

July 14, 1942.

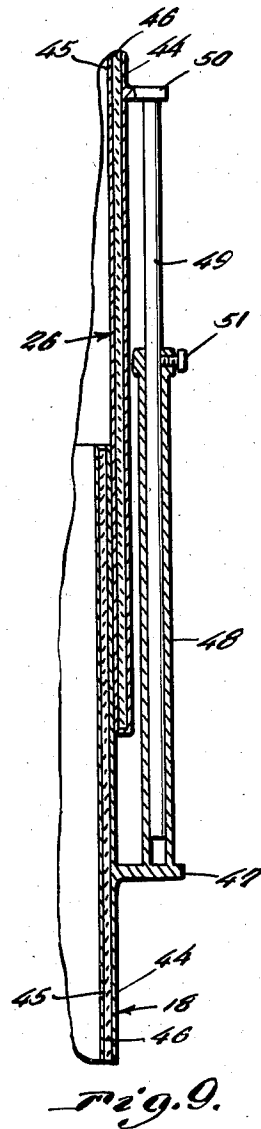
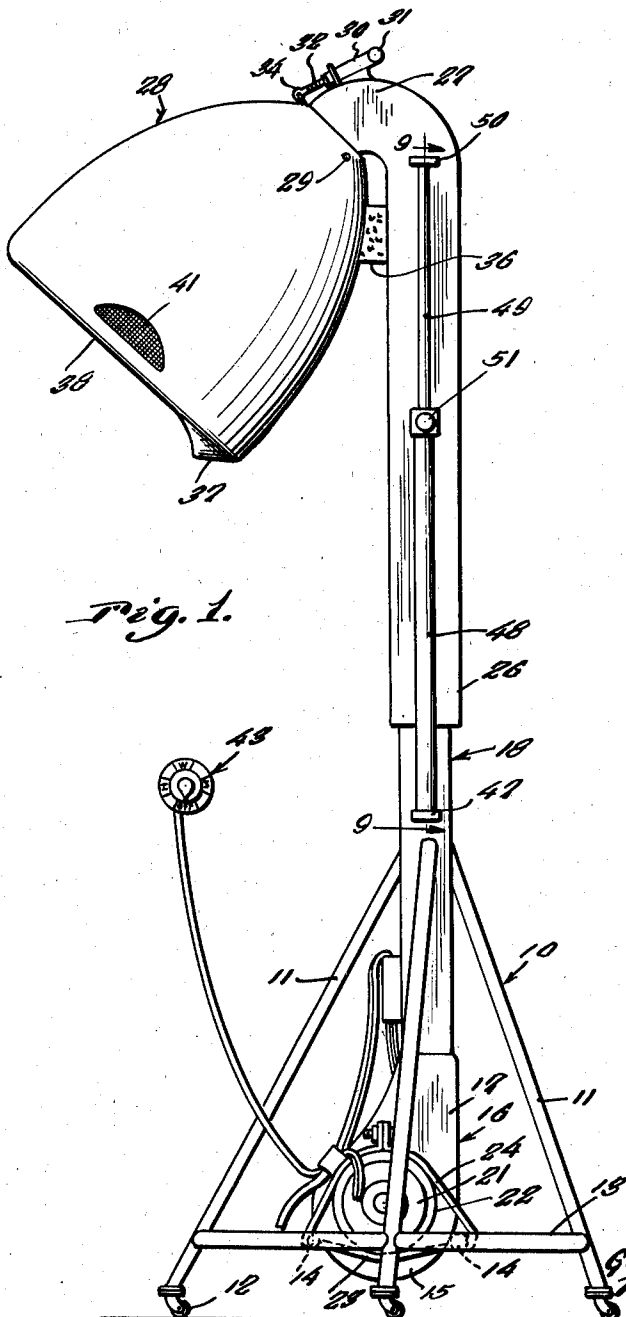
G. DE VINCENZIS ET AL

2,289,633

HAIR DRIER

Filed May 8, 1939

3 Sheets-Sheet 1



Inventors

Giovanni De Vincenzis
Pasquale Guido

By

Almon W. Brien
and Hyman Berman
Attorneys

July 14, 1942.

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3 Sheets-Sheet 2

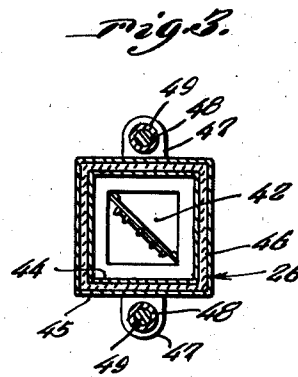
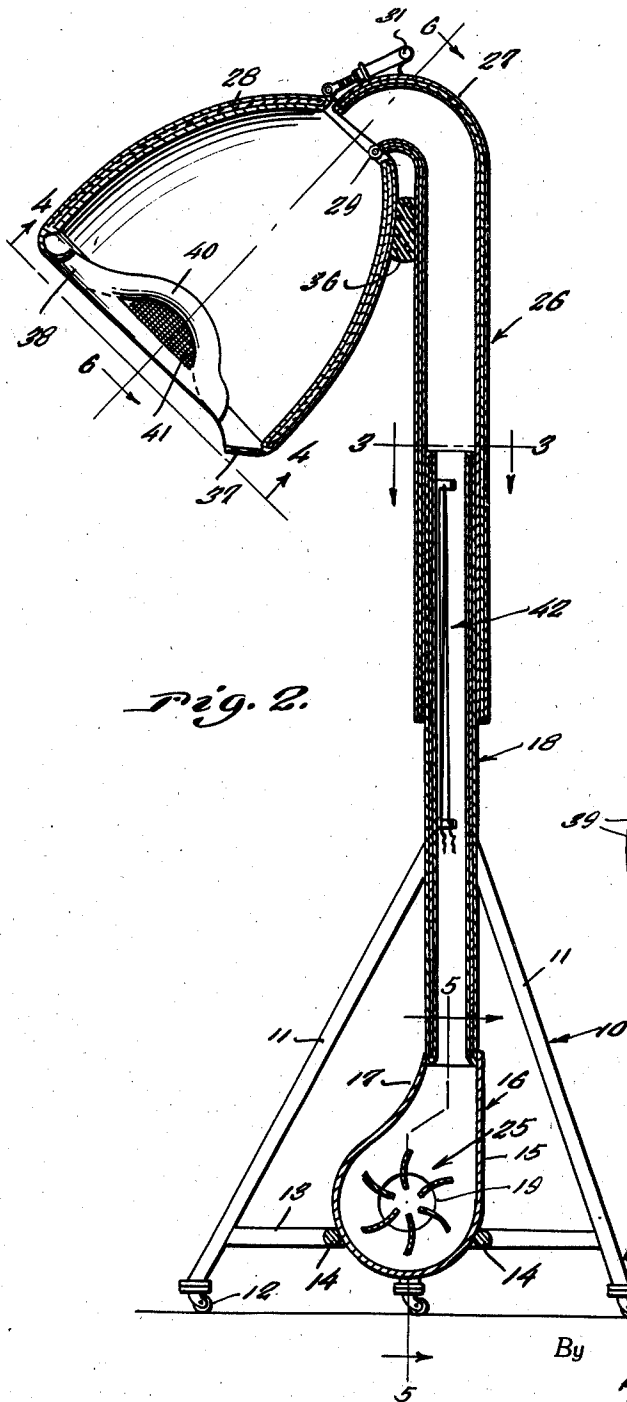
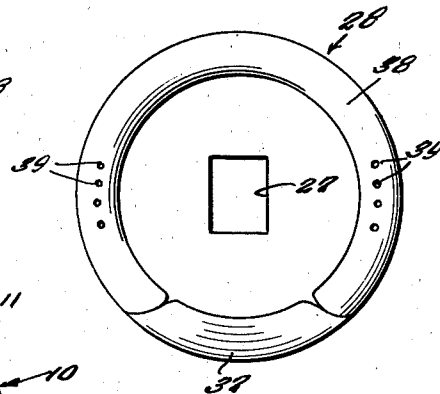


Fig. 4.



Inventors

Giovanni De Vincenzis
Pasquale Guido

By

Clarence A. O'Brien
and Hyman Berman
Attorneys

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Fig. 5.

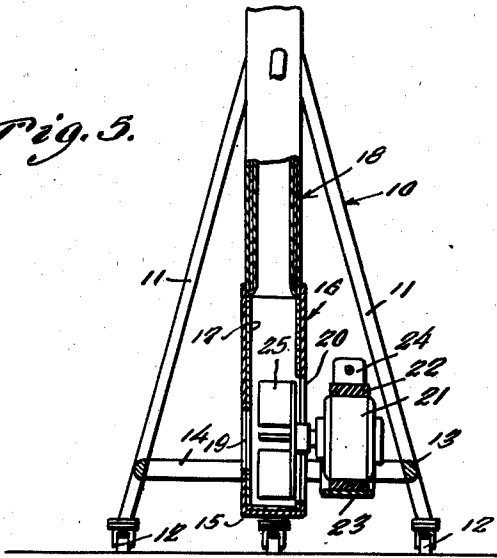


Fig. 7.

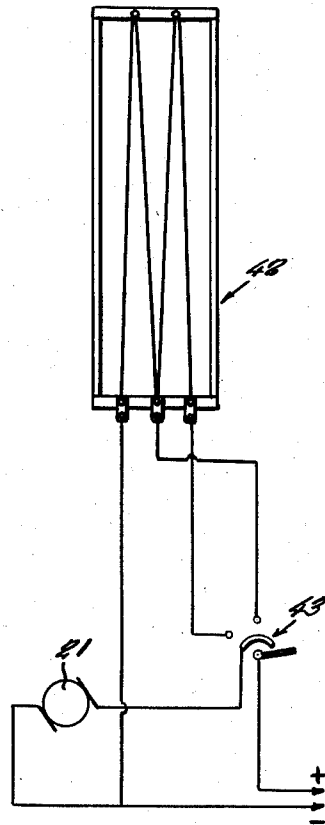


Fig. 6.

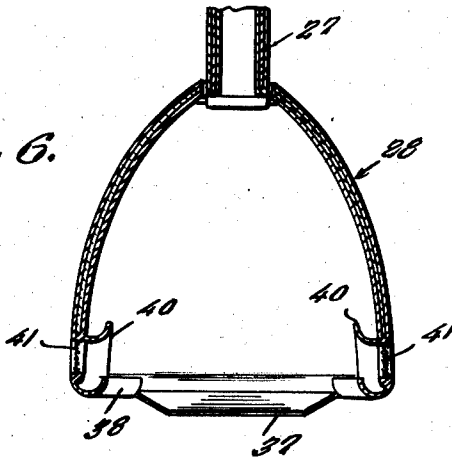
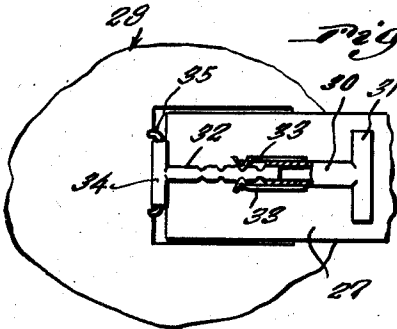


Fig. 8.



Inventors

*Giovanni De Vincenzis
Pasquale Guido*

By *Clarence A. O'Brien
and Hyman Berman*
Attorneys

UNITED STATES PATENT OFFICE

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HAIR DRIER

Giovanni De Vincenzis and Pasquale Guido,
Altoona, Pa.

Application May 8, 1939, Serial No. 272,481

5 Claims. (Cl. 34—99)

This invention relates to electric motor operated hair driers of the type used in hair emporiums, so-called beauty parlors and the like. The particular embodiment under advisement has reference in particular to a portable pedestal-style high-boy structure wherein the motor driven fan is on the base at a point remote from the head accommodating and receiving drier hood.

In accordance with the principles followed in constructing hair driers of the aforementioned types, a perpendicular hollow standard rises from a roller equipped base or stand, the standard being provided at its upper end with an adjustable hood and the air blower or fan being designed to deliver the flowing air into the conduit-forming standard. In an effort to place the blower as far away from the hood as is reasonably possible, structures of this type are given to development of seemingly unbearable noises. Unless the motor is cushioned and properly mounted and the blower constructed in accordance with the newer principles of this invention, an incessant noise tantamount to a nerve-wracking roar is created. So the unwilling victim, the customer subjected to this deplorable condition, must undergo untold punishment.

The trade in general has long recognized this unwanted condition. In fact, it would appear that the so-called pedestal-style noise-generating hair driers are perhaps destined to abandonment unless the roar is subdued and the machine constructed to satisfactorily serve and placate feminine customers. Not only have we discovered the need for a revision of present day hair driers of the type under consideration, but we have evolved and actually produced a unique construction and arrangement which aptly fulfills the requirements of the trade and minimizes vibration and attendant noise and roar to the extent that one has to listen intently in order to detect the presence of our now substantially silent motor driven blower.

Briefly, in reducing to practice the preferred embodiment of our ideas, we have perfected a motor and blower assembly adequately fitted to accomplish our purposes. With this assembly is associated a telescopic standard forming the air delivery conduit, the sections of this being insulated to cut down vibration and noise so that the adopted features collectively serve their proportionate share in providing an acceptable substantially noiseless hair drier.

Other somewhat secondary and subordinate

features will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein the preferred embodiment is disclosed and like reference characters are utilized to designate corresponding details throughout the views:

Figure 1 is a side elevational view of a hair drier constructed in accordance with the principles of our invention.

Figure 2 is a vertical central sectional view through the assembly seen in Figure 1.

Figures 3, 4, 5, and 6 are detail sectional views taken on the lines 3—3, 4—4, 5—5, and 6—6, respectively of Figure 2.

Figure 7 is a view of the wiring diagram of the multiple unit electric heater means.

Figure 8 is a fragmentary top plan view of the adjusting and retention means for the tiltable or adjustable hood.

Figure 9 is an enlarged fragmentary detail sectional view on the line 9—9 of Figure 1.

Referring now to the drawings by distinguishing reference numerals, the base or stand 10 comprises a plurality of downwardly diverging legs 11 having at their lower ends rollers or casters 12 to facilitate mobility of the structure as a whole. The horizontal frame bars 13 carried by the lower portions of the four legs have a pair of parallel cross-bars 14 therebetween. Saddled in the space between the cross-bars 14 is the insulated housing or casing 15 of the blower unit 16. The marginal peripheral rim is suspended between the bars 14 as brought out to advantage in Figure 2. The discharge neck 17 is in communication with and adjoined to the lower stationary section 18 of the tubular standard. It is highly important to note that the vertically parallel side walls of the fan housing are provided with opposed openings 19 and 20 (see Figure 5). The smaller opening 19 may be described as an air intake. The larger opening 20 is an air vent and the two openings collectively reduce air roar at this point to a minimum. Vibration is cut down by mounting the electric motor (of any suitable type) 21 in a properly cushioned harness. That is to say, the motor is surrounded by rubber or equivalent cushioning means 22 and is partly supported in a stirrup 23 carried by the aforementioned braces or cross bars 14. The sectional bands 24 surrounding the upper part of the motor cushioning bands and attached to the rods 14 function as suitable clamping means. Thus, the motor is cradled in rubber and because of this

the machine may be said to be equipped with "floating" power. A suitably bladed fan 25 is in the fan housing between the side walls and in alignment with the openings 19 and 20. It will be noticed that the fan shaft has no direct metal contact with the housing, and therefore there is no vibration or noise at this vital point.

The upper section 26 of the standard is telescopically connected to the rigid lower section 18. At its upper end it is provided with a goose-neck 27 to which the hood or shell 28 is pivotally connected as at 29. As the upper section is raised to a predetermined elevation it is necessary to tilt the hood down to obtain the desired angularity in relation to the head of the patient (not shown). The tilting and adjusting means is shown in Figure 8. We provide two T-shaped members. One is fixed as at 30 and the T-head 31 thereof provides a handle to facilitate pulling and pushing the entire machine from place to place. The stem of this rigid T-shaped member 30 is tubular to accommodate the rigid stem 32 of the other companion T-shaped member. The stem 32 is provided with longitudinally spaced notches forming keeper seats to accommodate the spring fingers or detents 33. The head portion of the movable T-shaped member as indicated at 34, is pivotally connected at the point 35 to the hood. Thus the hood can be lifted up and down with the hand and the spring catch means will function automatically to hold it in any suitable adjusted position. We want to emphasize in this connection the existing expansible sponge rubber cushion 36 between the hood and the upright portion of the section 26. By resting the bulk of the weight of the hood on the cushion and connecting the cushion both to the standard and the hood, the hood is cushioned against vibration and noise constantly. This is an important advantage.

The hood is more or less of conventional shape so far as its external appearance is concerned. It is to be observed however, that it has special built-in conveniences. There is an air deflector lip 37 at the back. Then, the perimeter of the mouth is provided with a part-segmental channel 38 with vents at the point 39. This means 38 and 39 provides a shield in the nature of a gutter to trap the hot air current and to keep the same from direct contact with the forehead and sides of the one's face. On diametrically opposite sides the inboard wall or flange of gutter-like shield has arching risers of appropriate shape and dimension as at 40 in Figure 2. These form ear-guards, and it will be noted that the registering portions of the shell of the hood are provided with apertures having air intake screens 41. By equipping the hood with these additional safeguarding and comforting facilities, this part of the structure is considered to be of outstanding importance.

Any suitable electric heating means may be provided on the conduit forming sectional standard. The means are generally referred to by the numeral 42 in Figure 2. As shown in the diagram in Figure 7, two or more independent controllable coils or units may be employed, the switch means 43 being constructed to selectively control the intensity of the heat. We are not particularly concerned with this phase of the invention and have shown broadly a diagram merely to illustrate the heat control. We are however, concerned with other additional details illustrated. That is to say, novelty is

thought to reside in the laminated construction of the standard sections as well as the hood. Each of these parts comprises an outer metal wall 44 and an inner metal lining or wall 45, there being intervening asbestos or equivalent packing 46 whereby to insulate these respective parts. That is, they are insulated against loss of heat and also rendered somewhat vibrationless and sound-proof. To add to the stability and to minimize the vibration, the adjusting means for the telescoping sections of the standard is preferably as detailed in Figure 9. Here 47 designates a support for a tube 48 receiving a telescoping rod 49 connected to the movable standard section as indicated at 50. A set screw 51 serves to interconnect the respective parts and to facilitate raising and lowering of the hood carrying section of the standard.

It is thought that the description taken in connection with the drawings will enable a clear understanding of the invention to be had. Therefore, a more lengthy description is thought unnecessary.

While the preferred embodiment of the invention has been shown and described, it is to be understood that minor changes coming within the field of invention claimed may be resorted to if desired.

We claim:

1. A substantially vibrationless non-roaring hair drier of the class described comprising a portable support, a centrifugal type air blower embodying a fan housing operatively mounted on said support, said housing having spaced parallel side walls and a marginal rim provided with an air discharge neck, said walls having opposed registrable relatively large openings therein, one opening serving as an air intake and the other opening serving as an air pressure relief vent, a floating power unit, said unit embodying an electric motor having a horizontal shaft extending through one of said openings into said housing, a fan in said housing mounted on said shaft, suspension means for said motor including a cushioning element wholly embracing the motor, a hollow air delivery duct attached to and rising from said discharge neck and terminating at its upper end in a return bend defining a depending goose-neck, a swingable head accommodation hood suspended from the mouth of said goose-neck, yieldable cushioning and shock-absorbing means interposed between the duct and adjacent portion of said hood, coating adjustment means between the goose-neck and the pivoted portion of the hood for regulating the angularity and fixing the position of the hood in relation to the duct, and air trapping and deflecting channel means surrounding the open discharge end of said hood.

2. A substantially vibrationless non-roaring hair drier of the class described comprising a portable support, a centrifugal type air blower embodying a fan housing operatively mounted on said support, said housing having spaced parallel side walls and a marginal rim provided with an air discharge neck, said walls having opposed registrable relatively large openings therein, one opening serving as an air intake and the other opening serving as an air pressure relief vent, a floating power unit, said unit embodying an electric motor having a horizontal shaft extending through one of said openings into said housing, a fan in said housing mounted on said shaft, suspension means for said motor including a cushioning element

wholly embracing the motor, a hollow air delivery duct attached to and rising from said discharge neck and terminating at its upper end in a return bend defining a depending goose-neck, a swingable head accommodation hood suspended from the mouth of said goose-neck, yieldable cushioning means interposed between the duct and adjacent portion of said hood, co-acting adjustment means between the goose-neck and the pivoted portion of the hood for regulating the angularity and fixing the position of the hood in relation to the duct, air trapping and deflecting channel means surrounding the open discharge of said hood, said channel means having an inner flanging wall provided with ear guards, and said hood having openings aligned and associated with said ear guards.

3. As a component part of a structure of the class described, a laminated hollow shell open at opposite ends and interiorly and exteriorly shaped to define a head-receiving hood, the open air-discharge end of said hood being provided with a channel-like marginal gutter and diametrically opposed screened air discharge openings, the inner wall flange of said gutter being provided with inwardly and upwardly projecting arched risers aligned and registering with said screened openings.

4. As a component part of a structure of the class described, a hollow dome-like shell open at opposite ends and interiorly shaped to define a head accommodation and receiving hood, the open air discharge end of said hood being provided with an interiorly confined channel-like marginal gutter, the inner wall flange of said gutter being provided at diametrically opposite

points with inwardly projecting and arched risers forming ear shields, said shell having diametrically disposed air discharge apertures in alignment with said ear shields.

5. A substantially vibrationless non-roaring hair drier of the class described comprising a portable support, a centrifugal type air blower embodying a fan housing operatively mounted on said support, said housing having spaced parallel side walls and an intervening side wall connecting marginal rim provided with an air discharge neck, said side walls having opposed registrable relatively large openings therein, one opening serving as an air intake and the other opening serving as an air pressure relief vent, a floating power unit, said unit embodying an electric motor having a horizontal shaft extending through one of said openings into said housing, an air intake fan in said housing mounted on said shaft and in alignment with said openings, yieldable and substantially shock-proof suspension means for said motor, a hollow air delivery duct attached to and rising from said discharge neck and terminating at its upper end in a return bend defining a depending goose-neck, and a head accommodation hood of dome-like form pivotally and adjustably suspended from the mouth of the goose-neck and adjustment and shock-absorbing yieldable means interposed and mounted between said duct and pivoted end of the hood permitting said hood to be substantially free of vibrational noises and susceptible of angular adjustment to arrange the tilt thereof in a position most advantageous to the user.

GIOVANNI DE VINCENZIS.
PASQUALE GUIDO.