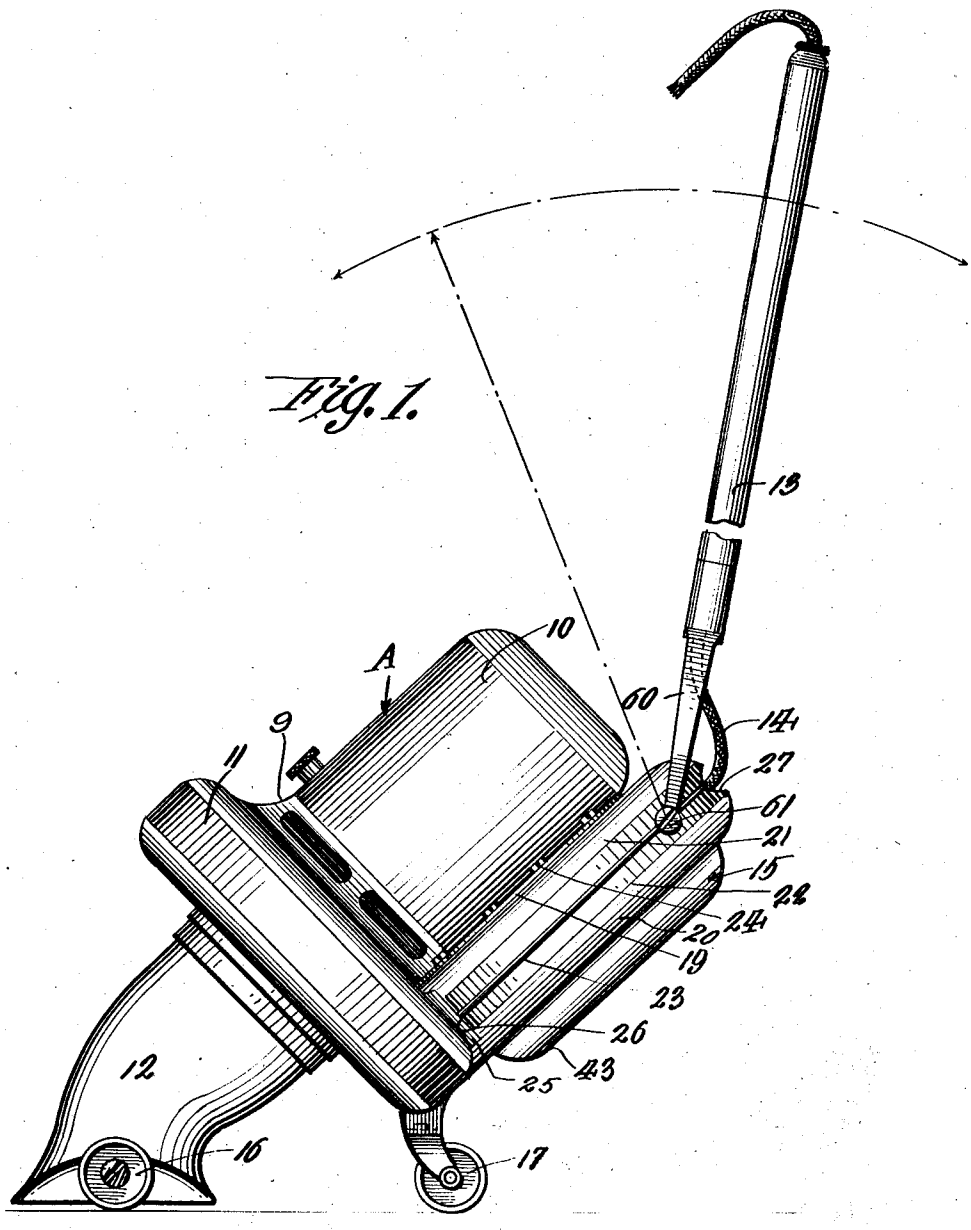
Sept. 1, 1925. 1,551,856

B. J. TAMARIN

TAKE-UP FOR VACUUM CLEANERS

Filed June 22, 1923 4 Sheets-Sheet 1

Fig. 1.



WITNESSES

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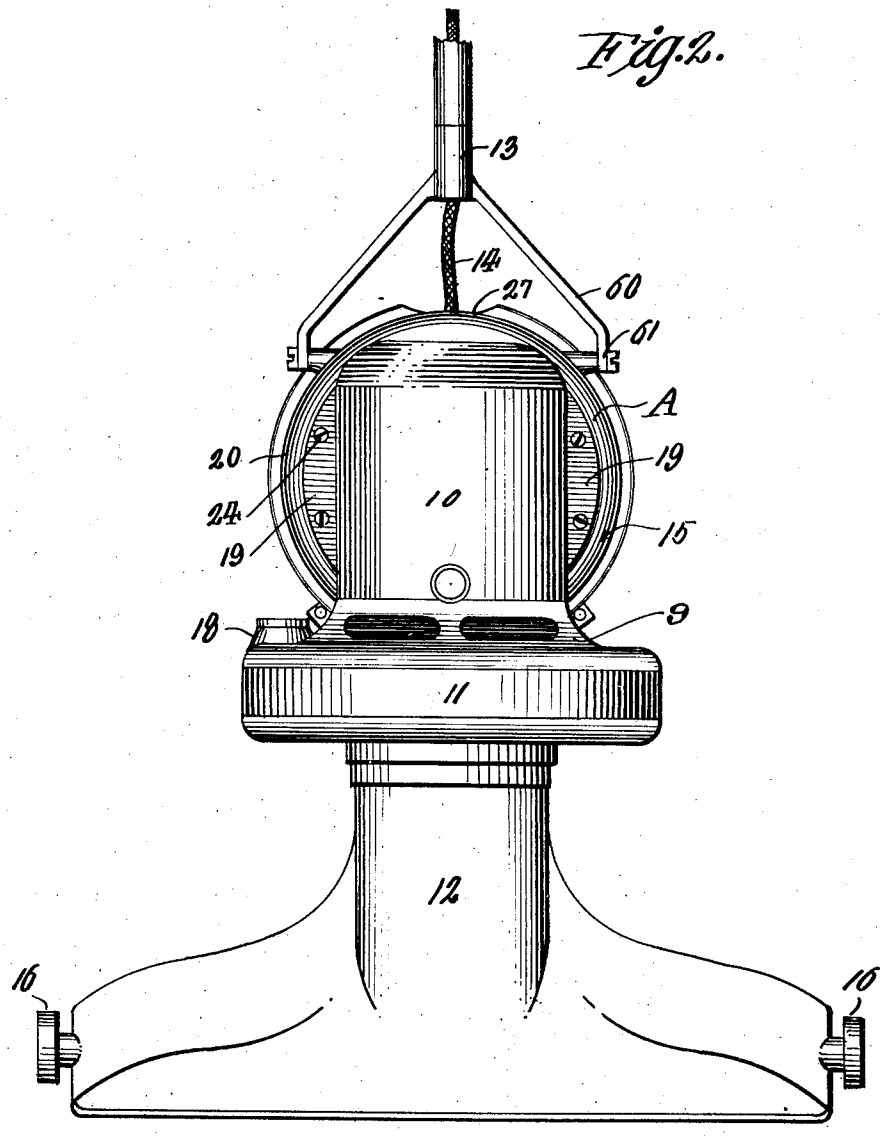
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TAKE-UP FOR VACUUM CLEANERS

Filed June 22, 1923 4 Sheets-Sheet 2

Fig. 2.



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1,551,856

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TAKE-UP FOR VACUUM CLEANERS

Filed June 22, 1923

4 Sheets-Sheet 3

Fig. 3.

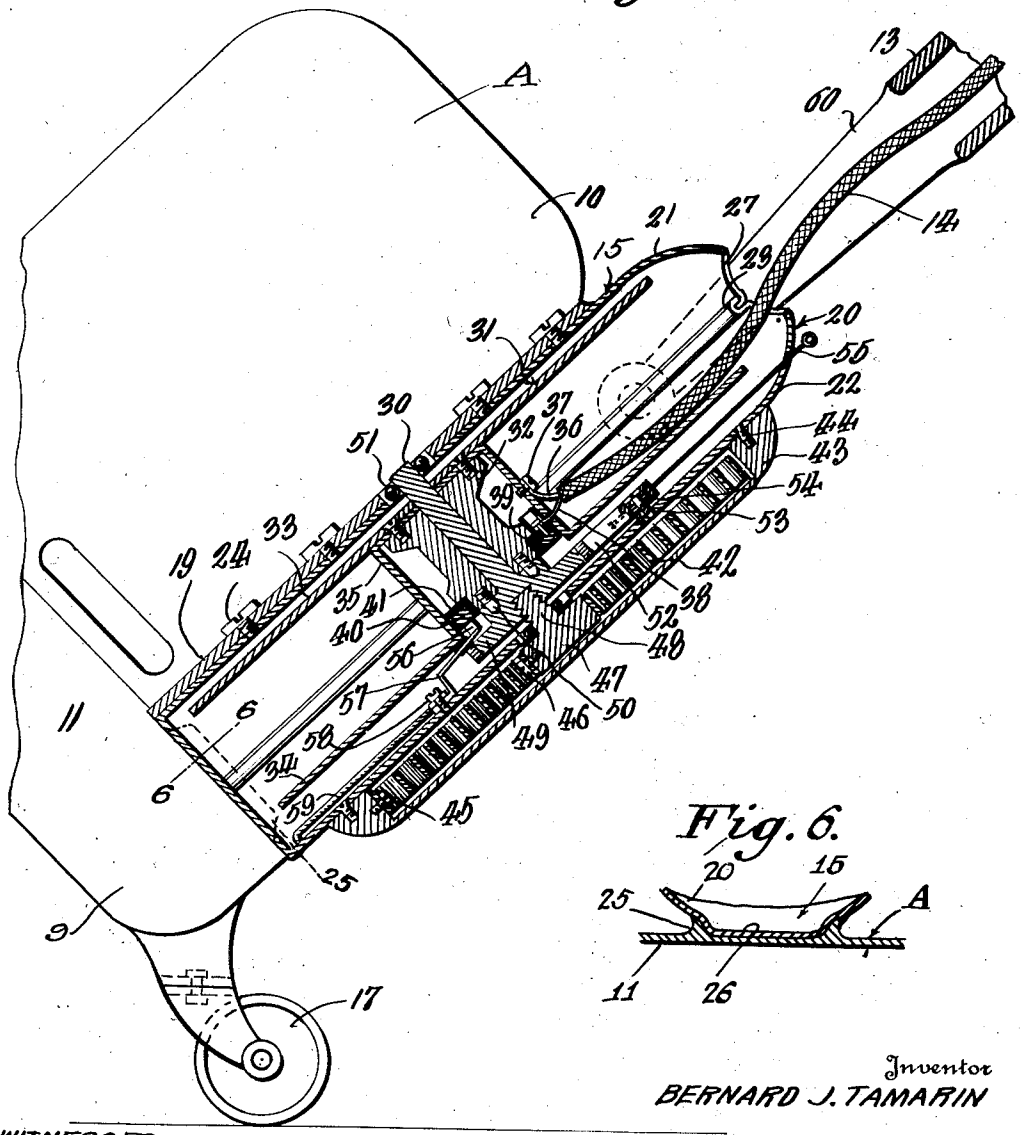


Fig. 6.

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TAKE-UP FOR VACUUM CLEANERS

Filed June 22, 1923 4 Sheets-Sheet 4

Fig. 4.

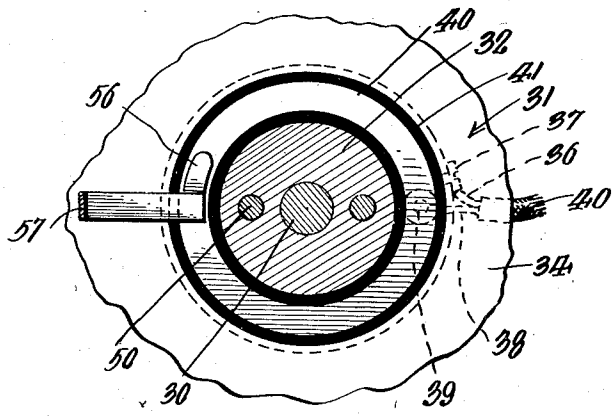
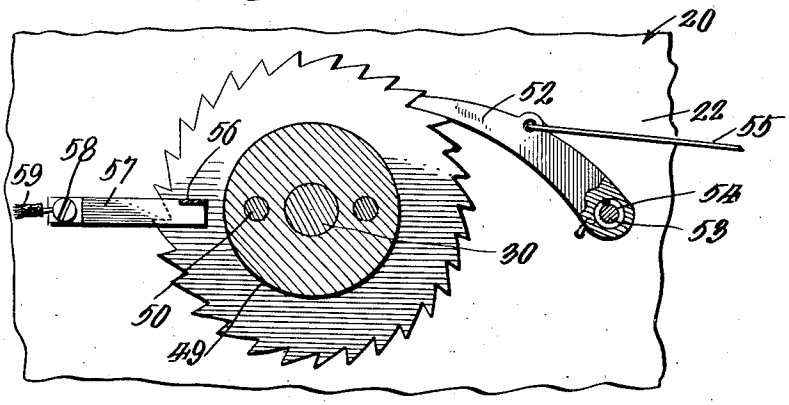


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

BERNARD J. TAMARIN, OF PHILADELPHIA, PENNSYLVANIA.

TAKE-UP FOR VACUUM CLEANERS.

Application filed June 22, 1923. Serial No. 647,124.

To all whom it may concern:

Be it known that I, BERNARD J. TAMARIN, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in a Take-Up for Vacuum Cleaners, of which the following is a specification.

This invention comprehends vital improvements in the art of vacuum cleaners and the primary object of the invention is to provide an improved vacuum cleaner having incorporated in the body portion thereof an automatice takeup for the electric feed cord, thereby effectively eliminating the inconvenience of having surplus length of wire in rear of the vacuum cleaner, when retracing one's steps.

It has heretofore been contemplated in the art, such as in my prior Patent Number 1,484,681 issued to me February 26, 1924, to provide a takeup incorporated with the handle of a vacuum cleaner. This effectively accomplishes the desired result, but it has been found, that it would be advantageous, to provide means for forming a complete vacuum cleaner having an automatic cord takeup incorporatted directly therewith.

It is therefore another salient feature of this invention to provide a vacuum cleaner embodying an automatic takeup incorporated directly with the motor and fan casing of the vacuum cleaner, whereby the takeup will form a direct part of the cleaner and be out of the way of the operator and eliminate additional weight on the handle and place the weight where most needed.

A further prime object of the present invention is to provide an improved vacuum cleaner embodying a suction head, a fan and motor casing, a cord takeup associated with the motor and fan casing, and a hollow handle pivotally connected with the takeup for forming means for operating the vacuum cleaner and for acting as a guide for the cord during the taking up and the paying out of the cord from on and off of the takeup.

A still further object of the invention is to provide an improved vacuum cleaner embodying a novel electric cord takeup of the above character, which will be of a compact and strong nature, incorporating dust proof qualities, durable and efficient in use, one that will be simple and easy to manufacture and one which can be placed upon the market at a reasonable cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed and illustrated in the accompanying drawings, in which drawings:

Figure 1 is a side elevation of the improved vacuum cleaner.

Figure 2 is a plan view of the same.

Figure 3 is an enlarged fragmentary side elevation of the improved vacuum cleaner, showing the novel electric cord takeup therefor in section.

Figure 4 is an enlarged detail section taken through the improved novel cord takeup illustrating the means of collecting the current from the cord takeup reel, and

Figure 5 is an enlarged fragmentary detail section through the improved cord takeup illustrating the novel pawl and ratchet mechanism associated with the reel.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates the improved vacuum cleaner, which includes a body 9. This body 9 embodies the electric motor casing 10, the suction fan housing 11; the suction nozzle 12, the operating handle 13, the electric feed cord 14, and the automatic cord takeup 15. The body 9 is preferably supported by a pair of front rollers 16 associated with the suction nozzle 12 in any desired way and a rear roller 17 carried by the suction fan housing 11. The suction fan housing 11 is provided with the usual outlet 18 to which can be connected in the ordinary manner the dust bag (not shown).

The electric motor casing 10 is provided at its lower surface with laterally projecting supporting flanges 19, which can be formed integral with or secured to the casing 10 in any desired way.

The improved automatic cord takeup 15 comprises a circular-shaped housing 20 which can be formed of sheet metal, such as aluminum or the like. The housing 20 can be constructed of inner and outer companion sections 21 and 22 connected together by means of crimped flanges 23. This hous-

ing 20 is connected to the flanges 19 in any desired way, such as by screws 24 and if desired spaced guide blocks 25 can be formed on the suction fan housing 11 for receiving the lower end of the housing 20, which can be provided with a guide lug 26 for fitting between said blocks. The guide blocks 25 and guide lug 26 form means for centering the housing 20 in position and for insuring the proper aligning of the screw openings formed in the casing 20 with the screw openings formed in the flanges 19.

A rotatable axle 30 is disposed in the axial center of the housing 20 and has keyed or otherwise secured thereto a reel 31 for receiving the electric current supply cord 14. This cord 14 is slidably mounted in the handle 13, which forms a guide therefor, and is adapted to extend into the housing 20 through a suitable opening 27 formed therein for that purpose. It can be seen that the opening 27 is located directly in front of the open inner end of the handle 13 and thus permits the free entrance and exit of the cord from the housing into and out of the handle.

The reel 31 can be constructed in any desired way, and as shown includes a hub block 32 and disk-shaped side plates 33 and 34. The side plate 34 at its axial center can be pressed inward to provide a cylindrical hub boxing 35 for receiving the hub block 32, which is secured thereto in any preferred way. One of the feed wires 36 of the cord 14 is grounded as at 37 to the metal hub boxing 35, while the other wire 38 of the cord 14 is electrically connected to a suitable contact 39, which is in turn electrically connected with the annular electric conducting ring 40. This annular electric conducting ring 40 is suitably anchored in an annular insulated block 41 carried by the hub of the reel 31. The purpose of this construction, will be hereinafter more fully described. It is obvious however, that the electric cord is free to be wound upon the reel 31.

In order to normally wind up the cord 14 upon the reel, I have provided a contractile helical coil spring 42, which is mounted in an auxiliary housing 43, secured by screws or the like 44 to the lower face of the takeup housing 20. One end of the spring 42 is anchored as at 45 to the housing 43, while the opposite end thereof is anchored as at 46 to a hub 47, which is rotatably mounted in the axial center of the housing 43. This hub 47 can be provided with a stem 48, which is in turn threaded into a ratchet disk 49, the purpose of which, will be also hereinafter more fully described. This ratchet disk 49 is connected by means of clutch pins or the like 50 with the hub block 32 of the reel.

The shaft 30 and the hub 47 are suitably mounted upon ball bearings 51 carried by suitable races supported by the housing 20 and the motor housing 10.

It is obvious, that when the desired amount of the cord 14 has been paid out, that the reel should be held against further twining movement, and in order to bring this about, I provide a pawl 52, which can be pivotally mounted upon a suitable pivot pin 53 carried by one side of the housing 20. A spring 54 is provided for normally urging this pawl into engagement with the periphery of the ratchet disk 49 and it can be seen that when the pawl is in engagement with the ratchet disk that rotation of the reel is prevented. In order to move the pawl away from the ratchet disk, when it is desired to permit the automatic takeup of the cord, I provide an operating rod 55, which can be extended out of the casing 20 and actuated in any preferred way.

In order to supply the current to the motor of the improved vacuum cleaner from the cord 14, I provide a current collecting contact member 56, which is resiliently supported by a conducting spring 57. This spring 57 is connected by means of a binding post 58 to one wall of the housing 20 and this post also serves as means for holding a feed wire 59 in position which leads to one terminal of the motor. As stated the wire 36 is grounded to the reel 41 and consequently to the other terminal of the motor.

The hollow handle 13 has its lower end provided with a U-shaped fork 60, the terminals of which support suitable bearings, which are connected for swinging movement, as at 61 to the opposite sides of the casing 20. By this construction it can be seen that the handle 30 is pivotally supported by the casing 20 of the improved takeup 15.

From the foregoing description, it can be seen that I have provided, as a single unit, a vacuum cleaner and a takeup for the supply cord thereof.

Owing to the means of associating the takeup with the motor casing and fan housing 10 and 11 respectively, I have provided an exceptionally simple and compact construction, which will not in any way detract from the appearance of the vacuum cleaner, but which will add to the effectiveness thereof.

While the weight of the takeup is practically negligible, still the point of application thereof with the motor casing 10 and fan housing 11 is advantageous, in view of the fact that the same will tend to hold the body of the cleaner firmly in engagement with the surface being cleaned and will entirely eliminate any additional weight on the handle 13.

While I have disclosed a complete form of takeup, it is to be understood that changes in details may be made without departing from the spirit or the scope of the inven-

tion, and that the main feature of the invention resides in the association of the takeup with the motor casing 10 and suction fan housing 11.

Changes in details may be made without departing from the spirit or the scope of this invention.

What I claim as new is:

1. A vacuum cleaner comprising a body, a pivoted operating handle associated with the body, an electric feed cord slidably mounted through the handle, and a takeup for the cord secured to the body forming a part thereof and arranged directly at the forward end of the hollow handle for receiving the cord therefrom.

2. A vacuum cleaner comprising a circular suction fan housing, a suction nozzle carried by the housing, a cylindrical motor casing connected with the suction fan housing and disposed at the axial center thereof, the suction fan housing extending radially from the motor casing, a current supply cord for the motor, an automatic takeup for the cord and means securing the take-up to the lower face of the motor casing and to the outer face of the suction fan housing.

3. An electrically operated vacuum cleaner comprising a suction nozzle, a suction fan housing, a motor casing connected with the fan housing, laterally extending attaching flanges formed on the motor casing, guides carried by the outer face of the suction fan housing, an automatic takeup for the electric cord of the cleaner embodying a casing, a guide lug carried by the inner end of the takeup for engaging the guides on the fan housing, and means for securing the takeup to the flanges carried by the motor casing.

4. An electrically operated vacuum cleaner comprising a suction nozzle, a motor casing, a suction fan housing disposed between the nozzle and motor casing extending radially beyond the motor casing forming a supporting flange, guide blocks carried by the upper face of the suction fan housing, a feed cord for the cleaner, an automatic takeup for the cord comprising a housing, a guide lug formed on the lower end of the housing for fitting between said blocks, laterally extending supporting flanges formed on the motor casing, means connecting the flanges with the takeup casing, a pivoted operating handle secured to the takeup casing, the handle being hollow for receiving the cord from the takeup.

In testimony whereof I affix my signature.

BERNARD J. TAMARIN.