

[54] **HYGIENIC CLEANING DEVICE FOR THE ANAL AREA OF THE HUMAN BODY**

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[51] Int. Cl. ... **A61h 9/00, A61h 19/00, A61h 21/00, A61h 35/00, A61h 37/00, A47k 7/04, A47k 7/08**

[58] Field of Search **4/1, 6, 7, 294; 15/304; 128/229, 357, 65**

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[57] **ABSTRACT**

A hand-held device for hygienical cleaning of the anal area of the human body including elongated cleaning heads mounted on a housing in a side-by-side relation, and a motor carried by the housing to drive the elongated heads in opposite directions about their longitudinal axes.

7 Claims, 5 Drawing Figures

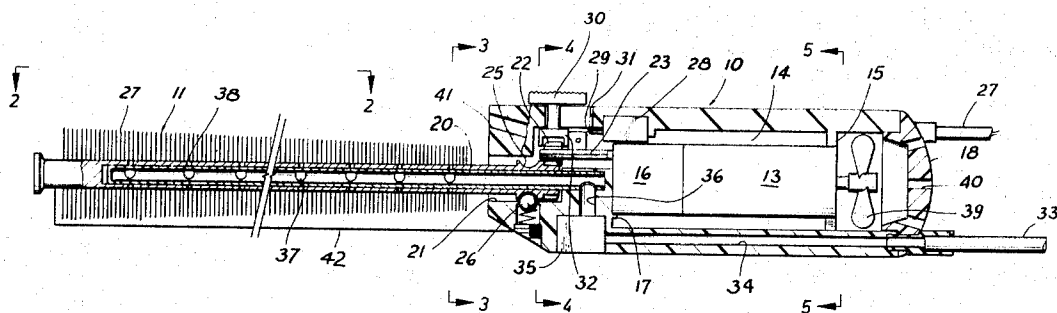


FIG. 1

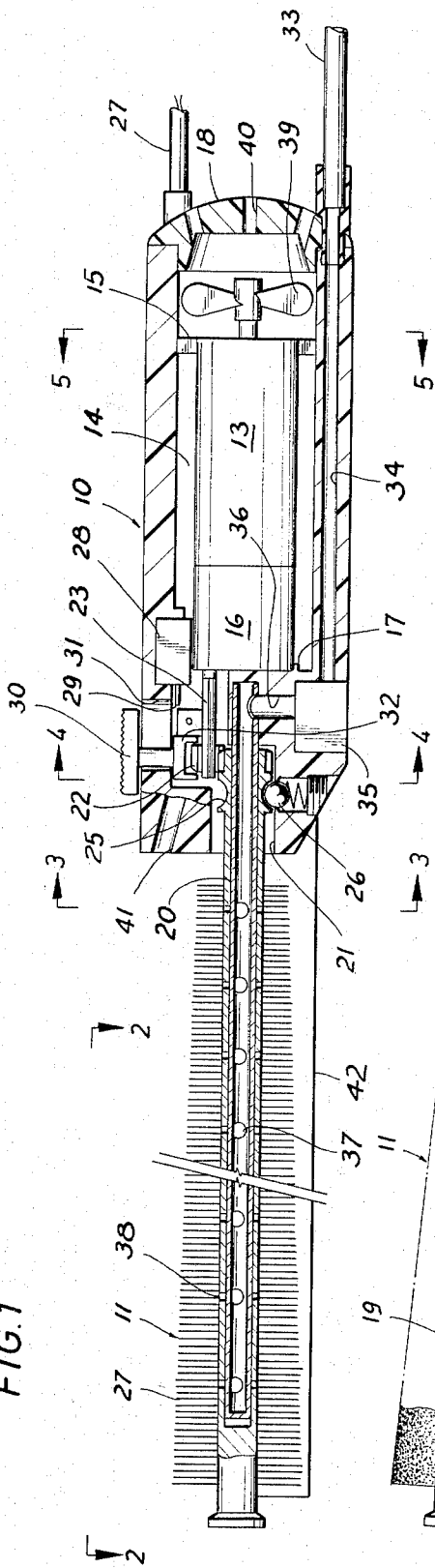


FIG. 2

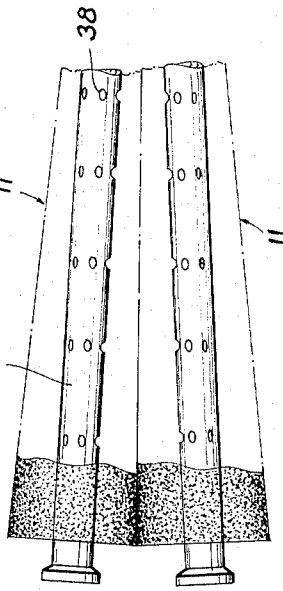


FIG. 4

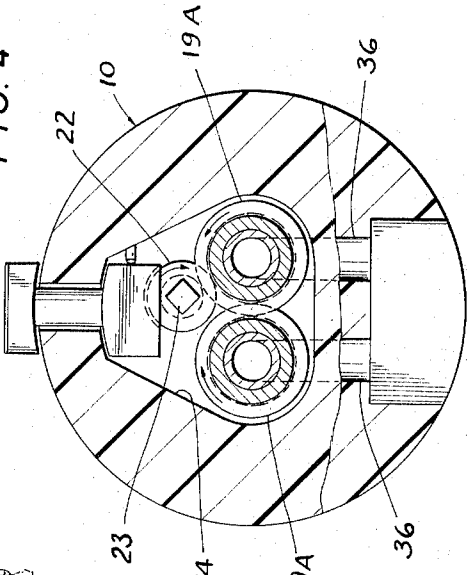


FIG. 5

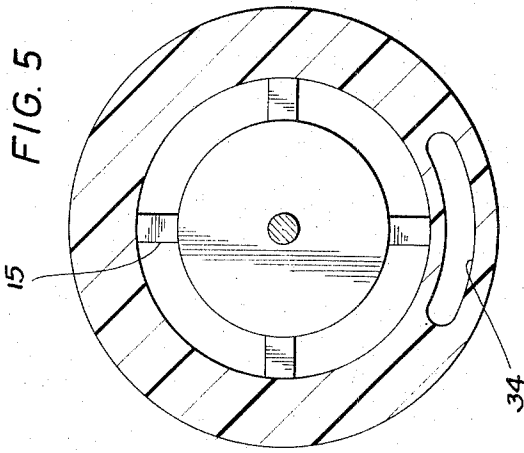
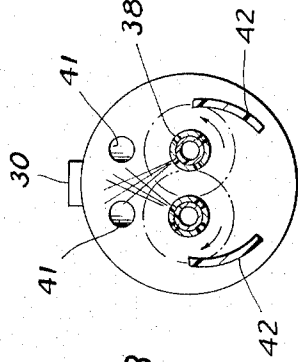


FIG. 3



HYGIENIC CLEANING DEVICE FOR THE ANAL AREA OF THE HUMAN BODY

This application is a continuation-in-part of my co-
pending U. S. application, Ser. No. 99,503 filed Dec. 18, 1970, and entitled "Toilet Manufacture".

This invention relates to an improved hand-held hygienical cleaning device for cleaning the anal area of the human body.

The use of dry papers in hand-wiping the anal region of the human body either improperly cleans the anal area or substantially irritates the tissue of the anal opening. When the anal region is inflamed from hemorrhoids and/or other causes, it is especially desirable to have a very effective cleaning of this region without an excessive amount of irritation.

Although the prior art discloses some devices intended to eliminate hand-wiping of the anal area, they either suffer from the same problems created by dry hand-wiping, i.e., irritation of the anal area and/or ineffective cleaning — or are of such large size as to require mounting to the toilet seat or bowl. Obviously, a device mounted in this way would be cumbersome and unsightly. Still other prior art devices are intended to cure the problems created by a dry wiping by means of some type of fluid along the wiping surface to effect cleaning. However, they are also generally quite large and inefficient, normally requiring mounting on the toilet seat, and in many cases, constitute nothing more than an extension of the wiping motion.

Still further, the cost of these complex cleaning devices of the prior art, whether of the dry or wet-wiping type, would be prohibitive, even if desired. Also, they generally suffer from an inability to be accurately placed by the operator to effect their greatest cleaning potential on the anal region.

An object of this invention is to provide such a hygienical cleaning device which provides effective cleaning without irritation of the anal region.

Another object is to provide a lightweight, hand-held device for hygienically cleaning the anal area of the human body with a minimum of wiping motion and in a moist environment.

It is another object of this invention to provide a device for applying medication and general massage to the anal region when in need of such medication and massage.

These and other objects, advantages and features are accomplished according to this invention, by a device which includes a hand-held housing having first and second elongated cleaning heads mounted thereon and extending therefrom in side-by-side relation, such that they may be placed adjacent the anal area. Means are carried by the housing for rotating the first and second heads in opposite directions along their longitudinal axes, and simultaneously directing liquid to the anal area, upon actuation by the user when the device is so placed adjacent his anal area. In accordance with the preferred embodiment of this invention, the device also includes a means for circulating air past the anal region after it has been hygienically cleaned by the rotating heads and liquid.

In the drawings, wherein the preferred embodiment of this invention is illustrated and like numbers are used throughout to designate like parts:

FIG. 1 is a longitudinal sectional view of the hygienical cleaning device of this invention;

FIG. 2 is a partial top view of FIG. 1, as seen along 2—2; and with a portion of the bristles on the cleaning heads shown in phantom; and

FIGS. 3, 4 and 5 are cross-sectional views of the hygienical cleaning device, taken along lines 3—3, 4—4 and 5—5 of FIG. 1.

Referring now to the details of the above-described drawings, the device shown in its entirety in FIG. 1 includes a hollow, generically cylindrical housing 10 of a size to permit it to be held intermediate its ends by the hand of the user. A pair of elongated cleaning heads 11 are mounted on one end of the housing 10 for extension in side-by-side relation, so that, as will be described to follow, the user may manipulate the housing 10 into a position to dispose the adjacent cleaning surfaces on one side (upper in FIG. 1) of the heads close to the anal area. More particularly, and as will be further described later, a means is carried by the housing for rotating the first and second heads in opposite directions about their longitudinal axes, whereby the cleaning surfaces on the one side of the heads move inwardly toward one another as they pass over the anal area.

An electric motor 13, a means for rotating the first and second heads, is mounted concentrically within the housing 10 to provide an annular passageway 14 therebetween. The rear end of the motor is held by spacers 15 and a gear box 16 connected to the front end of the motor is mounted on a ledge 17 formed on the interior of the housing 10. A cap 18 is removably disposed over the end of the housing opposite the heads 11 to permit access to and removal of the motor, gear box, and other parts within the housing to be described.

Each of the heads 11 includes a tubular member 19 closed at its outer end and open at its inner end for fitting closely over one of a pair of tubular members 20 extending from the end of the housing 10. More particularly, the inner end of each of tubular members 20 is fixedly disposed in a pocket within the housing, and the tubular members 19 and 20 extend from the end of the housing through an enlarged opening 21 therein.

The inner end of each tubular body 19 of each head is provided with gear teeth 19a thereabout in driving engagement with one another. Rotation is imparted to one such tubular member, and thus to the other, by means of gear teeth 22 fixed to the outer end of a shaft 23 extending from the gear box 16 and disposed within an enlarged recess 24 in the body intermediate the gear box and the enlarged opening 21 in the end of the housing. Thus, as will be understood, the electric motor 13 will, through the gear box 16, impart a relatively low speed of rotation to the shaft 23, which in turn will impart relatively low speed of rotation to the tubular bodies of the heads 11.

The inner portion of each tubular body 19 adjacent the gear teeth 19a thereabout is provided with a groove 25 for receiving a spring-pressed detent ball 26 carried by the housing. Thus, each of the heads 11 is releasably connected to the housing, whereby it may be removed for replacement, repair, or cleaning.

As shown in FIGS. 1 and 2, bristles 27 are mounted on the tubular body 19 of each head, preferably with the outer ends of the bristles providing conical cleaning surfaces. As shown in FIG. 2, the portions of the tubular bodies 19 on which the bristles are mounted converge outwardly at a small angle so that the adjacent

cleaning surfaces of the heads are substantially tangent to one another.

As shown in FIG. 4, the shaft 23 is caused to rotate in a clockwise direction, so as to impart rotation to the cleaning heads which causes the cleaning surfaces on the upper sides of the heads, which would normally be disposed adjacent the anal area, to be moved toward one another as they approach such area.

The motor 13 is connected to a suitable source of electrical power by means of an electrical conduit 27 extending through the rear end of the housing. A switch 28 is mounted within the housing for selectively disconnecting the motor from the power source. This switch is of any well-known type which is normally closed to operate the motor, but which may be opened by depression of a stem 29.

Thus, in the relative positions of the shaft 23 and heads 11 shown in FIG. 1, the motor is operating to rotate the heads for use in the intended manner. In order to discontinue rotation of the heads, gear teeth 22 about the shaft 23 are disengaged from the gear teeth of the heads by means of a shiftable, finger-operated switch 30. As shown in FIG. 1, the upper side of the housing 10 is slotted to permit the switch to extend into the housing and thus dispose a yoke 32 on its inner end over the gear teeth 22. The slot is elongated and the shaft 23 is retractible into the gear box to permit the switch to be shifted rearwardly to disengage gear teeth 22 from engagement with the heads. During the initial portion of this rear movement of switch 30 to disengage the shaft 23 from the heads, and thus discontinue rotation of the heads, the motor 13 continues to operate.

A liquid, which may be ordinary tap water, or which may be a cleansing liquid, is supplied to the housing 10 by means of a flexible tube 33 connected to the outer end of a conduit 34 extending longitudinally of the housing. The inner end of the conduit 34 fluidly connects with a valve 35 of any suitable construction, which in turn connects with laterally extending conduits 36 leading to the interiors of the tubular members 20. The valve is normally open, but adapted to be closed by a switch carried by the housing in position to be actuated by the yoke 32 on the inner end of switch 30 as the latter is shifted rearwardly. When engaged by the yoke, the switch closes the valve 35 and thus discontinues the supply of liquid to the interior of the tubular body 20.

The tubular bodies 20 are each provided with a single row of perforations 37 extending in a direction with their axes converging toward one another at the side of the heads to be disposed adjacent the anal area. Each of the tubular bodies 19 of the heads 11 is provided with a plurality of longitudinally extending rows of perforations 38, which are spaced apart the same distances as the perforations 37 in the bodies 20 so as to be intermittently aligned therewith upon rotation of the bodies 19 with respect to the bodies 20, whereby the liquid is intermittently sprayed in an upwardly convergent pattern toward the anal area. This not only serves a cleansing purpose insofar as the anal area is concerned, but also cleanses the bristles of the brushes since the liquid is caused to pass through the brushes.

As shown in FIG. 1, a propeller 39 is mounted for rotation on the rear end of the motor 13 inwardly of the cap 18 closing the outer end of the housing 10. The cap is provided with a series of holes 40 which permit air to be drawn into the housing by means of the propeller

39 and circulated through the annular passage 14, past the motor 13 and gear housing 16, and through the recess 24 and enlarged opening 21. As will be apparent from FIG. 1, the air is thus circulated over the brushes to provide a drying action thereon upon discontinuation of rotation of the brushes. A pair of holes 41 are also provided in the inner end of the housing 10 near the upper portion thereof so as to circulate air past the anal area above the upper sides of the cleaning heads. This, of course, is useful in drying the anal area as the user continues to hold the device in the cleaning position.

Upon completion of the drying cycle, the switch 30 is moved to a further rearward position, as determined by its engagement with the rear end of the slot 31, so as to depress the stem 29 and thus open the switch 28 to discontinue operation of the motor 13. The switch 30 may be releasably held in this latter position by any suitable means, such as detents or the like (not shown) on the outer portion of the housing.

Shields 42 are carried by and extend from the inner end of the housing for the entire length of the brushes of the heads 11 toward the sides thereof away from the sides normally opposite the anal area. Thus, as will be apparent from FIG. 3, these shields prevent liquid from being splashed outwardly from the brushes. Also, the upper edges of the shields engage the outer ends of the bristles forming the cleaning surfaces of the heads so as to scrape them and thus provide a cleaning action.

A massaging action can be accomplished with this device by moving the heads just slightly to either side of the center of the normal operating area, and such massaging action in combination with medication is considered desirable in some applications. For example, in the case of women after childbirth, it is desirable to apply salts and gentle massaging action to their episiotomy and anal region, and from the foregoing it can be seen that the device of this invention can accomplish such an application.

From the foregoing it will be seen that this invention is one well adapted to attain all of the ends and objects hereinabove set forth, together with other advantages which are obvious and which are inherent to the apparatus.

It will be understood that certain features and subcombinations are of utility and may be employed without reference to other features and subcombinations. This is contemplated by and is within the scope of the claims.

As many possible embodiments may be made of the invention without departing from the scope thereof, it is to be understood that all matter herein set forth or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

The invention having been described, what is claimed is:

1. A device for hygienically cleaning the anal area of the human body, comprising a hand-held housing; first and second elongate cleaning heads mounted on the housing for extension therefrom in side-by-side relation, whereby the housing may be held with the adjacent cleaning surfaces of one side of the heads close to the anal area, each head including a first tubular body, and the housing includes a pair of second tubular bodies on each of which a first body is rotatably mounted, means carried by the housing for rotating the first and second heads in opposite directions about their longitu-

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dinal axes; means for directing liquid to the anal area during rotation of the heads, the liquid directing means including conduit means in the housing for supplying liquid to the interior of each second body, and perforations in the first and second bodies adapted to be intermittently aligned upon rotation of the first body; and means mounted on said housing for circulating air past the anal area wherein said means for circulating air includes passages in the housing bypassing the rotating means and conduit means having an outlet from the tubular bodies for directing said air in a direction past the adjacent cleaning surfaces on the head.

2. A device of the character defined in claim 1 wherein the cleaning heads include brushes, and the liquid directing means is arranged to cause liquid to pass through the brushes.

3. A device of the character defined in claim 1 including shields carried by the housing over the cleaning

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surfaces on the opposite facing outer sides of the heads.

4. A device of the character defined in claim 3, wherein the edges of the shields engage the cleaning surfaces of the heads.

5. A device of the character defined in claim 1 wherein the perforations in the bodies are arranged to direct liquid in a converging pattern toward the anal area.

6. A device of the character defined in claim 1, wherein the means for rotating the heads includes drive means on the housing selectively engageable and disengageable with each of the first bodies.

7. A device of the character defined in claim 1, including means for selectively discontinuing rotation of the heads and supply of the liquid while continuing circulation of air.

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