Sept. 12, 1961 J. R. SMITH 2,999,263

VACUUM DANDRUFF HAIR BRUSH

Filed Aug. 10, 1959

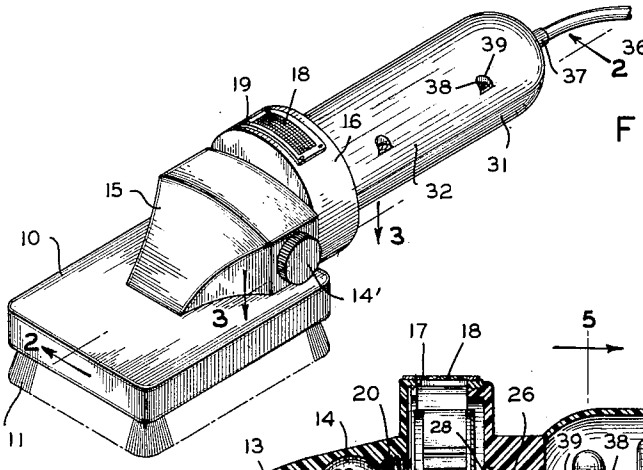


FIG. 1

FIG. 2

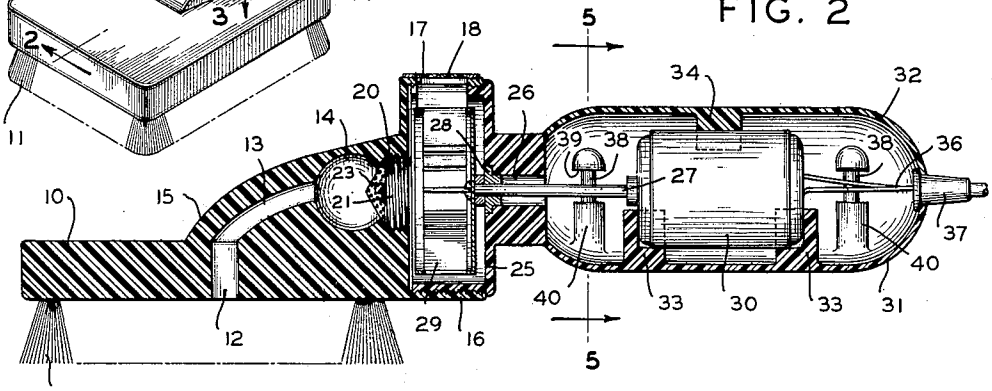
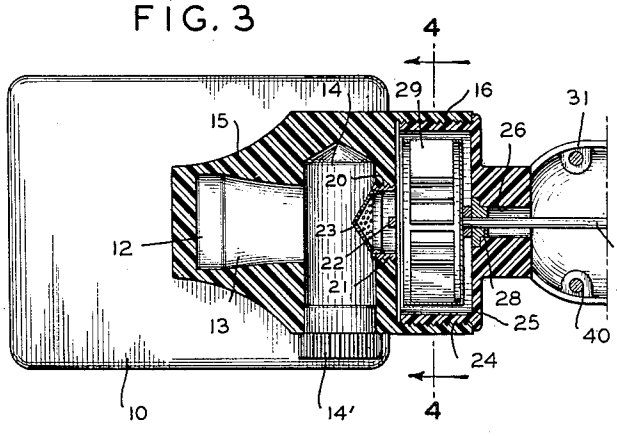


FIG. 3



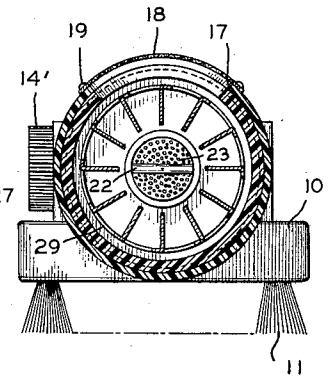


FIG. 4

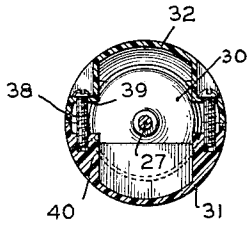


FIG. 5

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VACUUM DANDRUFF HAIR BRUSH

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1 Claim. (Cl. 15—344)

This invention relates to the care of the human body including the equipment employed in the accomplishment of such purpose and particularly to the care of the hair in order to maintain it in a clean healthy and dandruff-free condition.

The invention relates specifically to a brush designed for use on the scalp and the hair and having means for producing suction therethrough in order to make it possible to collect and dispose of loose dandruff or other small particles clinging to the hair.

Various devices have been produced for brushing, massaging, and otherwise treating the scalp and hair, both with and without the attempted collection of loose particles of dandruff and the like. Such devices have been inadequate and have failed in the removal and collection but they have left loose particles of dandruff in the hair and elsewhere on the person and which particles frequently were visible.

It is an object of the invention to overcome the difficulties enumerated and to provide a vacuum hair brush of a character to remove by suction small particles of dandruff or other substances from the scalp and hair during the brushing and massaging of the same and leaving the hair clean, healthy and dandruff free.

Another object of the invention is to provide a device of the character indicated in which the collected particles may easily be collected in a sanitary manner and thereafter readily discarded.

A further object of the invention is to provide a hair brush with suction means and a compartment for collecting particles and from which said particles may easily be removed and discarded and which hair brush can be readily washed without damaging the electrical or suction mechanism.

Other objects and advantages of the invention will be apparent from the following description taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a perspective illustrating one application of the invention;

FIG. 2, a longitudinal vertical section on the line 2—2 of FIG. 1;

FIG. 3, a section on the line 3—3 of FIG. 1;

FIG. 4, a section on the line 4—4 of FIG. 3; and

FIG. 5, a section on the line 5—5 of FIG. 2.

Briefly stated, the invention is an elongated generally rectangular brush having a head and bristles, the head being provided with a central transverse suction opening connected by a suction channel with a collection chamber, a renewable filter being in communication on its remote side with a chamber having a suction fan therein, and an air exhaust opening with a handle-forming extension having an opening for housing a motor connected by means of a shaft to such fan, the handle being formed of complementary parts adapted to afford access to the motor chamber therein and with conductor wires for connection to a source of electrical energy.

With continued reference to the drawings, the brush of the present invention has a back 10 over which are spaced bristles 11 in the manner of a conventional brush for use in brushing the scalp and hair in the customary manner. The back of the brush is provided with a cross channel 12 midway between its ends into which small particles of dandruff and the like are adapted to be drawn by suction.

From the cross channel 12 a connecting channel 13 extends to a collection chamber 14 having an access plug 14' in which particles collected are adapted to be deposited, such connecting channel 13 and collection chamber 14 being located in an enlargement 15 on the back of the brush which terminates in an enlarged housing 16 for a suction fan, such housing having an exhaust opening 17 covered by a screen 18 held in place by fasteners 19. The enlarged housing 16 is a part of the enlargement of the brush.

Between the hollow housing 16 and the collection chamber 14 is a threaded opening 20 in which is adapted to be disposed a screw plug filter composed of an externally threaded sleeve 21 with a manipulating bar 22 and a filter 23, the filter being adapted to retain small particles within the collection chamber 14.

The large housing 16 is provided with internal threads 24 for the reception of an externally threaded screw plug 25 having an axial opening 26 in which a shaft 27 is mounted in a supporting bearing 28, such shaft having a circular suction fan 29 fixed to said shaft, and with such shaft driven by a motor 30 housed within a hollow two-part handle 31—32, the part 31 being the lower part and integral with the screw plug 25 and having oppositely disposed motor supports 33 and with a cooperating motor support 34 in the opposed portion 32 of the handle for the reception and support of the motor 30. Conductors 36 extend through an insulating sleeve or collar 37 at the remote end of the handle. The complementary sections of the handle are fastened together by means of screws 38 extending through openings 39 in the upper section and anchored in bases 40 in the lower section.

It will be apparent from the foregoing that there is provided a relatively simple, compact, easily produced combination hair brush and suction device which can be readily held in the hand and manipulated to brush the hair and massage the scalp and at the same time to exert suction pressure on the hair and scalp area brushed by means of the suction fan. Also the suction is exerted through a collection chamber having a filter to prevent particles from being drawn into the fan and discharged into the atmosphere but permitting the removal of particles and the air devoid of such particles to be so discharged and the contents of the collection chamber may be readily emptied by removing its plug. Also, the motor-containing handle may be detached and separated from the rest of the device to permit the brush to be cleaned by washing or the like.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is illustrated in the drawings and described in the specification, but only as indicated in the accompanying claim.

What is claimed is:

A combination hair brush and dandruff removing vacuum device comprising a brush head having bristles around a major portion of the periphery thereof, said brush head being provided with an enlarged fan receiving section, said brush head being provided with an air passageway from the surface supporting said bristles within the periphery of said bristles and extending to said enlarged fan receiving section, said brush head being provided with an enlarged transverse passage in communication with said air passage and extending to the exterior of said brush head, said transverse passage being closed at one end, means to selectively open and close the other end of said transverse passage, said air passage being appreciably enlarged from said transverse passage to said fan receiving section and being provided with a filter receiving seat, a filter removably mounted on said filter receiving seat in said enlarged portion of said air passage and removable

through the fan receiving section, a motor support detachably connected to said brush head having a fan receiving section cooperating with the fan receiving section of said brush head to provide a fan receiving chamber therebetween, a motor, means to mount the motor in a motor receiving recess in said motor support, said motor support having a removable section to provide access to the motor receiving recess, said motor having a shaft extending into the fan receiving chamber, a fan mounted on said shaft within said fan receiving chamber, an air outlet means in said fan receiving chamber through said enlarged fan receiving section of said brush head and said cooperating section of said motor support whereby filtered air will be forced from the fan receiving chamber drawing dandruff and loose hair into said filter and ready cleaning thereof can be obtained by separation of the motor support from the brush head providing for ready removal of the filter element and providing for complete cleaning through the transverse passage.

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