No. 843,966. PATENTED FEB. 12, 1907.

P. SASS.

FLOOR POLISHING MACHINE.

APPLICATION FILED MAY 14, 1906.

Fig. 1.

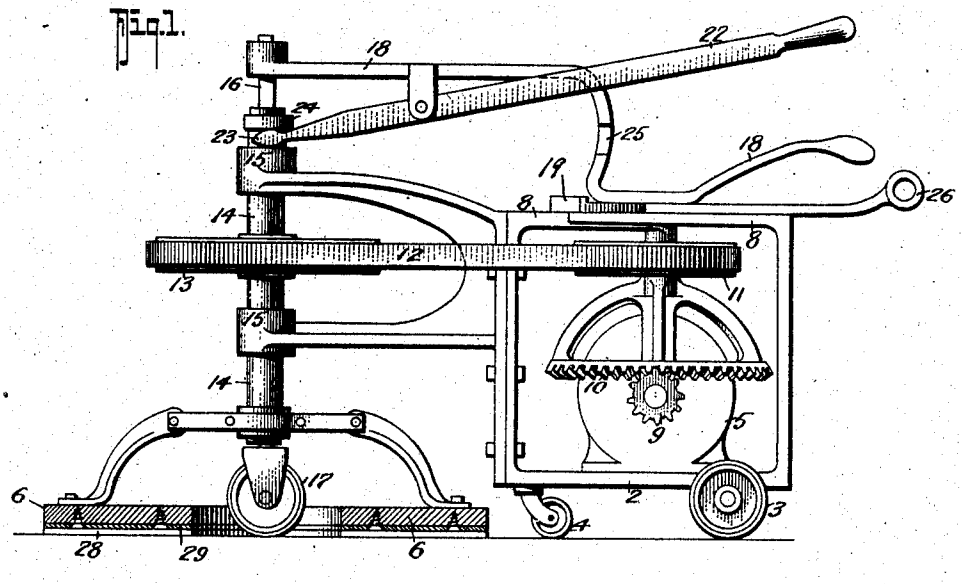
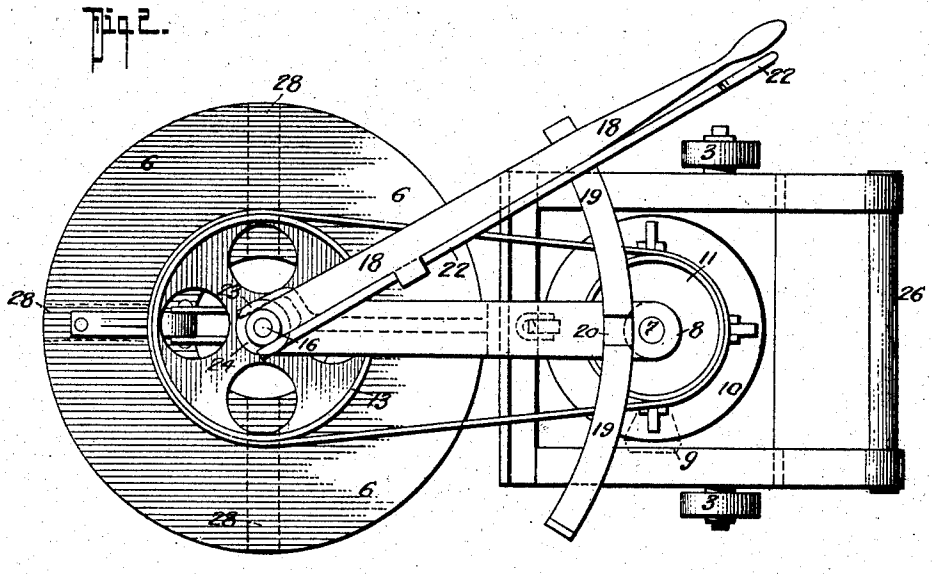


Fig. 2.



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FLOOR-POLISHING MACHINE.

No. 843,966. Specification of Letters Patent. Patented Feb. 12, 1907.

Application filed May 14, 1906. Serial No. 316,699.

To all whom it may concern:

Be it known that I, PETER SASS, a citizen of the United States of America, residing at the city of Vancouver, in the Province of British Columbia, Canada, have invented a new and useful Improvement in Floor-Polishing Machines, of which the following is a specification.

This invention relates to a floor-polishing machine particularly designed for smoothing and polishing the surface of a bowling-alley, which requires to be in as true a plane as practicable; but the machine is also applicable to surfacing a floor of any kind.

The invention is fully described in the following specification and illustrated in the drawings which accompany it, in which—

Figure 1 is a side elevation and part section of the machine, and Fig. 2 a plan of the same with the steering-handle set over.

The device consists of a truck or carriage-frame 2, provided toward its after end with a pair of rubber-tired wheels 3 and in the center toward its forward end one small wheel 4, mounted as a free caster to sustain, with the other two, the weight of an electric or other motor 5, which this portion of the frame is designed to carry, and to facilitate movement where desired.

The motor 5, which furnishes the power for the rotation of the polishing-head 6, is secured on the carriage-frame 2 over these three wheels, and stepped in a bearing on the crown of the motor-casing is a vertical shaft 7, the upper end of which is supported in a bearing in the upper part 8 of the carriage-frame. The shaft 7 is rotated from the motor 5 by a small bevel-pinion 9 on the shaft of the latter, which pinion meshes with a bevel-wheel 10, secured to the shaft 7, the arms of which bevel-wheel are crowned to clear the motor.

Rotatable and endwise slidable in bearings 15, carried on a forward extension from the frame 2 and 8 of the carriage, is a vertical hollow shaft 14, to the lower end of which is secured an annular polishing-head 6. This shaft 14 is driven from the shaft 7 by a band 12 round a pulley 11 on that shaft and a pulley 13, preferably larger in diameter, secured to the hollow vertical shaft 14. The shaft 14 is rotatable and endwise slidable on a stem 16, having at its lower end a rubber-tired steering-wheel 17, which bears on the floor in the open center of the polishing-head. To the upper end of the stem 16 is secured a steering-lever 18, the handle end of which bears on a guide-segment 19, secured to the upper part 8 of the carriage-frame, and is susceptible of movement on that segment to direct the course of the machine, a detent 20 being provided in the middle line.

Pivotally mounted on the steering-lever 18 is a lever 22, having a forked end 23, which engages the under side of a collar 24 on the upper end of the hollow shaft 14, by means of which the polishing-head may be lifted from the floor when required, a notch 25 being provided to hold the lever when the head is in the lifted position.

A handle 26 is secured to the after part of the carriage-frame 8, by which the machine may be moved over the floor as desired.

The lower face of the polishing-head 6 is provided with radial grooves 28 for the reception of strips 29, by which segments of sandpaper or other abrasive material may be secured to the under face of the head 6, the strips 29 being fastened with screws or bolts in the body of the head. When desired, brushes or polishing-cloths may be secured to the head 6.

In this machine the plane of rotation of the polishing-head coincides with the plane with which it is designed to polish. This machine is also so designed that the weight of the mechanism shall be borne chiefly by the motor-carrying portion of the frame and the steering-wheel 17, so that the pressure on the polishing-surface need not at any time exceed the weight of the polishing-heads and its shaft, &c., while the lever 22 enables the polishing-head to be lifted off the surface of the floor when desired. The steering-wheel, resting, as it does, on the floor in the center of the polishing-head, facilitates the directing of the device.

The bevel-pinion and its wheel 9 and 10 and the belt-pulleys 11 and 13 reduce the high speed of the electric or other motor to the moderate speed desirable for polishing, while the form of the head 6 affords facility for the application of an abrasive or polishing material.

Having now particularly described my invention, I declare that what I claim as new, and desire to be protected in by Letters Patent, is—

1. In a floor-polishing machine, the combination with a wheeled frame, an electric motor mounted thereon, of a vertical hollow shaft rotatable and endwise slidable in bear-

ings projecting from the motor-carrying portion of the wheeled frame, an annular polishing-head secured to the lower end of said shaft, a stem movable in the center of the polishing-head shaft upon which said wheeled shaft is endwise movable, a steering-wheel secured to the stem in the center of the polishing-head, means for rotating the hollow shaft from the motor, and means controlled by the operator for endwise moving said hollow shaft substantially as shown and described.

2. In a floor-polishing machine, the combination with a motor-carrying wheeled frame, of a vertical hollow shaft rotatable and endwise slidable in bearings projecting from the motor-carrying frame and having at its lower end an annular polishing-head, a steering-wheel on the lower end of a stem passing through the hollow shaft on which stem the hollow shaft is rotatable and endwise slidable, a lever secured to the upper end of the steering-wheel stem and passing toward the after end of the motor-carrying frame, means for driving the hollow shaft and its polishing-head from the motor and means for endwise lifting the hollow shaft in its bearings.

3. In a polishing-machine, the combination with a motor-carrying wheeled frame, a bracket-frame secured to the motor-carrying frame and projected forwardly thereof, said bracket-frame having bearing portions, a tubular shaft rotatably mounted in said bearing portions, a spindle held within said tubular shaft, a floor-engaging wheel carried by said spindle, a control-lever secured to said spindle for turning the same, and means mounted on the control-lever for moving the tubular shaft on its longitudinal axis, a clamp secure to the tubular shaft near its lower end, arms pivotally mounted in said clamp, a polishing-head secured to said arms, a drive-motor on said motor-carrying frame and connections between the drive-motor and the tubular shaft whereby motion of the drive-motor is imparted to the tubular shaft, substantially as shown and described.

4. In a polishing-machine, the combination with a motor-carrying wheeled frame, a bracket-frame secured to the motor-carrying frame and projected forwardly thereof, said bracket-frame having bearing portions, a tubular shaft rotatably mounted in said bearing portions, a spindle held within said tubular shaft, a floor-engaging wheel carried by said spindle, a control-lever secured to said spindle for turning the same, and means mounted on the control-lever for moving the tubular shaft on its longitudinal axis, a clamp secured to the tubular shaft near its lower end, arms pivotally mounted in said clamp, a polishing-head secured to said arms, a drive-motor on said motor-carrying frame, connections between the drive-motor and the tubular shaft whereby the motion of the drive-motor is imparted to the tubular shaft, said connections comprising a pinion on the motor-shaft, a rim-gear coöperating with said pinion, a spider-frame having a bearing portion for supporting said rim-gear, a spindle on the motor-carrying frame for said last-named bearing portion, a pulley on said last-named bearing portion, a pulley on said tubular shaft and an endless belt taking around said pulleys, substantially as shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

PETER SASS.

Witnesses:
ROWLAND BRITTAIN,
ELLICE WEBBER.