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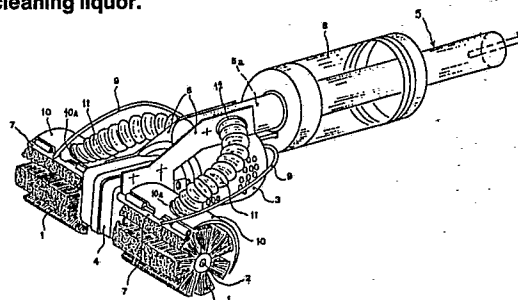
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⑤④ **Device for cleaning surfaces, such as floor, with removal of the cleaning liquor.**

⑤⑦ A device for cleaning surfaces such as floors and the like comprising a tubular holder 5 at the end of which there are pivotally mounted two cleaning brushes (1) housed within relevant spray preventing cases (10), the brushes (1) rotating on an axis perpendicular to the holder (5) and being connected for rotation with a motor (3) integral with the holder (5). In front of the brushes (1) there are provided means for distributing the detergent liquor. Suction openings (10a) are formed on the cases (10) and are connected through flexible hoses (11) to the interior (5a) of the tubular holder (5) which is in communication with a conventional suction device.



Description

DEVICE FOR CLEANING SURFACES, SUCH AS FLOOR, WITH REMOVAL OF THE CLEANING LIQUOR

The present invention relates to a device for cleaning surfaces, such as floors and the like.

The devices of the above mentioned type known in the art are essentially formed by one or more rotating brushes, contacting the surface to be cleaned and translating on it by virtue of their own motion, and by means for distributing the detergent liquid in the area covered by the brushes. The brushes and the liquid distributing means are generally mounted at the end of an elongated holder, such as a handle, used both for operating the device and as a support for a motor, and a detergent liquid reservoir.

According to the Italian patent no.1069335 in the name of the same Applicant, the brushes have a cylindrical shape and are connected for rotation to a shaft perpendicular to the holder or handle of the device. In a preferred embodiment, which enables cleaning and washing of very narrow spaces, such as corners and steps, the brushes are covered by a splash preventing case extending on the upper side of them. However dirt tends to accumulate within the case which must be frequently disassembled to remove the dirt.

The object of the present invention is to provide a device for cleaning surfaces such as floors and the like capable of sucking the washing liquid from the surface, whereby on one hand the drying of the surface after cleaning is avoided and, on the other hand, by continuously removing the dirt liquid from the case by means of suction, the frequency of maintenance operations (dismounting the case, removing the dirt accumulated therewithin) is considerably reduced.

The novel feature of the device for cleaning surfaces such as floors and the like according to the invention consists in that the device comprises means for sucking the exhaust washing liquor from the washed surface. According to a preferred embodiment, a suction opening is formed on the spray preventing case associated to each brush, to said opening conduit means being connected for communicating with said exhaust liquor sucking means.

The invention will become more apparent from the following description of a not limiting and exemplary embodiment taken in conjunction with the accompanying drawing wherein the device according to the invention is shown in perspective view.

With reference to the above mentioned drawing, the device according to the invention comprises two cylindrical brushes 1 mounted on a shaft 2 connected for rotation with a motor 3 through transmission means, not shown, housed in the box 4 centrally mounted between the two brushes 1. Motor 3 is fixed to the end of a tubular holder 5 provided at the other end of a handle, not shown, for the device operation. Tubular holder 5 is also fixed to box 4 by means of a pair of brackets 6.

Two tubular collectors 7 are mounted in front of the two brushes 1 arranged in a parallel relationship

with respect to shaft 2. Collectors 7 are equipped with sprayers or nozzles or the like for distributing the detergent liquor contained in a reservoir 8 supported by the tubular holder 5 and connected to collectors 7 by means of pipes 9. The detergent liquor supply is controlled by a conventional valve, not shown, mounted on the bottom outlet of reservoir 8, manually actuated by the operator, for instance by means of a lever or a push button provided on the handle.

The two brushes 1 are housed within relevant spray preventing cases 10 secured to brackets 6 and extending sideways from them and, according to the invention, on each case 10 there is formed a through opening 10a to which a flexible hose 11 is connected. Flexible hoses 11 coming from cases 10 are connected at 12 with the tubular holder 5 and flow in its interior which is in communication with a suction device, not shown. In this way the side of cases 10 facing brushes 1 is under draft when the suction device is activated, whereby the washing liquor and the dirt raised by brushes 1 from the surface under cleaning are sucked through flexible hoses 11 and tubular holder 5 up to the reservoir associated to the suction device.

The suction device is of the conventional type, comprising for instance a sealable drum housing a vacuum pump.

In a possible variation of the present embodiment flexible hoses 11 can be made to discharge in a separate collecting header running parallel to the tubular holder 5, instead of discharging in the interior of holder 5, said header being fixed to holder 5 and communicating with the suction device.

The invention is not to be considered as limited to the embodiment above described and shown in the drawing, but it is intended to encompass any variation and modification thereof.

Claims

1.A device for cleaning surfaces such as floors and the like, comprising an elongated holder (5) at the end of which there are pivotally mounted cleaning brushes (1) housed within relevant spray preventing cases (10), said brushes (1) rotating on an axis perpendicular to said elongated holder (5) and being connected for rotation with motor means (3) integral with said holder (5), means (7) for distributing the detergent liquor being provided in front of said brushes (1), the device being characterized in that it further comprises means for removing the washing liquor from the surface to be washed comprising a suction opening (10a) formed on each case (10) connected to collecting means (5a) integral to said elongated holder (5) and communicating with a suction device.

2.Device according to the claim 1, wherein said elongated holder (5) is of tubular shape

and said suction openings (10a) communicate with the interior (5a) of it.

3. Device according to claim 2, wherein the suction openings (10a) formed on said cases (10) communicate with the interior of said holder (5) through flexible hoses (11).

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