

Aug. 25, 1931.

W. G. ORTH
PORTABLE POWER DRIVEN MACHINE FOR SCRUBBING, POLISHING,
RESURFACING, OR OTHERWISE TREATING FLOORS

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2 Sheets-Sheet 1

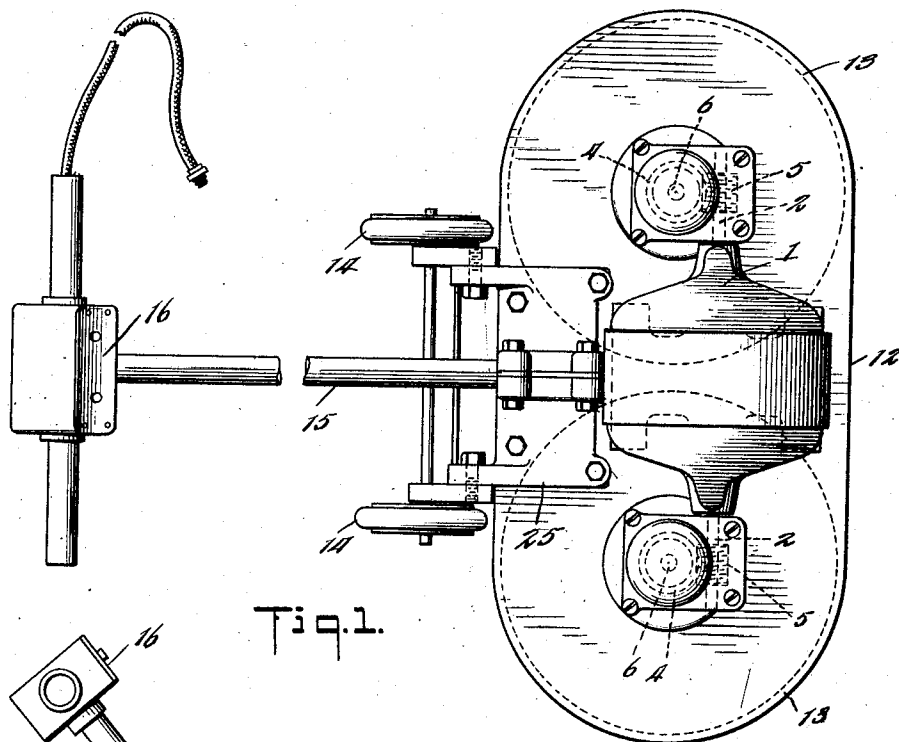


Fig. 1.

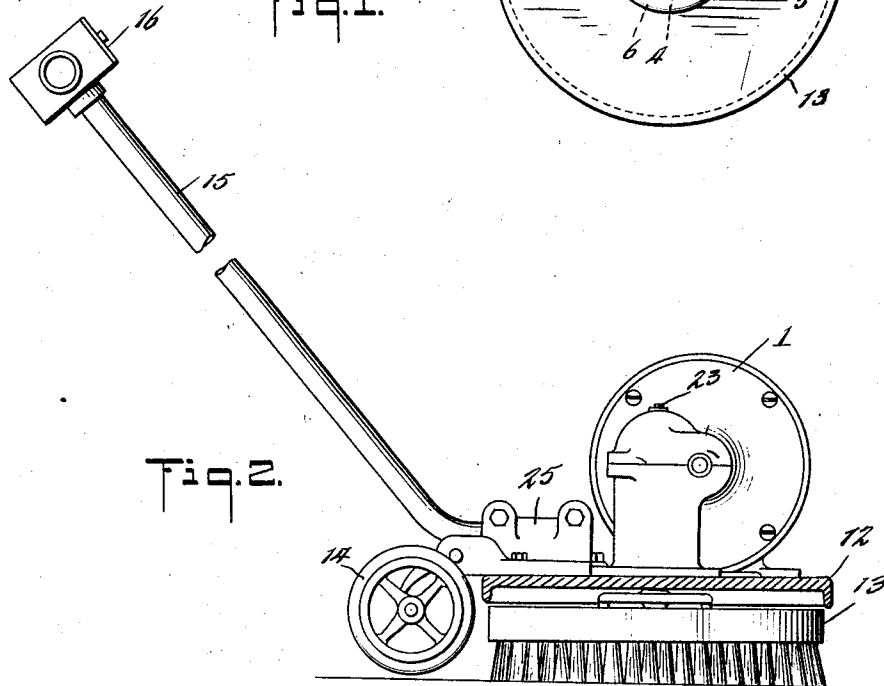


Fig. 2.

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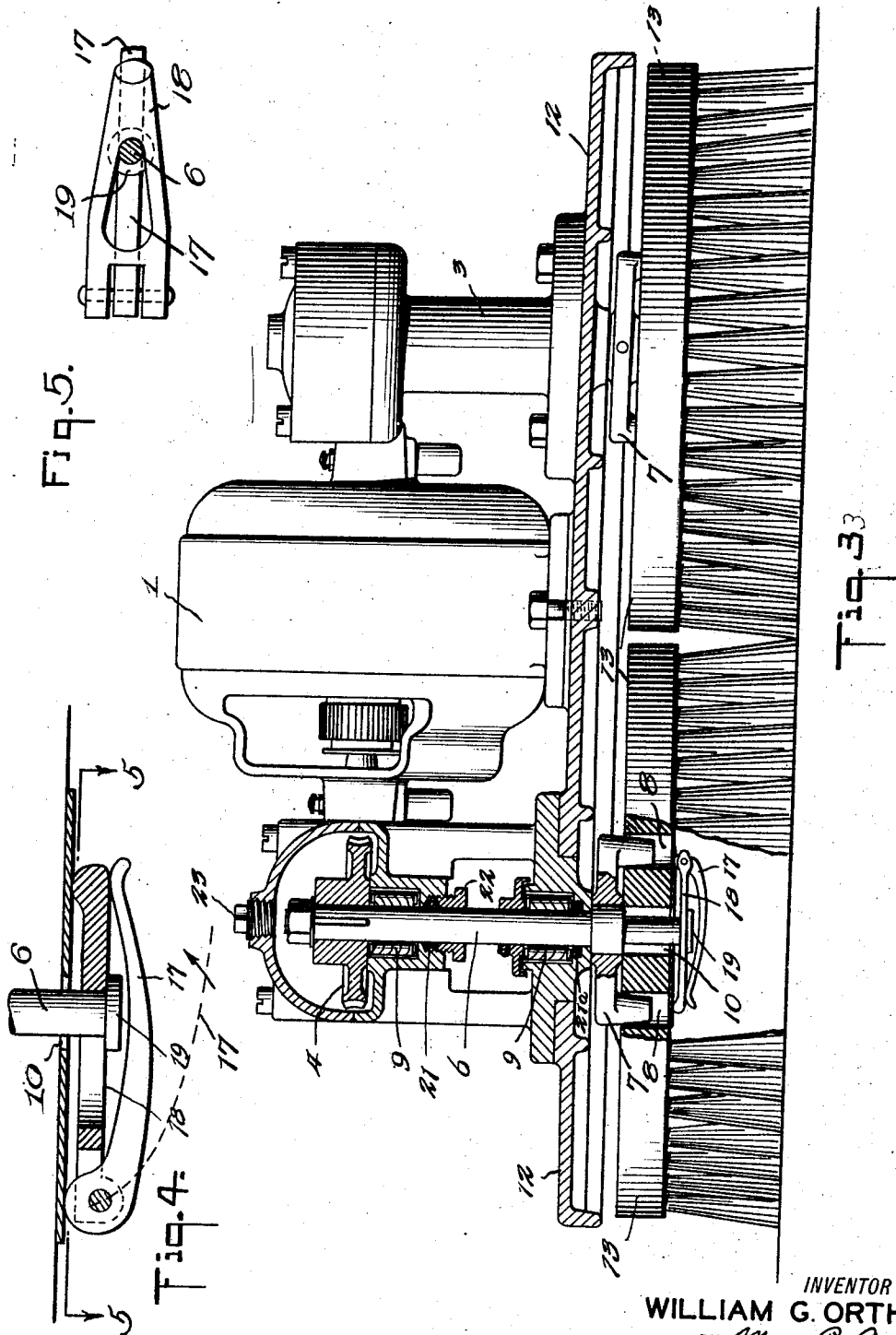
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2 Sheets-Sheet 2



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PORTABLE POWER-DRIVEN MACHINE FOR SCRUBBING, POLISHING, RESURFACING, OR OTHERWISE TREATING FLOORS

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This invention relates to a floor scrubbing and polishing device and more particularly to a portable machine operated by an electric motor.

5 The principal object of the invention is to provide a device of this nature comprising a pair of circular scrubbing brushes arranged side by side and each being gear driven by the motor shafts.

10 Another object of the invention is to provide an improved and novel means for connecting the said brushes to the frame of the mechanism.

Other objects will appear as the disclosure progresses. The drawings are intended merely to indicate a possible embodiment of the invention. It is obvious that the needs of manufacture may necessitate certain changes. It is therefore not intended to limit 20 the invention to the embodiment illustrated but rather to define such limitations in the appended claim. For a more general understanding of the invention attention is now called the drawings. In these drawings like 25 reference characters denote like parts throughout the specification.

Figure 1 is a top view of the device.

Figure 2 is an end view thereof.

Figure 3 is a side view partly in section.

30 Figure 4 is a detail of the clamping means for the brushes.

Figure 5 is a section on line 5-5 of Figure 4.

In brief the device consists of a motor to 35 which are geared two vertical shafts having at the lower ends attached cleaning and scrubbing brushes. As the motor shaft revolves the brushes will rotate therewith and thus clean or scrub the floor. The motor is positioned between the operating mechanism. 40 As both of the operating mechanisms are alike only one will be described.

Referring now to the drawings in detail, numeral 1 designates the motor provided with 45 a shaft 2 on which is keyed a worm 5. Meshing with the worm is a worm wheel 4 keyed on the vertical shaft 6. Numeral 3 designates a casing to house the shaft 6 and its associate parts. To avoid friction and noise roller 50 bearings 9 are provided for the shaft 6.

In practice the chamber formed in the casing 3 above the worm wheel 4 is filled with oil or grease and to avoid said oil or grease from reaching the brush 13 packing 21 and packing glands 22 are provided. The lower 55 shaft bearing 9 may be also periodically oiled and to prevent the oil from reaching the brush an oil retainer 21a in the form of a leather or felt disk is placed below the said lower bearing in a depression formed in the 60 plate 12 as indicated in Figure 3. At the top of the chamber used for retaining the oil and grease for the worm wheel 4 and its associate parts is a threaded opening through which to insert the said lubricant. This 65 opening is provided with a threaded plug 23.

Novel means are provided for conveniently attaching and detaching the brush to the vertical shaft 6 as follows: Keyed to the shaft 6 is a U-shaft element 7 which fits in the 70 holes 8 formed in the base of the brush 13. Between the holes 8 is a central hole 10 as noted in Figure 3. This hole is large enough for the bottom shaft head 19 to pass through. Between the shaft head 9 and the under side 75 of the brush base is a removable locking mechanism consisting of a slotted plate 18 and a lever 17 hinged to the plate 18. To fasten the brush in place the lower part of the shaft 6 with the U-shaft element attached 80 thereto is passed through the holes 8 and 10 respectively of the brush base. The locking mechanism is then used to securely fasten the brush in place in the following manner. 85 As noted in Figure 5 the plate 17 is formed with a slot so that the shaft head 19 can pass through. The first operation consists of passing the shaft head 19 through the slot of the plate and then moving the mechanism to the left so that the plate will rest on the 90 shoulder of the head 19. The next operation consists of raising the lever 17 until the free end is in contact with the bottom of the free end of the plate as shown in Figure 4. At 95 the pivoting end of the lever is a cam. Now when the lever is lifted up the cam surface bearing against the bottom of the brush base will firmly secure the brush in place against rattling or loose motion.

Numeral 25 designates a bracket attached 100

to the plate 12. Fastened to this plate is a handle 15 for manually moving the device. At the opposite end of the handle is an electric switch 16 to operate the motor. Attached to the bracket 25 are a set of bearings through which pass a shaft having a set of wheels 14 for moving the apparatus around.

It will thus be seen that I have provided a simple, efficient and easily operated device for cleaning and scrubbing floors. With the novel clamping means the brushes can easily be removed and replaced with any other polishing device such as a waxing felt or the like.

Having described my invention, I claim:

In a clamp for holding a brush to a polishing and surfacing machine, the combination of a drive shaft, an enlarged head at the bottom of said shaft, a plate having a slot therein for engagement with said drive shaft, a lever provided with a cam pivoted at one end to said plate, said cam bearing against the under side of said brush, the free end of said lever adapted to bear against the opposite end of said plate.

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