DUST SUCTION DEVICE FOR CLEANING FUR CLOTHING, ETC

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INVENTOR

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BY

ATTORNEY
This invention relates to new and useful improvements in a dust suction device for cleaning furs, clothing and the like.

This application is an improvement over my patented Jan. 4, 1938. UNITED STATES PATENT OFFICE 2,104,400 DUST SUCTION DEVICE FOR CLEANING FUR, CLOTHING, ETC.

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3 Claims. (Cl. 15-6)

Fig. 5 is a transverse sectional view taken on the line 5-5 of Fig. 6.

Fig. 6 is a transverse sectional view taken on the line 6-6 of Fig. 2.

Fig. 7 is a sectional view taken on the line 7-7 of Fig. 6, to which a filter bag has been added.

Fig. 8 is a perspective view of the device.

Fig. 9 is a fragmentary sectional view taken on the line 9-9 of Fig. 5.

Fig. 10 is a bottom view similar to Fig. 3 but showing a modified form of the device.

The dust suction device for furs, clothing and the like, according to this invention, includes an inverted saucer-like casing 10 adapted to be attached upon a table 11 and having a top opening 12. A plate 13 is formed with a longitudinal slot 14 and is adapted to partially close the top opening 12. This plate has an edge portion resting upon a flange portion 15 surrounding the opening 12 and projecting from the casing 10. An air duct 15 is arranged within the casing 10 and extends completely across the slot 14. This air duct is formed with a flange 16 resting upon the flange 15 and disposed beneath the edge portion of the plate 15.

A blower 17 is mounted within the casing 10 and upon one side of the air duct 15. This blower has its suction intake 18 connected with the said duct 15 and has its pressure discharge 19 adapted to be connected with an air filter bag 20 (see Fig. 7). A combination brush and vibrator 21 is arranged within the air duct 15 adjacent and beneath the slot 14 and is adapted to brush and beat furs, clothing and other articles passed over the top of the casing. A means is provided for driving the combination brush and vibrator and includes an electric motor 22. This motor is also utilized to drive the blower 17.

An electric switch 23 is shown mounted upon one side of the saucer-like casing 10 and is for the purpose of controlling the motor 22. This specification does not disclose the wiring of the switch to the motor as it forms no part of the invention.

The plate 13 is held in position by several screws 24 passing through the plate and into the flange 15. This plate is also formed with several openings 25 in the vicinity of the slot 14 and adapted to receive pegs 26 from a screen 27 adapted to be positioned over the opening 14. This screen is shown in dot and dash lines in Figs. 6 and 5.

The air duct 15 is of a much smaller width than the width of the opening 12 so that when the plate 13 is removed, as shown in Fig. 2, the blower is exposed. A screen element 28 is extended across the suction inlets 18 of the blower. The blower 17 includes a casing 17a in which a blower rotor 17b is mounted. This rotor is

In the accompanying drawings forming a material part of this disclosure:—

Fig. 1 is a plan view of a device constructed according to this invention.

Fig. 2 is a view similar to Fig. 1 but illustrating the device with the top plate removed.

Fig. 3 is a bottom plan view of the device.

Fig. 4 is a perspective view of a screen member which may be used in conjunction with the device and which is shown in dot and dash lines in Figs. 5 and 6.

In the description of the preferred embodiment of this invention, the invention is shown and particular reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

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Fig. 4 is a perspective view of a screen member which may be used in conjunction with the device and which is shown in dot and dash lines in Figs. 5 and 6.
mounted upon the shaft 22\textsuperscript{a} from the motor 22. The motor is mounted through one side of the casing 10 and is supported upon a shelf 30 included for this purpose. This shelf is attached upon the side wall of the casing 10. The combination brush and vibrator 21 comprises two distinct sections, the section 21\textsuperscript{a} and the section 21\textsuperscript{b} separated-by a pulley 21\textsuperscript{c}. Each of the sections 21\textsuperscript{a} and 21\textsuperscript{b} comprises a cylindrical body portion from which two flange blades 21\textsuperscript{d} project. These blades are spaced 120\textdegree from each other. Spaced 120\textdegree from these blades there is a bristle brush 21\textsuperscript{e}. The sections 21\textsuperscript{a} and 21\textsuperscript{b} are so arranged that the bristle brushes 21\textsuperscript{d} of the end sections are 180\textdegree from each other.

The combination brush and vibrator is mounted upon a shaft 22 which is adjustably supported at its ends. Each of the ends of the shaft 22 is rotative in bearing 23 which has a trunnion 24 swiveled in a block 35 vertically adjustable on the shaft 22, and set screws 37 are mounted on the tracks for adjusting the blocks 35 to hold the blocks in adjusted positions.

It is possible to arrange the combination brush and vibrator so that it is level and acts universally throughout the length of the slot 14. If it is desired one of the blocks 35 may be adjusted slightly upwards and the other of the blocks 35 slightly downwards so as to change the relative distance between the pulley 21 and the motor shaft 22, while at the same time changing the position of the brush and vibrator at the opposite ends of the slot 14. Thus, more violent brushing and vibrating may be accomplished at one end of the slot than the other. It is thus possible to pass coarser materials over the coarser operating side of the brush and vibrator, and finer materials over the other side.

A belt 38 passes over the pulley 21\textsuperscript{c} and over a pulley 39 mounted on the shaft 22\textsuperscript{c}. Thus, the motor 22 is capable of operating the combination brush and vibrator.

In Fig. 8 another pulley 40 is shown associated with a cable 41 which is connected with the motor 22. In Fig. 10 a slightly modified form of the invention has been disclosed which distinguishes the prior form merely in the construction of the blower outlet. In this form of the invention the blower outlet 19 is of elliptical shape, contrasted with the circular shape of the blower outlet 19 (see Fig. 3) in the prior form of the device.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. In a dust suction device for furs, clothing, etc., including an inverted saucer-like casing adapted to be attached on a table and having a top opening, a plate having a longitudinal slot closed said opening, an air duct within said casing and extending across said slot, a blower mounted within the casing, a combination brush and vibrator within said duct and adjacent said slot for brushing and beating furs, clothing, etc., passed over the top of said casing, and a means for driving said combination brush and vibrator; means for adjustably mounting the brush and vibrator, comprising a shaft, a pair of spaced hollow cylindrical end sections mounted on said shaft ends, tracks mounted upon the side walls of said air duct, bearing frames at each end of said shaft adapted to vertically adjustably engage said tracks and to support said cylindrical end sections for pivotal movement about a horizontal axis, and a means for holding said bearing frames in their adjusted position to allow said brush and vibrator to be adjusted around a center intermediate the ends of the brush.

2. In a dust suction device for furs, clothing, etc., including an inverted saucer-like casing adapted to be attached on a table and having a top opening, a plate having a longitudinal slot closed said opening, an air duct within said casing and extending across said slot, a blower mounted within the casing, a combination brush and vibrator within said duct and adjacent said slot for brushing and beating furs, clothing, etc., passed over the top of said casing, and a means for driving said combination brush and vibrator; means for adjustably mounting the brush and vibrator, comprising a shaft, a pair of spaced hollow cylindrical end sections mounted on said shaft ends, tracks mounted upon the side walls of said air duct, bearing frames at each end of said shaft adapted to vertically adjustably engage said tracks and to support said cylindrical end sections for pivotal movement about a horizontal axis, and a means for holding said bearing frames in their adjusted position to allow said brush and vibrator to be adjusted around a center intermediate the ends of the brush.

3. In a dust suction device for furs, clothing, etc., including an inverted saucer-like casing adapted to be attached on a table and having a top opening, a plate having a longitudinal slot closed said opening, an air duct within said casing and extending across said slot, a blower mounted within the casing, a combination brush and vibrator within said duct and adjacent said slot for brushing and beating furs, clothing, etc., passed over the top of said casing, and a means for driving said combination brush and vibrator; means for adjustably mounting the brush and vibrator, comprising a shaft, a pair of spaced hollow cylindrical end sections mounted on said shaft ends, tracks mounted upon the side walls of said air duct, bearing frames at each end of said shaft adapted to vertically adjustably engage said tracks and to support said cylindrical end sections for pivotal movement about a horizontal axis, and a means for holding said bearing frames in their adjusted position to allow said brush and vibrator to be adjusted around a center intermediate the ends of the brush.

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