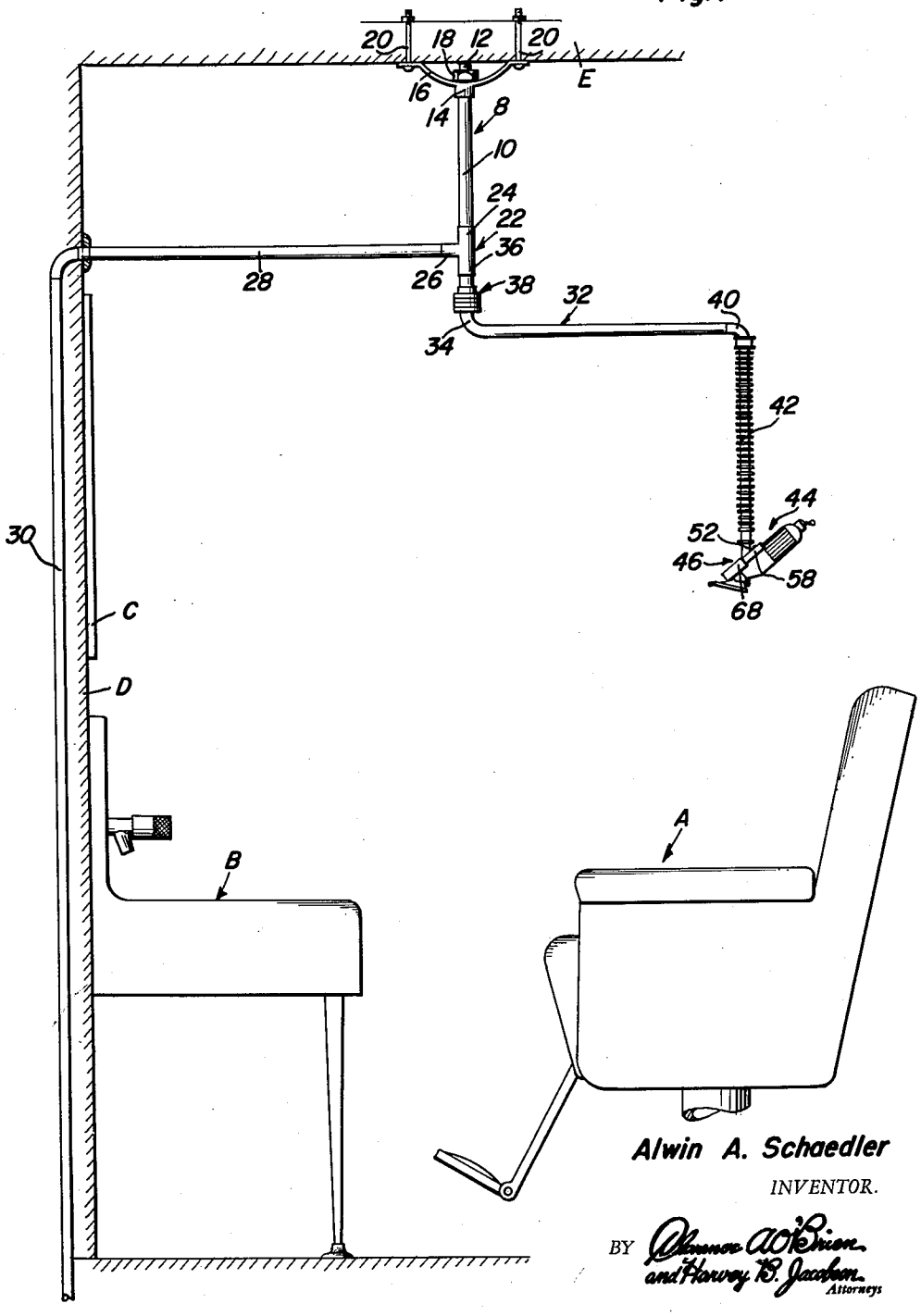
Jan. 15, 1963 A. A. SCHAEDLER 3,073,026

HAIR VACUUM LINE AND INDUCTION NOZZLE FOR HAIR CLIPPERS

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Fig. 1



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Fig. 2

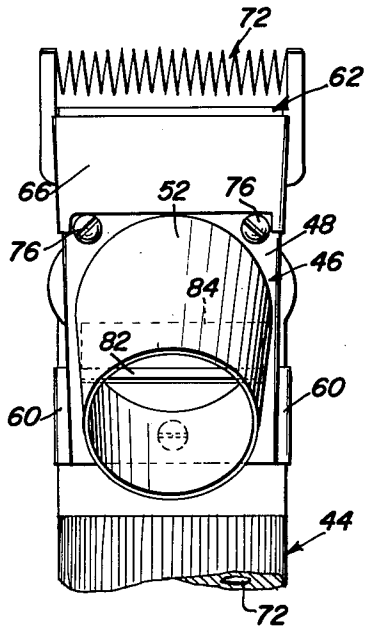


Fig. 3

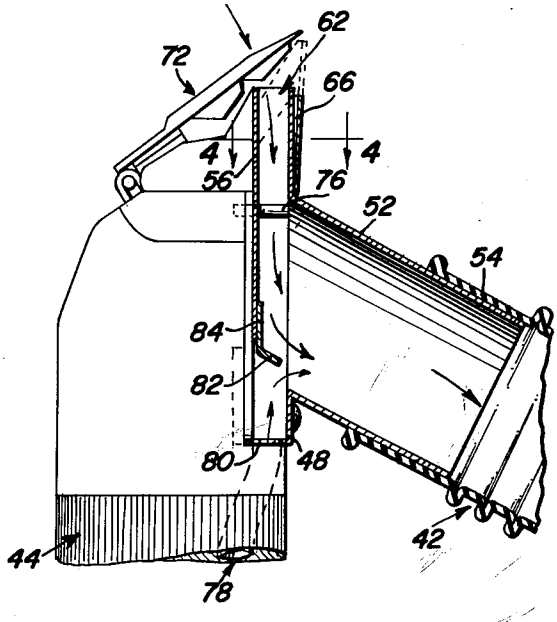


Fig. 4

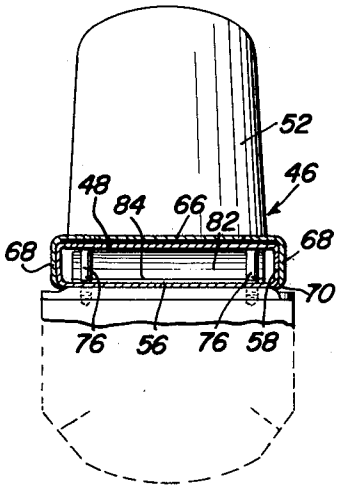
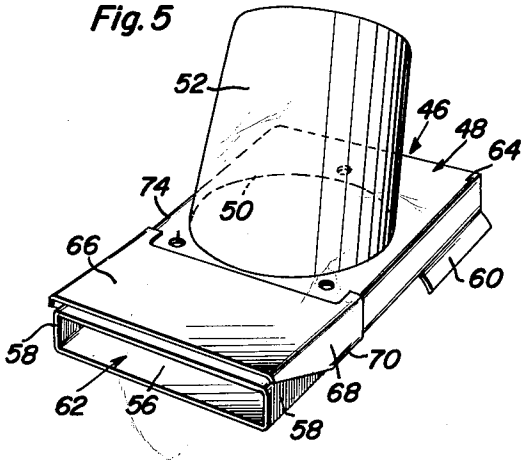


Fig. 5



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United States Patent Office 3,073,026 Patented Jan. 15, 1963

3,073,026

HAIR VACUUM LINE AND INDUCTION NOZZLE FOR HAIR CLIPPERS

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Filed Mar. 27, 1961, Ser. No. 98,679
4 Claims. (Cl. 30—133)

This invention relates to certain new and useful improvements in means for picking up, gathering and disposing of hair while being clipped by a barber and pertains, more specifically, to a vacuum line or conduit wherein the intake end is cooperatively connected with a specially constructed hair intake or induction nozzle, the discharge end of said conduit being communicatively and operatively connected with a suitable vacuum source having a container or any equivalent means for collecting and trapping the disposable hair.

The preceding general idea and hair disposal procedure has been a barber shop problem for some time. Persons conversant with it are aware that many inventors have explored this field of endeavor and have come up with a number of proposed solutions but for one reason or another their efforts seem not to be worthy of endorsement, acceptance or widespread adoption and use. It follows that the instant invention seeks to provide ways and means which are capable of accomplishing what is desired by manufacturers, retailers, barbers and other users.

To the ends desired, consider first the fact that the barber must not be hampered in freedom of handling and using the clippers at hand. Manifestly, any arrangement which hinders the barber's skill and action will meet with resentment and will result in objections too numerous to dwell upon. So, with this contingency in mind the instant invention makes available a simple, practical and acceptable means to suspend the clippers so that anticipated difficulties can be overcome. Therefore, and to begin with novel easy-to-handle suspension means is provided. Briefly, this means comprises a hanger embodying a rigid suspension member having an upper end provided with means for attaching said upper end to an elevated stationary support so that said member is hung vertically and rigidly, a rigid suction arm swivelly mounted at one end on said member, said arm being disposed in a horizontal plane, a flexible hose communicatively connected to the other end of said arm, a hair and air induction nozzle carried by said hose, an electric hair clipper connected with said nozzle, and a suction line communicatively joined to said one end and adapted to be connected with a place of deposit for accumulated hair clippings.

The flexible hose is attached to the clippers at a 60° angle on a swivelled arm to allow the barber to operate the clipper by holding the same in his customary way but without also having to hold the hose. The flexible hose is 1¼ inch, inside measurements, which allows hair of any length to pass through without clogging. The 1¼ inch inside measurements of the flexible hose attached to the induction nozzle—5/16" high and 1¾" wide—provides sufficient suction current of air to carry away all of the cut hair.

Another aspect of the concept has to do with hair clippers embodying customary cutting heads at one end of a handle-equipped body, an elongated tubular hair intake nozzle mounted atop said body and having an intake end in close proximity to and aligned with the blades on said heads, said nozzle being provided with a discharge neck, said neck adapted to permit a suction hose to be communicatively joined thereto, and baffle means mounted in the passage of said nozzle and cooperable with the hair intake end of said neck.

The invention also is directed to the nozzle by itself, that is, in the sense that it is a ready-to-use attachment

which lends itself to use on and in conjunction with electric hair clippers which are currently in use. Briefly the attachment is characterized by a tubular nozzle rectangular in cross-section and defining a hair and air passage, the forward end of said passage being open, one wall of said nozzle having an opening and a hair disposal neck registering the with said opening, said neck being disposed at an oblique angle relative to the long axis of the nozzle and serving to permit the attachment thereto of a suction hose, means carried by said nozzle for mounting the same on a surface of the aforementioned body portion, and a baffle mounted in said passage and located for associated cooperation with the intake end of said neck.

Then, too, it will be noted that the flexible hose is attached to the nozzle by way of an appropriately angled neck and the construction and arrangement is such that the suction induced draws air through the clipper motor housing or handle thereby keeping the motor cool and easier for the barber to handle.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a view in elevation which diagrammatically shows barber's quarters including a barber chair and other facilities and shows, what is more important, the overall vacuum system including the clippers and nozzle mounted atop the same;

FIGURE 2 is a plan view showing a fragmentary portion of the body or handle of the clippers and detailing the improved suction nozzle, the hose being omitted;

FIGURE 3 is a view in section and elevation and at right angles to FIGURE 2 and which serves to show the construction and arrangement of the nozzle;

FIGURE 4 is a section on the line 4—4 of FIGURE 3; and

FIGURE 5 is a view in perspective of the nozzle by itself.

With reference first to FIGURE 1 the letter A designates a chair, B a basin, C a mirror on the wall, D the ceiling being denoted at E. The aforementioned hanger means is broadly designated by the numeral **8**. Specifically this arrangement comprises a rigid vertical rod **10** of requisite length having an upper screw-threaded end **12** passing through a collar **14** provided therefor at the center of the ceiling bracket **16**, the threaded end being secured in place by a nut **18**. The bracket **16** is bolted at **20** to the ceiling or other stationary support means E. The lower end of the rod is provided with a T-coupling **22** one branch or end **24** of which is connected to the lower end of the suspension rod **10**. The horizontal branch **26** serves to accommodate a communicatively connected pipe **28** which is joined to a companion pipe **30** and which pipes are herein designated as the suction line. In actual practice the lower end of the line **30** will be connected to a source of suction and hair disposal collecting and trapping means (not shown). The suspension means is also characterized by a horizontally disposed freely movable tubular arm **32**. One end **34** is suitably constructed and joined with the coupling branch **36** by way of a flexible and swivel-type coupling **38**. Any suitable swivelling and coupling means may be provided here to support the arm **32**. The righthand end portion **40** of the arm is constructed with an elbow or the like to accommodate a depending flexible hose **42** which is of an accordion-type and extensible and retractible and supports the clipper in the out-of-the-way position illustrated in FIG. 1.

The hair clipper is denoted at 44 and the hair intake or induction nozzle is designated generally at **46**.

Taking up the nozzle, whether it be an attachment or built in as an original part of the clippers, it comprises a hair intake or induction nozzle of non-corrodible sheet metal or equivalent material the nozzle being denoted at **46**. As seen in FIGURE 5 the nozzle is generally elongated and rectangular in cross-section and comprises a top wall **48** having a hole therein intermediate the forward and rearward ends the hole designated at **50** and being aligned with the oblique angled tapered neck **52** to which the cooperating end of the hose **42** is connected as denoted at **54** in FIG. 3. There is a bottom wall **56** parallel to the top wall and longitudinal side walls **58** provided at the rearward end of the nozzle with attaching flanges **60**. The intake end of the nozzle is denoted at **62** and the opposite end at **64**. The numeral **66** designates a flat gauge plate which has end flanges **68** and bent lip portions **70** whereby the plate is slidingly mounted on the intake end of the nozzle. This plate is adjustable toward and from the cutter heads **72** of the clippers. The function thereof is brought out in full and dotted lines in FIG. 3 wherein it will be evident that the gap between the intake end or mouth **62** and cutter heads can be adjusted and suitably regulated. The nozzle is provided with bolt holes **74** to accommodate bolts **76** which serve to mount the nozzle flatwise on the clippers to assume the cooperating position illustrated in the drawing. At this point it will be noted that the body or handle portion of the clippers has an air intake passage **78** which registers with the hollow portion of the nozzle by way of a port or opening **80** as seen in FIG. 3. The idea here is that the suction also draws air through the passage **78** for cooling the handle and the motor (not shown) embodied herein. Attention is also directed to the oblique angled baffle **82** which is mounted by way of an attaching flange **84**. This baffle is located so that it directs the hair laden air through the neck **52** and into the hose in the manner shown in FIG. 3 by way of the arrows. The arrows also indicate cool air coming through the passage **78** and entering the nozzle and being drawn through the conduit in a manner to cool the motor.

The distance from the cutting blades **72** on the clipper **46** to the top edge of the induction nozzle intake **62**, is 5/16 of an inch, and the induction nozzle is affixed to the clippers to provide for such distance, with provision **66** for closing such distance to a lesser opening. The flexible hose is attached as shown so as to draw air through the clipper motor, thereby keeping the motor cool and easier for the barber to handle.

Considered as an attachment the invention is compact and has an adjustable suction housing that fits any standard clipper and also acts as a cooling means for the clipper motor. The connection is adjusted so as to allow the use of the clippers at any angle and allows the barber to use the clippers in his own way.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A device for removing cut hair for use with a conventional-type hair clipper embodying customary cutting heads at one end of a handle-equipped body comprising: an elongated tubular hair intake nozzle mounted atop said body and having an open intake at one end in close proximity to and aligned with the blades on said heads, said nozzle having a wall thereof provided between forward and rearward ends with an outstanding discharge neck adapted to permit a flexible suction hose to be communicatively joined thereto, a baffle mounted in the clippings laden air passage of said nozzle and cooperable with the clipped hair intake end of said neck, said neck being provided on a top wall of said nozzle and disposed at an oblique angle in respect to the lengthwise axis of said nozzle, and a gage plate slidingly mounted on the intake end of said nozzle and adjustable toward and from said intake end in a manner to govern and control the hair intake action at said intake end, said body having an open ended air passage, the discharge end of said suction activated air passage registering with the passage in said nozzle and being close to the neck's intake and short of and spaced from the baffle.

2. The structure according to claim 1, and wherein the aforementioned wall is flat, said gauge plate being flat and slidingly contacting said flat portion of said wall, said gauge plate being provided at its respective transverse ends with lateral end-flanges, said end flanges having turned in laterally bent lip portions and said flanges and also said lip portions frictionally embracing adjacent cooperating wall portions of said nozzle.

3. The structure defined in claim 2, and wherein said baffle is oblique-angled and extends transversely across and bridges said passage and is of a length approximately equal to the diameter of the intake end of said neck.

4. The combination of claim 1 and, in combination, a manually extensible accordion-type self-retracting normally retracted suction hose adapted to suspend said nozzle and clipper and having a lower end embracing and communicatively and operatively connected with said discharge neck and also having an upper end which is adapted to be operatively and communicatively connected with a rigid supporting and suction communicating arm.

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