I. B. BARRIRE.

FLOOR POLISHING MACHINE.

APPLICATION FILED NOV. 24, 1908.

926,232. Patented June 29, 1909.

3 SHEETS—SHEET 1.

Fig. 1.

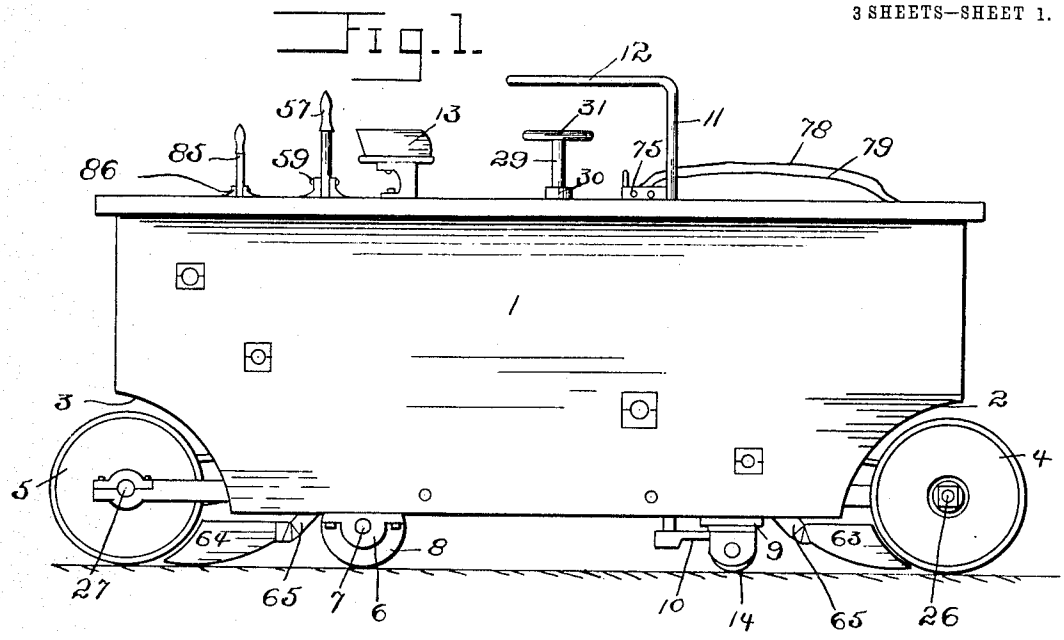
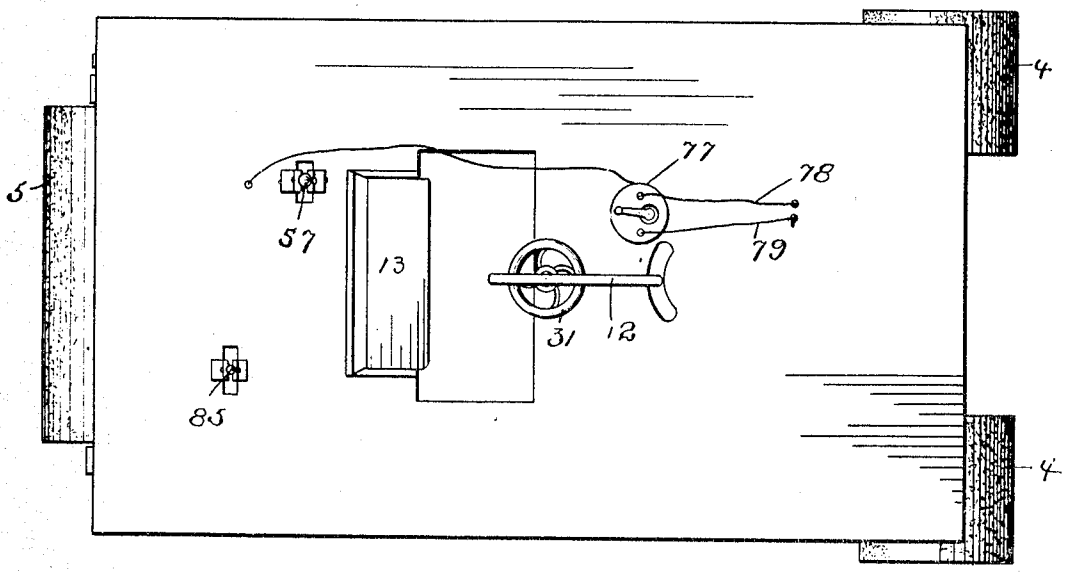


Fig. 2.



Witnesses

J. Wells.

L. R. Basim.

Inventor

Isidore B. Barrire.

By E. G. Crosman,

his Attorney.

I. B. BARRIRE.

FLOOR POLISHING MACHINE.

APPLICATION FILED NOV. 24, 1908.

926,232. Patented June 29, 1909.

3 SHEETS—SHEET 2.

Fig. 3.

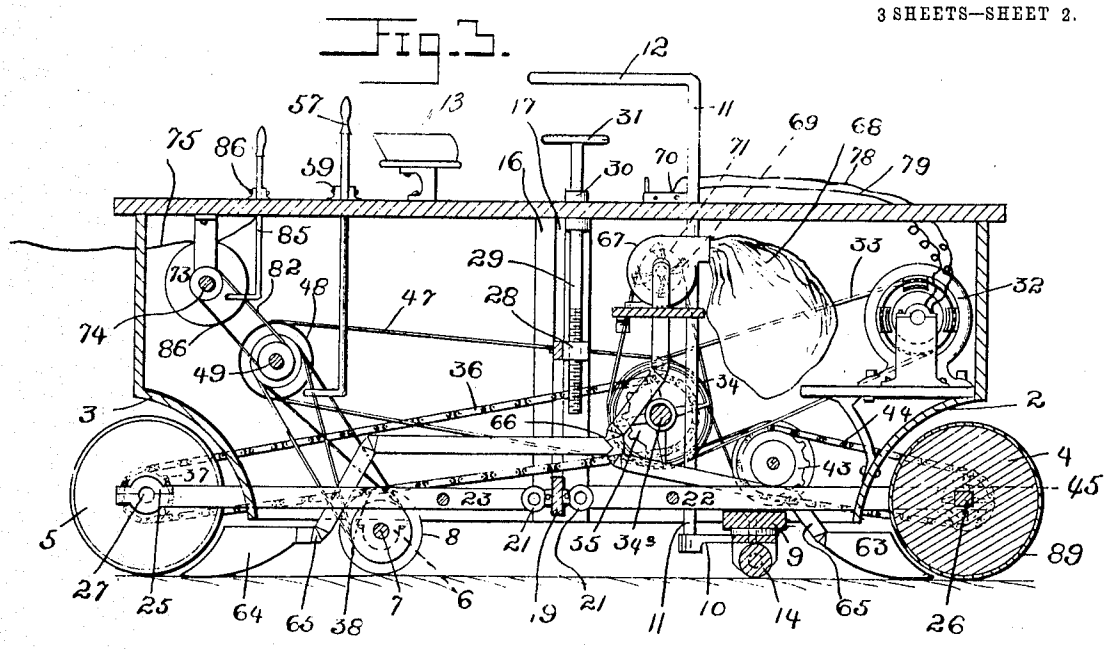
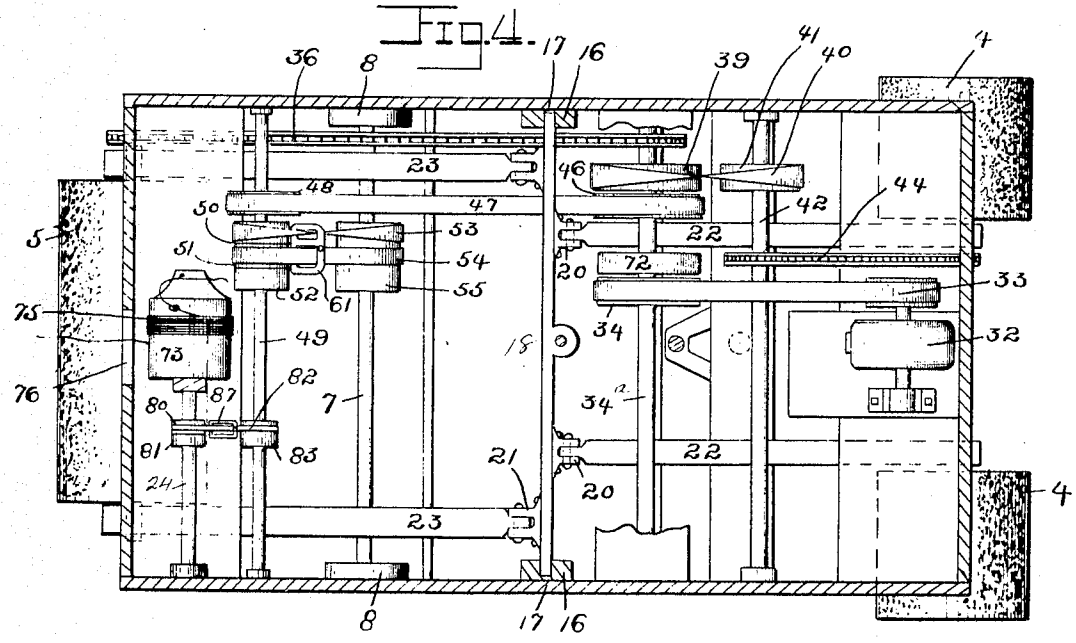


Fig. 4.



Witnesses

J. Wurtz.

L. K. Basim

Inventor

Isidore B. Barrire.

By E. G. Crosman,

his Attorney

I. B. BARRIRE.

FLOOR POLISHING MACHINE.

APPLICATION FILED NOV. 24, 1908.

926,232. Patented June 29, 1909.

3 SHEETS—SHEET 3.

Fig. 5.

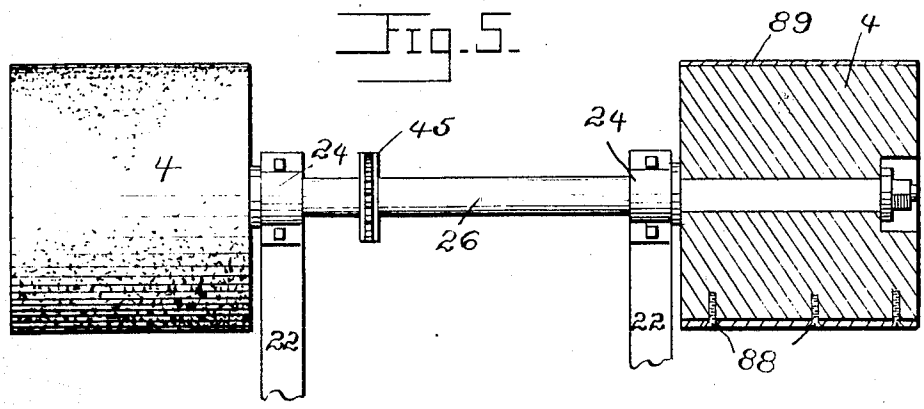


Fig. 6.

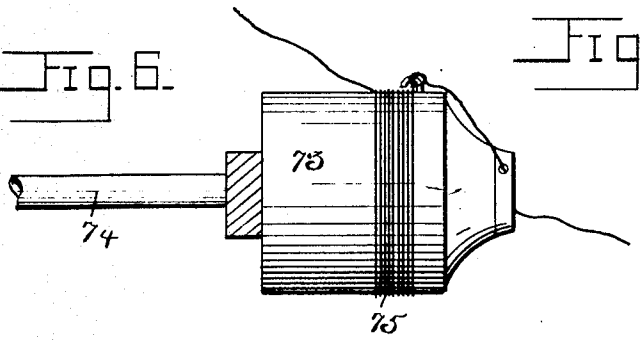


Fig. 7.

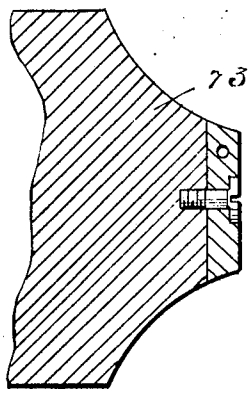


Fig. 8.

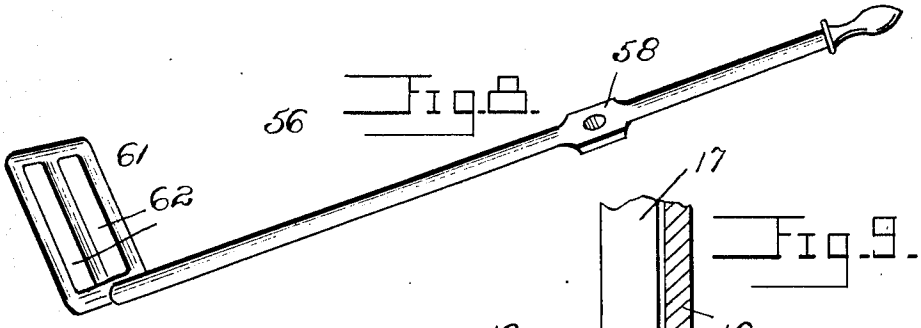
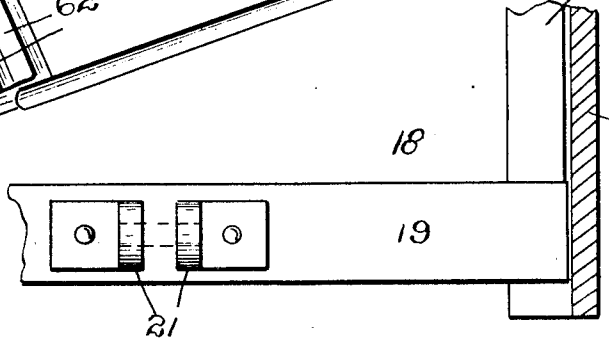


Fig. 9.



Witnesses
J. Wurrells.
L. K. Burns.

Inventor
Isidore B. Barrire.
By C. C. Crosman,
his Attorney.

UNITED STATES PATENT OFFICE.

ISIDORE B. BARRIRE, OF WATERBURY, CONNECTICUT.

FLOOR-POLISHING MACHINE.

No. 926,232. Specification of Letters Patent. Patented June 29, 1909.

Application filed November 24, 1908. Serial No. 464,234.

To all whom it may concern:

Be it known that I, ISIDORE B. BARRIRE, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Floor-Polishing Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to surfacing machines especially adapted for treating floors or the like, and has specially in view a novel arrangement of operating mechanism therefor which will permit of the machine operating upon surfaces closely adjacent to walls, and also the arrangement of the power mechanism so that it will be inclosed within the body of the machine so that dust can not gain access thereto.

In carrying out the objects of the invention generally stated above it will of course be understood that the essential features involved are susceptible to changes in details and structural arrangements, but a preferred and practical embodiment of the same is shown in the accompanying drawings wherein—

Figure 1 is a side elevation of the improved surfacing machine. Fig. 2 is a top plan view. Fig. 3 is a vertical sectional view. Fig. 4 is a horizontal sectional view. Fig. 5 a detail view of the front abrasive rollers and their supports, one of the rollers being shown in section. Fig. 6 is a detail view of the reel or drum for supporting the connection with a source of electrical supply. Fig. 7 is a detail sectional view of a portion of said reel or drum. Fig. 8 is a perspective view of a belt shifter employed in connection with the present invention. Fig. 9 is a fragmentary sectional detail view of the adjustable support for the front abrasive rollers of the machine showing the slidable relation of said support and the body of the machine.

Like characters of reference designate corresponding parts in the several figures of the drawings.

Referring to the accompanying drawings, 1 designates the body of the machine which is preferably rectangular shaped, and has the lower corners of its front and rear ends provided with a curved cut-away portion 2 and 3, respectively which permit of the front and rear abrasive rollers 4 and 5 to operate partially beneath the body of the machine as is more clearly shown in Figs. 1 and 3 of the drawings, and as will be more fully described hereinafter. The said body 1 has rear wheel bearings 6 carrying a supporting and power shaft 7 having rollers 8 mounted thereon and which form the rear support for the machine. The front portion of the body has a truck 9 held in pivotal relation with its underside and which is provided with a horizontal-arranged extension frame 10 which receives one end of a steering rod 11 that projects through the body of the machine from the top thereof, and at its upper end is provided with an operating handle or lever 12 which is in a position to be reached by an operator seated upon the seat 13 of the top of the said body 1. Wheels or rollers 14 are carried by said truck 9.

The body 1 of the machine at approximately its central portion carries vertically arranged guide rods 16 that are oppositely disposed and each provided with a longitudinal groove or slot 17 for the reception of a frame 18, the lower horizontal member 19 of which is provided on opposite front and rear faces with pivot ears 20—21 which receive the pivot ends of roller supporting bars 22—23, for the front and rear abrasive rollers 4 and 5, said bars 22—23 projecting through the front and rear end of the body and being provided with end bearings 24—25 for the roller shafts 26—27. The upper horizontal member 28 of the frame 18 is provided with a threaded opening for the reception of a screw 29 which extends through bearings 30 in the top of the body 1, and at its outer end is provided with a hand wheel 31 for rotating said screw to raise or lower said frame, to cause the front and rear rollers to be raised or lowered as desired.

An electric motor 32 is suitably mounted within the body of the machine and has a belt connection 33 with a pulley 34 fast on a horizontally arranged shaft 34^a which extends transversely across said body and at one end portion within said body, said shaft 34^a carries a sprocket wheel 35 which has a sprocket chain connection 36 with a sprocket wheel 37 mounted on the rear abrasive roller shaft 27, the lower flight of said sprocket chain 36 passing over a sprocket wheel 38 mounted on the propelling and supporting shaft 7 and adapted to impart a rotary movement to the latter, as

well as to the rear abrasive roller 5, to propel the machine, as will be readily understood. The said shaft 34ª, also has a side pulley 39 fast thereon and which has a belt connection 40 with a pulley 41 fast on a transversely extending shaft 42 which carries a sprocket wheel 43 having a sprocket chain connection 44 with a sprocket wheel 45 mounted on the front roller supporting shaft 26. A pulley 46 is mounted on said shaft 34ª adjacent to the side pulley 39 and has a rearwardly extending belt connection 47 with a pulley 38 mounted on a transversely extending shaft 49 arranged horizontally in the rear portion of the body 1 of the machine. Said shaft 49 also carries three pulleys 50, 51, and 52, respectively, the pulley 50 being fast on the shaft and turning therewith; the pulley 51 being loose thereon, and the pulley 52 being of the well known type termed "reversing," and which rotates oppositely to the rotation of said shaft. Two belts 53 and 54 are used for connecting said pulleys with a pulley 55 carried by the power shaft 7, said pulley 55 being a long one to permit of the belts being shifted thereon. A belt shifter 56 has its handle portion 57 projecting through and above the top of the body 1, and is provided with an intermediate flattened portion 58 which has a pivotal engagement 59 in the top of the body, the lower power portion projecting into said body and being provided with an angular end 61 provided with longitudinal openings 62 through which said belts 53 and 54 pass, said openings being so arranged that the belts are held in a spaced apart relation. Assuming the parts to be in the position shown in Figs. 3 and 4 of the drawings, it will be seen that by rocking the belt shifter 56 on its pivotal mounting, the belts 53 and 54 will be shifted so that the belt 53 will be on the loose pulley 51; the belt 54 will be on the reversing pulley 52, and the pulley 50 will be an idler. The shifting of the belts will impart a reverse movement to the power shaft 7, and, of course, reverse the movement of the machine.

A dust receptacle or scoop is held closely adjacent to the rear of each of the front and rear abrasive rollers 4 and 5, said dust receptacles being designated 63 and 64, respectively and are of substantially the same width at their mouth portions as the longitudinal length of said rollers. A conveyer pipe 65 extends from each dust receptacle 63—64, said pipes having a junction 66 within the body 1 and extend upwardly therein and through a suction fan casing 67 and deliver the dust into a dust bag or receptacle 68. The fan or blower 69 of said casing 67 is mounted on a shaft 70 carrying a pulley 71 which has a belt connection with a pulley 72 carried by the shaft 34ª.

From the foregoing description it will be seen that when power is applied to the shaft 34ª through its connection with the motor 32, a rotary movement will be imparted to the propelling shaft 7 of the machine, the front and rear abrasive rollers 4 and 5, and the suction fan or blower 69, and it will also be seen that all of the operating mechanism of the machine is arranged within the body of the machine so as to be protected from the dust incidental to the grinding operations of the rollers 4 and 5 upon the floor or other surface.

A drum or reel 73 is rotatably mounted on a transverse shaft 74 arranged horizontally in the rear of the body 1 and has wound thereon a wire 75 which has one end portion passing an opening 76 formed in the rear end of the body 1 and which is connected with a suitable source of electrical supply. The other end of said wire or conductor passes from said reel or drum 73, up and through the top of the body 1 and connects with a switch 77, having the usual connections 78, 79 with the motor 32. The shaft 74 carries two pulleys 80—81, the pulley 80 being fast thereon, and the pulley 81 having a reversing connection with said shaft. A belt 82 connects said pulleys with a pulley 83 fast on the shaft 49. A belt shifter 85 similar in shape to that belt shifter 56, has a pivotal mounting 86 in the top of the body 1, and an angular end 87 adapted to shift the belt 82 from the pulley 80 to the reversing pulley 81, or vice versa, as desired. It will be seen that the described connection of the motor with its source of electrical supply, is one that permits of the same having a wide range of movement over the surface being treated, owing to the fact that the reel or drum will be operated to wind or unwind its conductor in accordance with the direction it is traveling relative to the source of electrical supply.

Preferably the abrasive rollers are arranged relative to the body of the machine as shown in Figs. 2 and 4 of the accompanying drawings. The front rollers 4 being spaced apart and having their outer ends projecting slightly beyond the body of the machine, so as to adapt them for working close to walls or other vertical obstructions. The rear roller 5 is arranged to act upon the space between the front rollers, said rear roller being of less width than the width of the body.

Any suitable abrasive material may be used for the working surfaces of the rollers, and preferably said abrasive material is held thereon in such a manner that it may be readily detached when worn out, or to permit of finer or coarser material to be used, as circumstances may render necessary or desirable. A convenient means for retaining the said material in detachable relation with the roller is shown in Fig. 5

wherein screws 88 are used the heads of which are sunk well into the material 89.

Claims:—

1. A machine of the character described comprising a body provided with propelling mechanism, side guides carried by said body, a frame slidably mounted in said side guides, front and rear abrasive rollers having a pivotal connection with said frame, and means for adjusting said frame.

2. A machine of the character described comprising a body provided with propelling mechanism, guiding standards carried by said body, a frame slidably mounted in said standards, abrasive rollers having a pivotal connection with said frame, and a screw carried by said body and adapted to raise or lower said frame.

3. A machine of the character described comprising a body provided with propelling mechanism, longitudinally grooved standards carried by said body, a frame slidably mounted in said grooves, supporting arms having a pivotal connection with said frame, abrasive rollers carried by said arms, and means for raising or lowering said frame.

4. A machine of the character described comprising a body provided with propelling mechanism, longitudinally grooved standards oppositely disposed within said body, a frame slidably mounted in the grooves of said standards, arms projecting from opposite sides of said frame and having a pivotal connection therewith, abrasive rollers carried by the ends of said arms, and a screw carried by said body and provided with a hand wheel at one end, and having its other end in engagement with said frame, whereby said screw may be operated to raise or lower said frame.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

ISIDORE B. BARRIRE.

Witnesses:

M. E. DUNN,

ARTHUR J. SAVARD.