Oct. 21, 1958 E. M. PIERCE 2,856,627

VACUUM CUT HAIR REMOVING MACHINE

Filed June 26, 1956 2 Sheets-Sheet 1

Fig. 1.

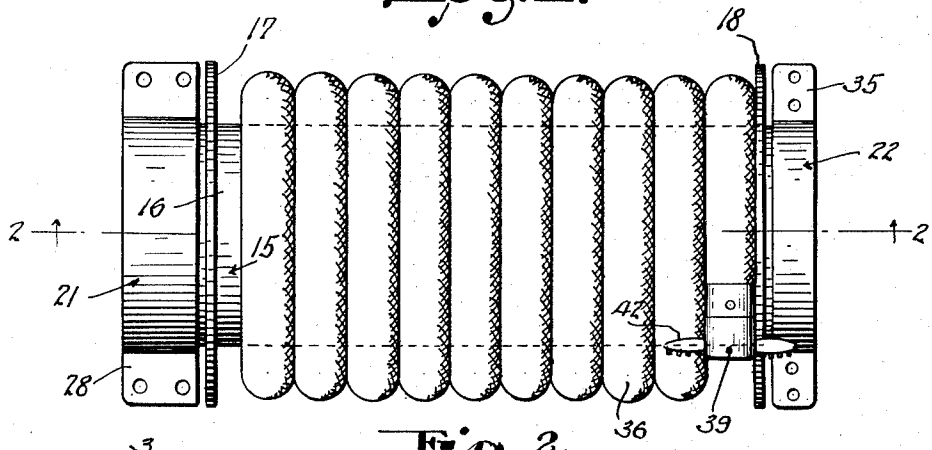


Fig. 2.

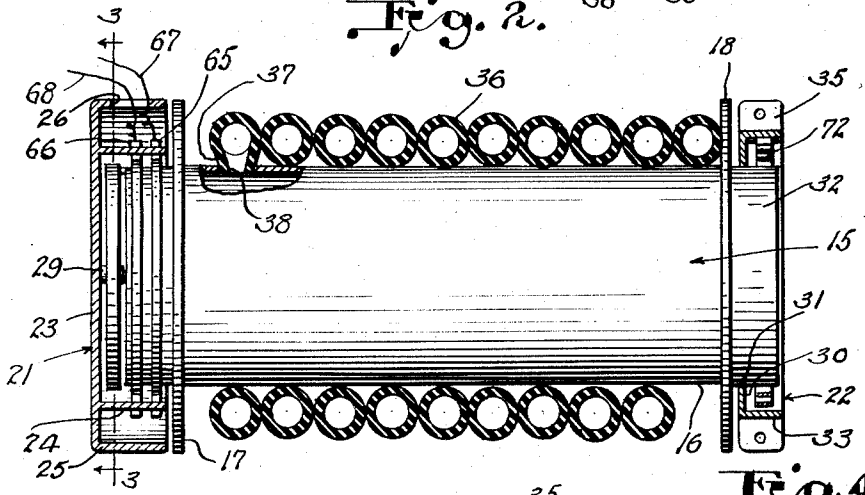


Fig. 3.

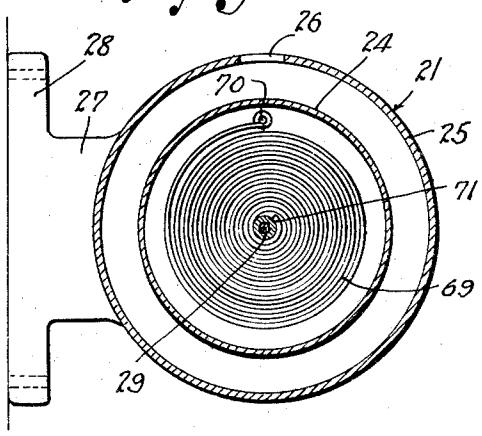
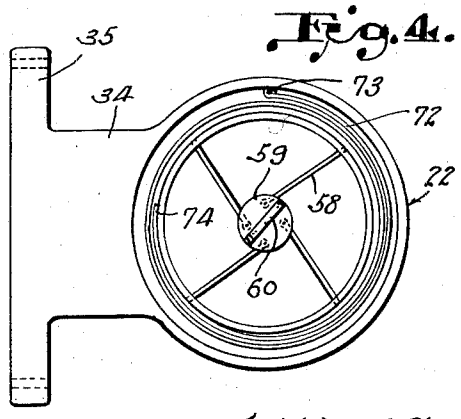


Fig. 4.



Eldridge M. Pierce
INVENTOR

BY Cadwalader.

ATTORNEYS.

Oct. 21, 1958 E. M. PIERCE 2,856,627

VACUUM CUT HAIR REMOVING MACHINE

Filed June 26, 1956 2 Sheets-Sheet 2

Fig. 5.

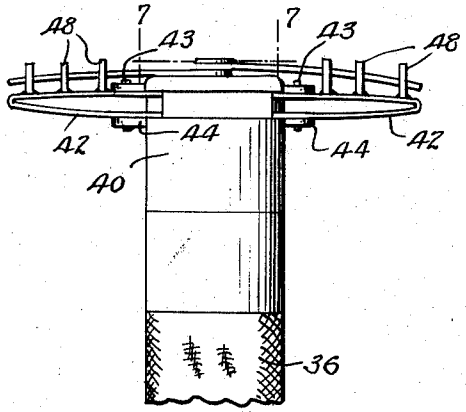


Fig. 7.

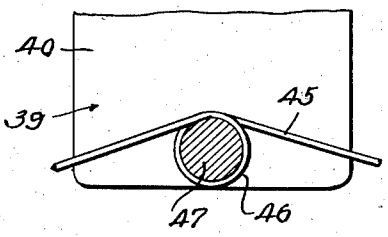


Fig. 9.

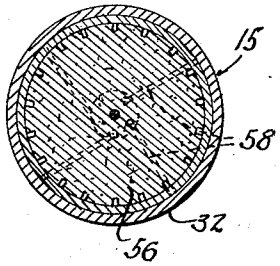


Fig. 6.

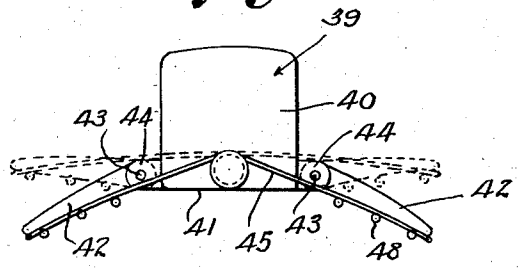


Fig. 8.

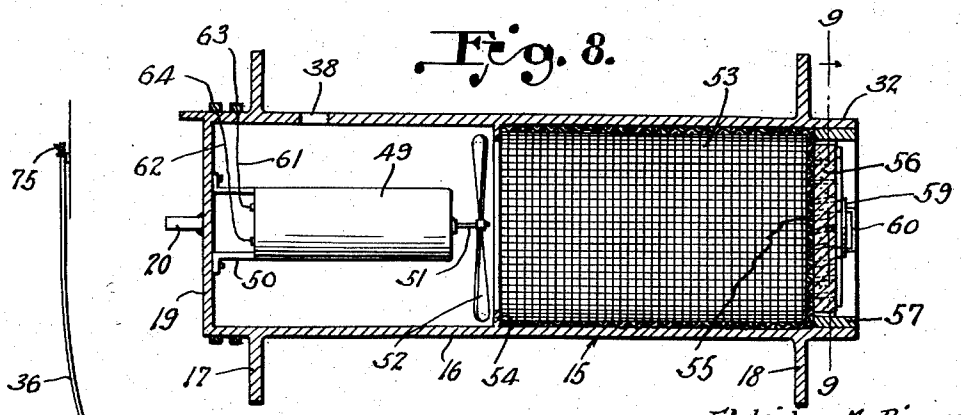
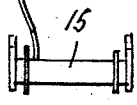


Fig. 10.



Eldridge M. Pierce
INVENTOR

BY C. A. Snow & Co.
ATTORNEYS.

United States Patent Office 2,856,627
Patented Oct. 21, 1958

2,856,627

VACUUM CUT HAIR REMOVING MACHINE

Eldridge M. Pierce, North Highlands, Calif.

Application June 26, 1956, Serial No. 593,884

1 Claim. (Cl. 15—315)

This invention relates to a vacuum machine for use with the hair.

An object of this invention is to provide a vacuum or suction device for use in beauty parlors, barber shops, or the like, for removing cut hair, dust or the like from the head.

Another object of this invention is to provide a vacuum device which includes a reel about which the hose is wound, with the hub of the reel having a suction means disposed therein.

A further object of this invention is to provide a vacuum device which includes a wall bracket for attaching the device to a wall.

A further object of the invention is to provide a vacuum device which includes a reel with a bracket mounting for the reel and spring means for rotating the reel in a winding direction.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts, hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

Referring to the drawings:

Figure 1 is a detail side elevation of a vacuum device constructed according to an embodiment of this invention.

Fig. 2 is a sectional view taken substantially on the line 2—2 of Fig. 1.

Fig. 3 is a sectional view taken on line 3—3 of Fig. 2.

Fig. 4 is a detail end elevation of the device.

Fig. 5 is a fragmentary plan view of the intake nozzle.

Fig. 6 is an end elevation of the nozzle.

Fig. 7 is a fragmentary sectional view taken on line 7—7 of Fig. 5.

Fig. 8 is a longitudinal section of the reel construction removed from the supporting brackets.

Fig. 9 is a sectional view taken on line 9—9 of Fig. 8.

Fig. 10 is a detail front elevation showing the device with the suction hose drawn out to the limit from the reel and secured to the wall.

Referring to the drawings, the numeral 15 designates generally a reel structure which is formed of a cylindrical body 16 having annular flanges 17 and 18 adjacent each end thereof. The body 16 is provided with one end wall 19 and with a centrally disposed stub shaft 20. The reel 15 is rotatably supported by means of a pair of brackets, generally indicated at 21 and 22. The bracket 21 includes a vertically disposed wall 23 having an inner cylindrical member 24 projecting from one side thereof and the wall 23 also has an outer flange 25 of cylindrical construction formed with an opening 26. The wall or plate 23 has projecting therefrom a plate 27 which has secured thereto a base 28 adapted to be secured by suitable fastening means in a vertical position, as shown in Fig. 3. The plate 23 has a centrally disposed bearing 29 projecting therefrom and within which the stud 20 is adapted to rotatably engage.

The bracket 22 includes an inner plate 30 having an opening 31 within which a projecting portion 32 of the reel 15 rotatably engages. The plate 30 has projecting outwardly therefrom a cylindrical flange 33 and a supporting plate 34 projects from the flange 33 and has formed at its outer end a base 35 adapted to be secured to a suitable support.

A flexible suction hose 36 has one end 37 secured to the reel 15 and the end 37 is in communication with an intake opening 38 which is formed in the cylindrical member 16. The hose 36 is adapted to be wound when in operative position on the body 16, as shown in Figs. 1 and 2 and the free end of the hose 36 has a suction nozzle 39 secured thereto. The suction nozzle 39 includes a nozzle head 40 which is open on the lower side 41 thereof and the head 40 has projecting therefrom a pair of suction arms 42 which are pivoted as at 43 between a pair of ears 44 extending from the opposite sides of the head 40. The arms 42 are longitudinally curved and these arms are constantly urged toward each other by means of a spring 45 having the central portion 36 thereof wound about a stud 47 projecting forwardly from the head 40. The spring 45 extends outwardly from opposite sides of the stud or pin 47 and engages over lugs or pins 48 which project from one side of each of the nozzle members 42.

The reel 15 constitutes a housing within which a motor 49 is secured. The motor 49 is secured to the end wall 19 by means of bracket members 50 and the shaft 51 of the motor 49 has a fan blade 52 secured thereto. A perforate container 53 is disposed within the body 16 forwardly of the fan blade 52 and as shown in Fig. 8 the interior of the body 16 has an annular flange 54 disposed closely adjacent the blade 52 so as to limit the inward positioning of the container 53. The container 53 includes an outer bottom wall 55 which is also perforate and which confronts a filter 56. The filter 56 is disposed within a ring or cylindrical member 57 engaging within the adjacent outer end of the body 16 and the ring 57 is releasably locked within the body 16 by means of a plurality of locking arms 58 which are secured to a centrally disposed plate 59. The arms 58 are adapted upon turning of the plate 59 by grasping a handle 60 carried by plate 59 to be ejected outwardly into locking engagement through the ring 57 against the adjacent end portion of the body 16. The motor 19 has a pair of conductors 61 and 62 extending therefrom, which are connected with a pair of contacting rings 63 and 64 secured to the outer side of the reel member 15 outwardly from the flange 17. The contact rings 63 and 64 are engaged by a pair of brushes 65 and 66 respectively, which extend through the cylindrical member 24 and the brushes 65 and 66 are connected by means of conductors 67 and 68 to a source of electric current supply.

In order to provide means whereby the reel 15 may be under constant spring tension to wind the motor 49 thereof, I have provided a spiral or coil spring 69 disposed within the flange 24 and connected at its outer end as at 17, to the wall 19. The inner end of the spring 69 is secured as indicated at 71 to bearing 29. At the opposite end of the reel or drum 15 there is provided a second coil or spiral spring indicated at 72. The spring 72 has one end 73 secured to the wall 30 and the inner end of the spring 72 is secured as at 74 to the end portion 32 of body 16.

In the use and operation of this device, the reel structure 15 is mounted by means of the brackets or support-

ing members 21 and 22 on a vertical support or wall. If desired the hose 36 may be unwound from the reel 15 as shown in Fig. 10, with the nozzle 39 secured to a holder 75. Under normal conditions the springs 69 and 72 will constantly urge the reel 15 to rotate in a winding direction so as to wind the hose 36 thereabout. The nozzle 39 may be pulled with the hose 36 from the reel 15 and at this time the motor 49 may be connected to a source of electric current supply to thereby produce a suction in the nozzle 39. This vacuum device will provide a means whereby loose hair or the like may be removed from the head so that the remaining hair will not become tangled as the loose hair is removed under present conditions.

What is claimed is:

A vacuum machine comprising a tubular reel, annular flanges formed on said tubular reel adjacent to the ends thereof, brackets for securing the reel to a supporting surface, the ends of said tubular reel being mounted for rotation in said brackets, cylindrical members formed on said brackets, coiled springs each secured at one of its respective ends to one of said brackets, said springs surrounding the ends of said reel and having their other ends connected with said reel adapted to normally rotate said reel in a winding direction, a suction fan and motor unit mounted within one end of said tubular reel, a perforate container having an open end adapted to receive air discharged from said fan mounted within said tubular reel, a filter mounted within said tubular reel at the other end of said perforate container through which air is propelled by said fan, a hose wound on said reel with one end of the hose connected to said reel in communication with the interior of the tubular reel and with the intake side of the fan, and a nozzle on the other end of said hose.

References Cited in the file of this patent

UNITED STATES PATENTS

773,971	Nuhring et al.	Nov. 1, 1904
1,809,337	Hall	June 9, 1931
1,869,200	Linton	July 26, 1932
2,246,862	Smellie	June 24, 1941
2,520,942	Leslie	Sept. 5, 1950

FOREIGN PATENTS

208,339	Switzerland	Apr. 16, 1940