July 22, 1941. R. FRAAS 2,250,015

CLEANER FOR DUST MOPS

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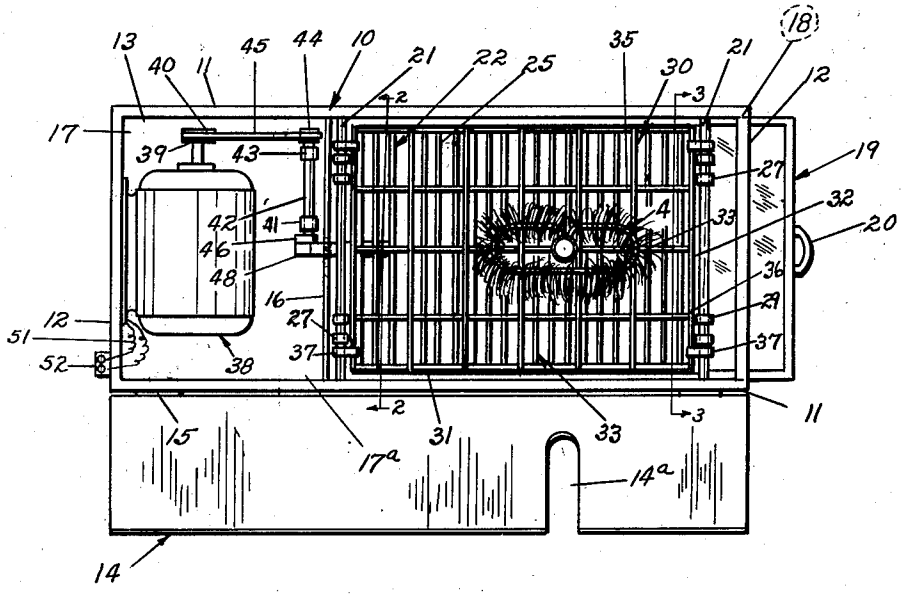


Fig. 1.

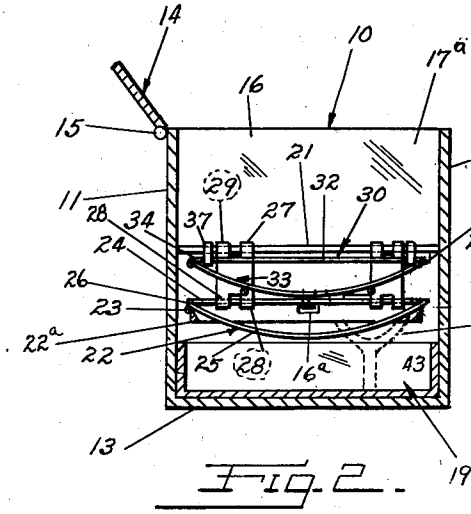


Fig. 2.

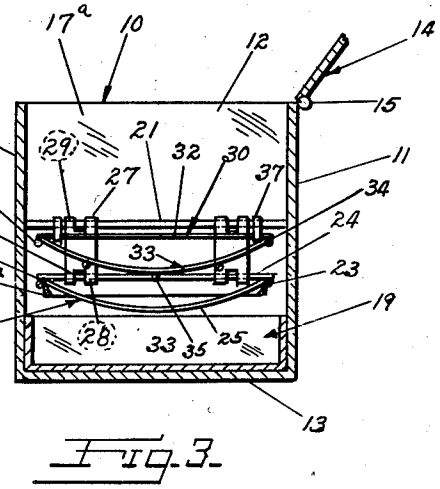


Fig. 3.

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CLEANER FOR DUST MOPS

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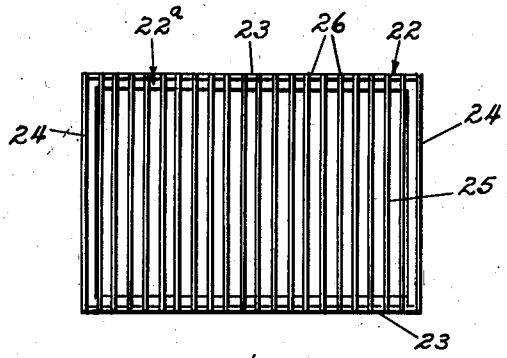


Fig. 4.

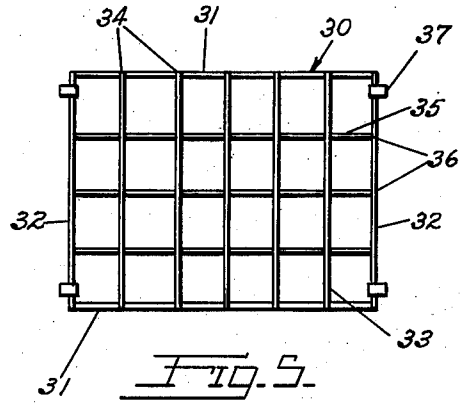


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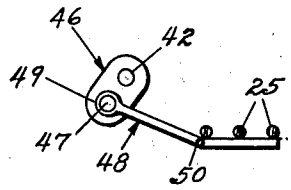


Fig. 6.

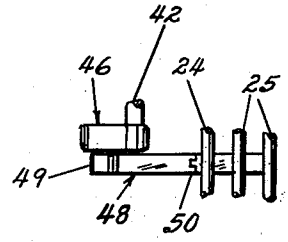


Fig. 7.

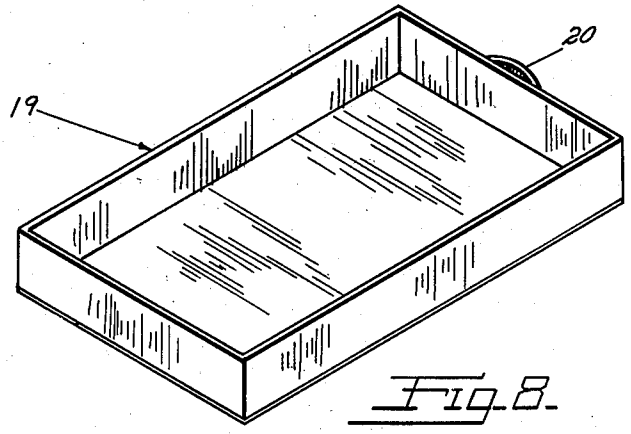


Fig. 8.

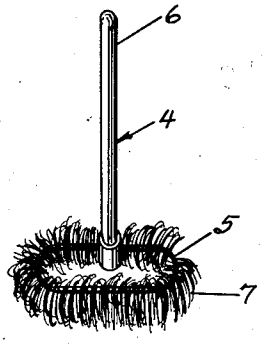


Fig. 9.

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2,250,015

CLEANER FOR DUST MOPS

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Application July 17, 1940, Serial No. 345,899

2 Claims. (Cl. 15—94)

This invention relates to cleaners for dust-mops, and especially to such cleaners as designed for "string" mops. Such mops are in general use in hospitals and sanitariums, as well as in homes, where the common practice is to jar the mops over fire-escapes or other out-side bearing to discharge the dust, which flies in all directions. This is therefore a very unsanitary practice, and the main object of the present invention is to provide means for both discharging or ejecting the dust from the mop and at the same time confining and enclosing the dust and preventing its untidy and unhealthful dispersion.

Another object is to provide a dust-mop cleaner including a suitable box or housing with hinged lid, a shaker-grate horizontally and oscillatably mounted in the box in spaced relation to the bottom thereof, a stationary mop-supporting rack of spaced cross-bars, mounted in the box in spaced relation above the shaker-grate as a support for the mop-head, as the mop strands or strings fall down onto the shaker-grate, a gate or door in the box for cleaning out the dirt and lint, with a catch tray slidably mounted therein, and means for vibrating or oscillating the said shaker-grate for jarring out dust from the mop strands.

With the foregoing objects and advantages in view, together with such additional objects as may appear from the specification, a preferred embodiment of the invention as shown in the drawings, wherein:

Figure 1 is a top plan view of the dust-mop cleaner, as constructed in accordance with my invention, the box-lid thereof being raised to show the interior arrangement of elements.

Figure 2 is a cross-section on the line 2—2 of Figure 1.

Figure 3 is a cross-section on the line 3—3 of Figure 1.

Figure 4 is a plan view of the shaker-grate, removed from the housing or dust-box.

Figure 5 is a plan view of the stationary mop head support, removed from the box.

Figures 6 and 7 are enlarged details of the eccentric shaking, vibrating or oscillating mechanism.

Figure 8 is a perspective view of the catch tray, removed from the box.

Figure 9 is a perspective view of a conventional form of cotton-string-mop, for the cleaning of which this invention is especially designed.

This invention is primarily designed for use in cleaning "string"—dust mops, a common form of which is shown at 4 in Figure 9 and which comprises an ovate loop 5 of strip metal with handle 6 attached medially at one side of the loop, and a plurality of closely arranged string cords 7 or strands of cotton, or the like, depended all around the said loop.

The cleaning device comprises a suitable oblong housing or box 10, including sides 11, ends 12, bottom 13 and top or lid 14 hinged at 15 to one side. A partition 16 is erected vertically and transversely near one end to provide a motor compartment 17 and a mop compartment 17a, and an oblong opening or gate-way 18 is formed through the lower part of one end for slidably receiving a dirt or catch-tray or drawer 19 therethrough, the same being of a width snugly yet freely to slide within the sides of the housing or box 10, along the bottom thereof, and of a length to fill the bottom of the box up to the partition 16. The outer end of the tray is conformed with that end of the box, and is provided with a handle 20.

Shaker supporting rods 21 are rigidly set across the interior of the box at each end of the mop compartment 17a, these rods being substantially and equally spaced above the tray 19. An open shaker-grate 22 is provided, of a width slightly less than the width of the compartment 17a and of a length substantially less than the length of that compartment, so that this grate may have room to oscillate longitudinally therein. This grate 22 comprises side-bars 23 and end-bars 24, rigidly joined at the corners to form an oblong frame. A plurality of cross-bars 25 are then regularly spaced apart over the frame, their ends being rigidly secured to the side-bars 23, as indicated at 26. Four hangers 27, two at each end, are pivotally journaled at one end as indicated at 28 to the ends of the two end-bars 24 of the shaker grate 22, and the opposite or upper ends of the hangers are similarly journaled to the ends of the supporting rods 21, as indicated at 29. Thus the grate 22 is swingingly supported above the tray 19, for longitudinal oscillation thereover.

A stationary mop-head supporting basket or rack 30 is provided for removably positioning in the compartment 17a above the grate 22. This rack 30 comprises side-bars 31, end bars 32, rigidly joined at their meeting corners to form an oblong frame, regularly spaced and downwardly curved cross-bars or wires 33 arranged in spaced relation from end to end of the rack, and secured at their ends to the side-bars as indicated at 34, and regularly spaced longitudinal bars or wires 35, from side to side, secured at their ends to the end-bars, as indicated at 36. Lugs 37 are rigidly

mounted at the ends of the end-bars 32 of the rack 30, projected outwardly end-wise and adapted to rest upon the shaker supporting rods 21. Thus an open mesh, stationary, mop-head supporting rack is provided, with centrally depressed bottom formation, for removably positioning in the compartment 17*a*, above the shaker-grate 22.

A small electric motor 38 is mounted transversely in the compartment 17 and its extended shaft end 39 has rigidly mounted thereon a pulley 40.

A forked bracket or stand 41 is mounted between the motor and partition 16, and a short drive shaft 42 is journaled at 43 across the forks of the bracket. The shaft 42 is disposed parallel with the motor shaft and a pulley 44 is rigidly mounted on its outer end in operative alignment with the pulley 40 of the motor. A belt 45 operatively connects the two pulleys. A short crank 46 is rigidly mounted on the opposite end of the shaft 42 and has a crank pin 47 extended at its outer side. A shaker arm 48 is journaled at one end 49 onto the pin 47, the opposite end being passed through a slot 16*a* in the partition 16 and then hinged at 50 centrally to the adjacent end bar 24 of the shaker grate 22.

A slot 14*a* is cut medially and transversely into the frontal or free side or margin of the lid 14 for engaging the mop handle 6 of the mop, in the use of the device. Conventional electrical leads 51 are provided for energizing the motor 38, and a switch 52 controls the operation of the motor.

The housing or box 10 may of course be made of any suitable material, such as sheet metal, and the other parts would also be preferably of metal. A pendent margin 22*a* may be formed around the lower side of the grate 22, if desired, for centering the dust into the tray 19.

In use the mop 4 is positioned length-wise on the supporting rack 30 with the strands 7 depended through the mesh bottom onto the shaker-grate 22, the handle 6 is held vertical and the lid 14 then closed, the slot 14*a* receiving the handle 6 so that the lid may close tightly. The current is then turned on, the resulting action being to oscillate or vibrate the grate 22 and dislodge and eject the dirt, dust and lint from the mop and mop strands.

It is thought that the construction, operation and use of the invention will be fully understood from the foregoing description, and while I have herein shown and described a specific embodiment of the invention, and the several structural features thereof, the same may be changed or modified within the scope of the claims.

I claim:

1. A dust-mop cleaner, comprising in combination an oblong housing partitioned to provide at one end a motor compartment and at the opposite end a mop compartment, the outer end of the mop compartment having a tray-opening formed through the lower part thereof, a dust tray slidably mounted in said opening, a shaker-grate horizontally and oscillatably mounted in the mop compartment over the dust tray, a stationary mop-head supporting rack mounted in the mop compartment, the same having a reticulated bottom for passing the strands of a corded dust-mop, a motor mounted transversely in the motor compartment, a drive-shaft supported and journaled in the motor compartment between the motor and the said partition the said shaft being parallel with the motor shaft, aligned pulleys on the outer extended end of the motor shaft and one end of the stub-shaft, a belt trained over the pulleys, a crank and pin rigidly mounted on the opposite end of the drive shaft, and a shaker arm journaled at one end to the crank pin and being hingedly connected at the other end to the adjacent end of the shaker grate.

2. In a device of the kind described, an oblong housing, a shaker-grate horizontally and swingingly suspended in the housing for oscillation therein, a stationary reticulated, mop-head supporting rack in the housing above the shaker-grate, and means for oscillating the said shaker-grate.

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