Feb. 23, 1943. N. A. PETLEY 2,312,189

CEILING WASHING MACHINE

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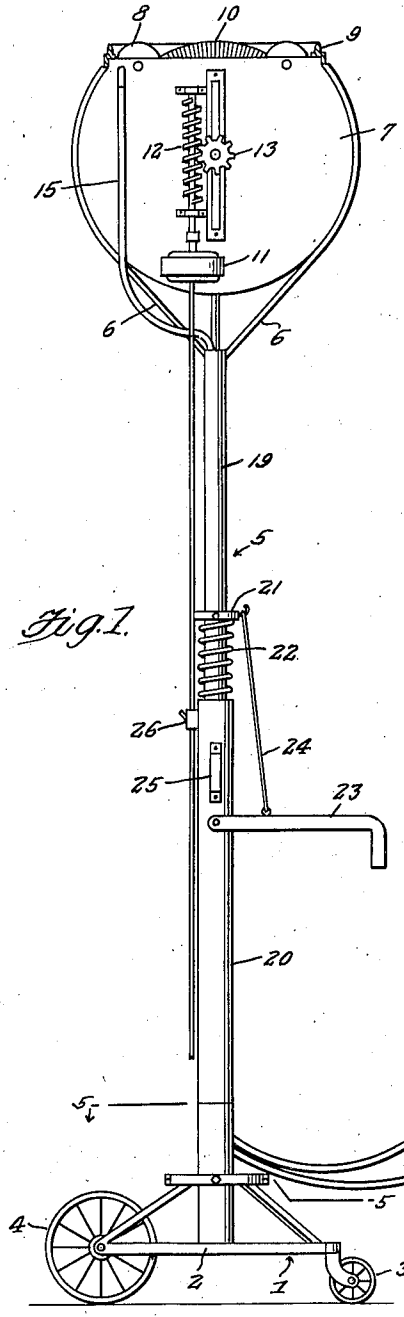
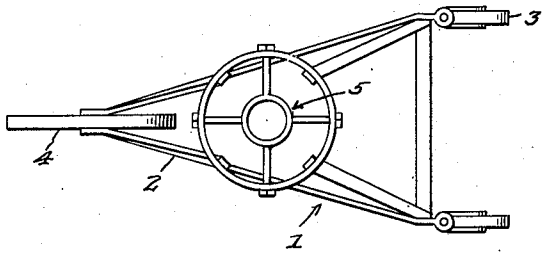


Fig. 1.

Fig. 5.



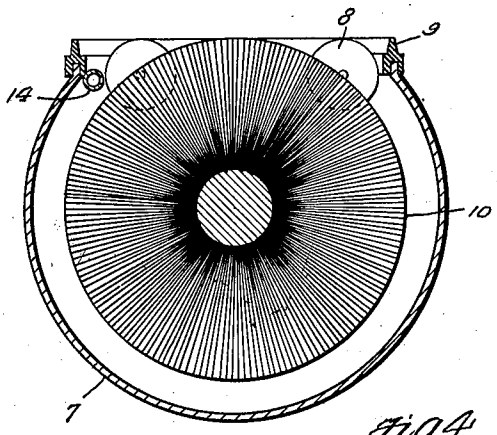


Fig. 4.

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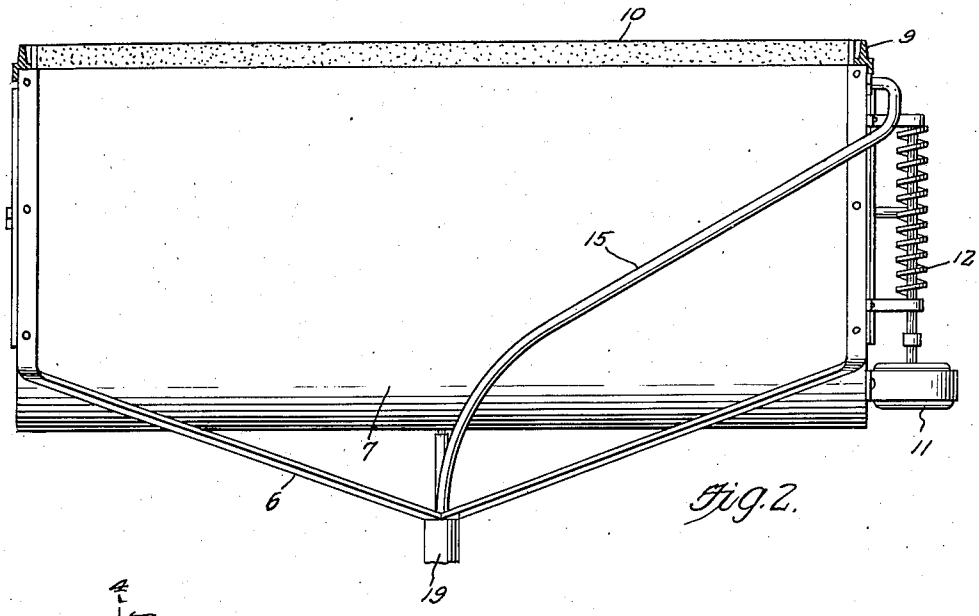


Fig. 2.

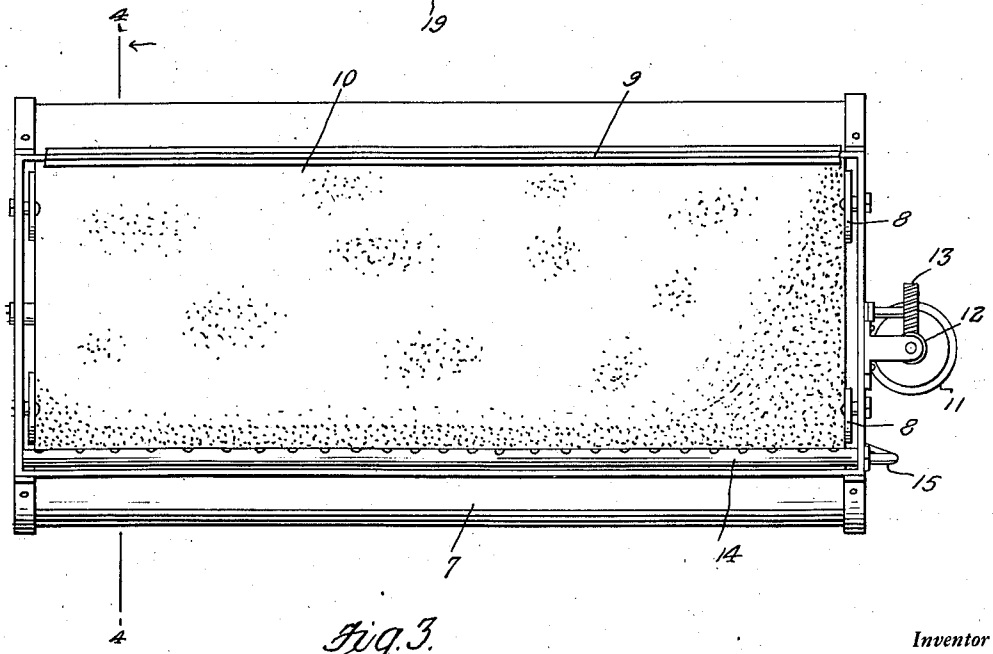


Fig. 3.

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CEILING WASHING MACHINE

Norman A. Petley, Portland, Maine

Application July 10, 1942, Serial No. 450,436

1 Claim. (Cl. 15—50)

The present invention relates to new and useful improvements in ceiling washing machines, and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character comprising a novel structure for supporting a rotary, motor driven brush in engagement with the surface to be cleaned.

Another very important object of the invention is to provide a ceiling washing machine of the character described which is vertically adjustable to meet various conditions.

Other objects of the invention are to provide a ceiling washing machine of the aforementioned character which will be comparatively simple in construction, strong, durable, highly efficient and reliable in use, compact, light in weight and which may be manufactured at low cost.

All of the foregoing and still further objects and advantages of the invention will become apparent from a study of the following specification, taken in connection with the accompanying drawings wherein like characters of reference designate corresponding parts throughout the several views, and wherein:

Figure 1 is a view in side elevation of a ceiling washing machine constructed in accordance with the present invention.

Figure 2 is a view in front elevation of the upper portion of the device.

Figure 3 is a top plan view of the upper portion of the device.

Figure 4 is a vertical sectional view, taken substantially on the line 4—4 of Figure 3.

Figure 5 is a view in horizontal section, taken substantially on the line 5—5 of Figure 1, showing the supporting truck or carriage in top plan.

Referring now to the drawings in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a truck 1. The truck 1 includes a frame structure 2 which is substantially triangular in plan, said frame structure being provided, on its rear, with caster wheels 3 and on its front with a single, comparatively large wheel 4.

Rising from the truck 1 is a vertically adjustable tubular standard 5. Secured through the medium of arms 6 on the upper end of the standard 5 is an elongated pan 7, which, as illustrated to advantage in Figure 4 of the drawings, is of substantially segmental cross section and open at its top.

Rollers 8 are journaled in the upper portion of the pan 7 and extend upwardly therefrom for engagement with the ceiling to be cleaned. Mounted on top of the pan 7, also for engagement with the ceiling to be cleaned, is a sealing and wiping element 9 of resilient rubber.

A rotary brush 10 is operable in the pan 7 and engageable with the ceiling to be cleaned. Mounted on one end of the pan 7 is an electric motor 11. The motor 11 is operatively connected to the brush 10 by means including worm gears 12 and 13. Suitable vertically slidable bearings are provided in the ends of the pan 7 for permitting vertical adjustment of the brush 10 to compensate for wear on said brush as it occurs. It will be observed that the worm 12 is of sufficient length to permit this.

Mounted in the upper portion of the pan 7 is a perforated pipe 14 which parallels the brush 10 and which is adapted to spray water thereon. A tube 15, for connection with a suitable source of water under pressure, extends upwardly through the standard 5 and is connected to one end of the spray pipe 14. A control valve 16 is interposed in the tube 15. A flexible drain tube 17 also extends upwardly through the tubular standard 5 and is connected to the lower portion of the pan 7. A tubular hook 18 is provided on the other end of the drain tube 17 for engagement over the rim of a sink or receptacle.

The standard 5 includes telescopic male and female sections 19 and 20, respectively. A collar 21 is fixed on the male section 19. Interposed between the collar 21 and the female section 20 is a coil spring 22. Thus, the pan 7 is yieldingly supported. A lever 23 is pivotally mounted on the female section 20 of the standard 5. A rod 24 connects the lever 23 to the collar 21 for pulling the male section 19 downwardly against the tension of the coil spring 22. A stationary handle on the female standard section 20 is indicated at 25. A suitable electric switch 26 is provided adjacent the handle 25 for controlling the motor 11.

It is thought that the operation of the device will be readily apparent from a consideration of the foregoing. Briefly, the valve 16 is opened to the desired position for spraying water on the brush 10 from the perforated pipe 14 and the electric motor 11 is energized for rotating said brush. With the rotating brush 10 in contact with the ceiling to be cleaned, the device is moved about on the floor of the building through the medium of the truck 1. Water which gravitates to the bottom of the pan 7 is drained therefrom through the tube 17. By swinging the lever 23 downwardly the brush 10 may be expeditiously disengaged from the ceiling when desired.

It is believed that the many advantages of a ceiling washing machine constructed in accord-

ance with the present invention will be readily understood, and although a preferred embodiment of the device is as illustrated and described, it is to be understood that changes in the details of construction and in the combination and arrangement of parts may be resorted to which will fall within the scope of the invention as claimed.

What is claimed is:

A ceiling washing machine comprising a vertical support, a pan, for the reception of water, mounted on the upper end of said support, a brush journaled in the pan and rotatable in a vertical plane, said brush including a shaft projecting from the pan, a gear on said shaft, a worm gear mounted vertically on the pan, the first-named gear meshing with and being adjustable on said worm gear, and an electric motor mounted on the pan and operatively connected to the worm gear.

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