTAFSON, RUDOLF ENSZLIN, and JOHN M. REYNOLDS, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Sandpapering and Polishing Machines, of which the following is a specification.

The object of the present invention is to provide a machine for polishing or surfacing floors, especially wooden floors, by means of sand paper or similar polishing material, which machine will be convenient and rapid in operation.

In the accompanying drawing, Figure 1 is a side view of the machine; Fig. 2 is a plan view; Fig. 3 is a rear view.

Referring to the drawing, the machine comprises a carriage, the frame of which is formed of upper and lower side bars 1, 2, connected at their ends, and also braced by angular bars 3. The rear ends of the lower bars 2 are bent upward and extended, as shown at 4, to form handle bars, which bars 4 are connected to the upper bars 1 by diagonal braces 5. The above named bars are connected across the machine by channel irons 6, by a cross bar 7 across the lower portion of the handle bars, and by a plate 8, which provides a bearing for a pressure rod 9 as hereinafter described. Said frame travels on a rear central wheel 10, on a shaft 11 having bearings in hanger bars 12 depending from the handle bars 4, also upon two wheels 13 on a shaft 14 having bearings at the center of the lower portion of the frame.

Upon the top of the carriage, immediately above the channel irons 6, are secured supports 15 for an electric motor 16, to which current is supplied from any suitable source by a flexible cord 17. Upon the shaft of this motor is secured a sprocket wheel 18, around which passes a sprocket chain 19 which also passes around a sprocket wheel 20 upon a shaft 21 rotating in bearings 22 secured upon the underside of a forward or projecting portion 23 of the frame. A shaft 24 is also provided at the rear portion of the frame, having bearings in yokes 25, adjustably secured to the lower bars 2 by means of bolts 27 passing through slots 28 in said bars 2. Said yokes can be moved longitudinally by means of screws 29 on which are screwed

nuts 30 which bear against brackets 31 through which said screws pass. By screwing said nuts in or out, the distance of the shaft 24 from the shaft 21 can be increased or diminished as may be desired. Upon the shafts 21 and 24 are drums 32, secured only at their inner ends to the shafts, their outer ends being free, disconnected, and unobstructed of access. Around said drums passes an endless belt 33 of sand paper or other polishing material. As the motor rotates, the lower part of the belt of sand paper moves forward in the direction shown by the arrow.

In order to furnish the necessary pressure of the sand paper against the floor which is to be smoothed or polished, there are provided on the under side of the lower bars 2 bearings 34 for a rock shaft 35 carrying a crank arm 36 connected at its free end to a rod 39 which passes at its upper end through the plate 8 and has screwed thereon a nut 38 having a hand wheel 39. A coiled spring 40 is interposed between said plate 8 and a nut 41 screwed on said rod, and presses the nut downward. From said rock shaft 35 extends an arm 42 pivoted at its forward end to a block 43 which bears down upon the endless belt of sand paper, with a pressure derived from the pressure of the coiled spring 40 against the nut 41. However, by screwing the adjusting wheel 39 said block can be raised to remove said pressure, thus permitting the apparatus to be freely wheeled over the floor to any part where it is desired to use it.

An important feature of this invention is the arrangement whereby the belts of smoothing or polishing material can be removed from the drums and replaced by others when desired. This can be done very quickly with the present machine, by reason of the fact that said drums are entirely free and unobstructed at one end, and said drums are supported wholly on one side of the frame of the machine.

It is important for the proper operation of the machine that the shafts of the two drums be maintained accurately parallel with each other, and it is for this reason that there are provided two adjusting screws 29, one at each side of the frame, so that by adjusting said screws more or less, the bearings for the rear transverse shaft 24 can be very accurately adjusted.

A further novel feature of the invention is believed to be the arrangement of the adjusting wheel 39 close to the handle 45, which enables the pressure to be easily and quickly varied, if desired.

We claim:—

1. In an apparatus of the character described, the combination of a carriage having a front axle and a pair of wheels thereon, and a rear axle and a single wheel thereon, a motor mounted on said carriage immediately above the front axle, transverse shafts rotatably supported on said carriage, respectively in front of and behind said axle, said shafts extending outward beyond their bearings, drums secured upon said outwardly extending ends adapted to support an endless belt and having their outer ends free and unobstructed to pass within said belt, and means for rotating said drums from said motor, substantially as described.

2. In an apparatus of the character described, the combination of a carriage having a front axle and a pair of wheels thereon, and a rear axle and a single wheel thereon, a motor mounted on said carriage immediately above the front axle, transverse shafts rotatably supported on said carriage, respectively in front of and behind said axle, said shafts extending outward beyond their bearings, drums secured upon said outwardly

extending ends adapted to support an endless belt and having their outer ends free and unobstructed to pass within said belt, means for rotating said drums from said motor, and means for independently adjusting to and from one of said drum shafts the bearings for the other drum shaft, substantially as described.

3. In an apparatus of the character described, the combination of a carriage, a handle bar extending rearwardly and upwardly therefrom, a motor mounted upon said carriage, drums rotatably supported by said carriage, and adapted to carry an endless belt of suitable polishing material, means for depressing said belt, a connection from said means to a point adjacent to the upper end of the handle bar, and means located near said upper end for adjusting said means to vary said pressure, substantially as described.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

ALFRED GUSTAFSON.
RUDOLF ENSZLIN.
JOHN M. REYNOLDS.

Witnesses:

F. M. WRIGHT,
D. B. RICHARDS.