Dec. 31, 1968 W. E. SPARKS 3,418,726

HAIR DRYER

Filed Dec. 19, 1966

FIG. 1.

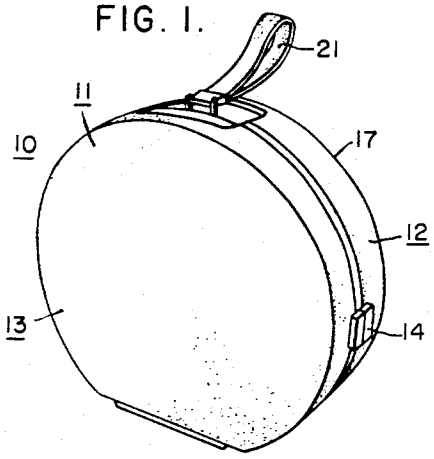


FIG. 2.

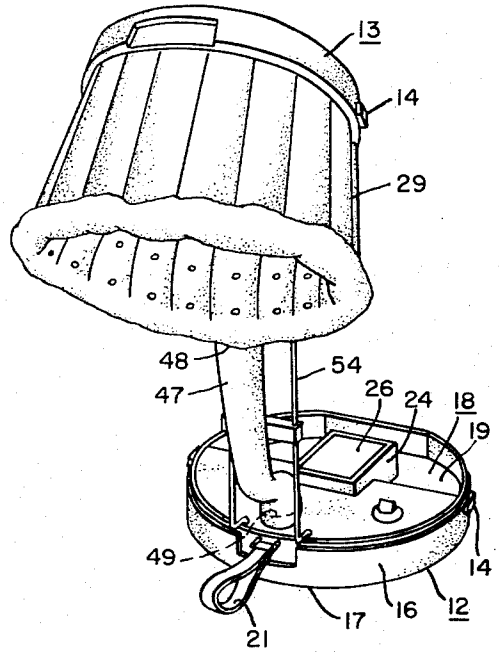


FIG. 3.

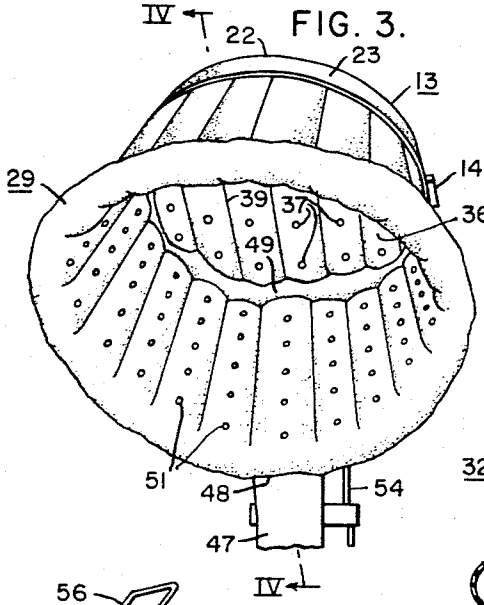
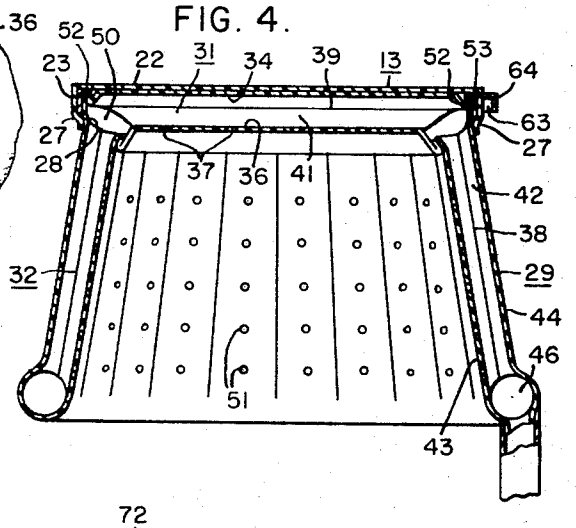


FIG. 4.



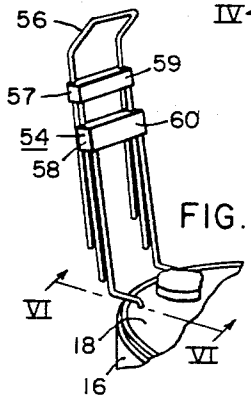


FIG. 5.

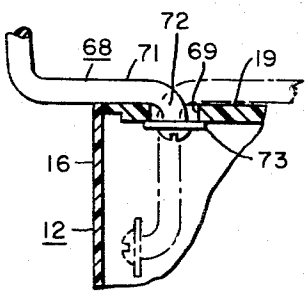


FIG. 6.

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HAIR DRYER

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10 Claims. (Cl. 34—99)

ABSTRACT OF THE DISCLOSURE

A portable hair dryer having an inflatable hood and a support structure therefor which enables it to be used like a salon type unit by slipping the head into and out of the hood. When inflated the side walls of the hood stand away from each other to form a salon type hood which when collapsed packs neatly into a compact carrying case provided therefor.

This invention relates, in general, to portable hair dryers and, more particularly, to portable salon-type hair dryers.

Wholehearted acceptance of portable hair dryers dictates that they be efficient in operation, compact in size, easy to operate and afford an optimum degree of comfort during use.

One model hair dryer currently available to the consumer is fashioned after the professional or commercial salon-type unit in that it has a rigid hood or bonnet which is supported on a stand to enable the user to sit thereunder. The hood is also utilized as a combination cover, for the power unit, and carrying case. Of all available portable hair dryrs, this type is probably the most efficient and least objectionable from the standpoint of discomfort during use, however, it lacks compactness and bcause of its inflexibility restricts movement of the head. In other words, the head must be moved about carefully within the hood to avoid bumping of the rigidly constructed walls thereof.

The bonnet type hair dryers overcome some of the objectionable features of the portable salon-like dryer. For example, they possess the desirable features of compactness and flexible walled construction. However, they are less efficient in operation due to poor air circulation, moreover, they cause discomfort due to impressions on the forehead and pressure exerted on the ears by the elastic band or drawstring used for snugly fitting the bonnet on the head.

From the standpoint of operation, it is desirable to have a minimum number of operations to perform in order to ready the hair dryer for use. Most portable hair dryers are cumbersome in this respect.

Accordingly, it is the general object of this invention to provide a new and improved portable hair dryer.

It is a more particular object of this invention to provide a new and improved bonnet for a portable hair dryer.

Another object of this invention is to provide a new and improved bonnet type hair dryer which is compact in size yet highly efficient in operation.

Still another object of this invention is to provide a new and improved portable hair dryer which is easy to operate.

Yet another object of this invention is to provide, in a salon-type portable hair dryer, an inflatable flexible walled hood.

Briefly, the above-cited objects are accomplished by

providing a hair dryer comprising a hood made from flexible vinyl plastic or other suitable material and adapted to be inflated. The hood is attached to the cover of a relatively shallow carrying case which cover serves as a storage receptacle for the hood when not in use. This is accomplished by collapsing or folding the flexible hood into the cover. The cover is provided with one part of a support structure which is adapted to receive the free end of a stand supported by the base of the carrying case. Accordingly, the base of the carrying case which houses the power means may be placed on a table such that the user can place her head into and out of the flexible bonnet which depends like an annular curtain from the carrying case cover. Since the bonnet is inflatable, it assumes a shape similar to that of a professional salon type hair dryer.

The foregoing and other objects of the present invention will become more apparent when considered in view of the following detailed description and drawings, in which:

FIGURE 1 is a perspective view of a hair dryer, in a knocked-down condition, representing the invention;

FIG. 2 is an assembled perspective view of the hair dryer illustrated in FIG. 1;

FIG. 3 is a perspective view of the bonnet portion of the hair dryer shown in FIG. 2;

FIG. 4 is a cross-sectional view taken on the line IV—IV of FIG. 3;

FIG. 5 is an enlarged fragmentary perspective view illustrating a support structure forming a part of the present invention; and

FIG. 6 is a cross-sectional view taken on the line VI—VI of FIG. 5.

Referring now to the drawings, especially FIG. 1, reference character **10** indicates generally a portable hair dryer comprising a carrying case **11** including a base **12** and a cover **13**. The cover and base are provided component parts of a pair of latch or lock mechanisms **14** (only one of which is shown) for securing the cover **13** to the base **12** such that the cover can be completely detached therefrom as shown in FIG. 2.

The base **12** comprises a vertical annular wall **16** formed integrally with a generally circular bottom wall **17**. A generally horizontal partition **18** serves as a closure for the base **12** in which power apparatus, not shown, is contained. The partition **18** is recessed or dished as at **19** to provide a storage area for a power cord, not shown. The partition **18** is also provided with an air intake **24** which carries an air filter **26**. A strap **21** attached to the wall **16** of the base **12** provides means for readily carrying the dryer **10**.

The cover **13** comprises a top wall **22** (see FIG. 4) formed integrally with a vertical annular wall **23** having a peripheral flange **27** with a reversed lip construction including an inwardly protruding portion **28**.

The hair dryer **10** includes an integral hood structure **29** made from any suitable material, for example, flexible vinyl plastic. The hood **29** comprises a top wall structure **31** having a generally circular configuration and an annular, depending or side wall structure **32**. The top wall or crown structure **31** consists of an imperforate top wall **34** and a bottom wall **36** provided with a plurality of apertures **37**. The walls **34** and **36** are joined, as by heat welding, along lines indicated at **39** (see FIG. 4) to thereby form a plurality of generally horizontal air distributing channels **41** to which air is conveyed (in a

manner to be more fully described hereinafter) from substantially vertical air channels **42** formed in the annular depending wall structure **32** by heat welding along the lines indicated at **38**.

The wall structure **32** consists of a generally cylindrical inner wall **43** and a generally cylindrical outer wall **44** which are joined together at the bottom edges, also by heat welding. The heat welds at **38** terminate at approximately 2½" from the lower edge of the wall structure **32** thereby providing an annular air duct **46** communicating with the vertical channels **42** to provide communication between a flexible coupling conduit **47** and the latter. One end of the conduit **47** is heat welded to the wall structure **32** as indicated at **48** (see FIGS. 2 and 4) while the other end is coupled to an air outlet **49** (shown in dotted lines in FIG. 2) provided in the partition **18** and which communicates with the power means, not shown.

The periphery of the imperforate top wall **34** is joined to the periphery of the outer wall **44** and the bottom wall **36** is joined to the inner wall **43** to form the integral bonnet structure **29** (see FIG. 4). The heat welds along the lines **39** terminate at approximately one inch from the top of the wall structure **32** and the welds along the lines **38** terminate at points remote from the peripheral edge of the top wall structure **31** thereby forming a second annular air channel **49** at the jointure of the walls **34** and **36** with the walls **44** and **43**, respectively. It is this channel **49** which provides the communication between the vertical channels **42** and the horizontal air channels **41**. Air flowing in the channels **41** is distributed over the top head of the user through the exhaust apertures **37**. Similarly air flowing through the vertical channels **42** is distributed over the sides, front and back of the head through exhaust apertures **51** and in the inner wall **43**.

A flexible cylindrical band **52** (see FIG. 4) attached in any suitable manner, as by gluing to outer wall **44** at the top thereof, is insertable in a continuous groove **53** formed between the top wall **22** and the inwardly projecting portion of the peripheral flange **27**, the band **52** being captivated therein by the inwardly projecting portion **28**.

In this manner the bonnet **29** is adapted to be supported for use by the cover **13** which is, in turn, carried by an extensible or telescopic stand or support structure **54** (best shown in FIG. 5).

The support structure **54** comprises U-shaped rods **56**, **57** and **58** coupled together by connecting members **59** and **60**. Each of the U-shaped members **57** and **58** has a straight bight portion which is insertable in slots in the undersides of connecting members **59** and **60**. The bight portion of the U-shaped rod **56** is insertable in a slot **63** (see FIG. 4) formed by a portion of the annular wall **16** and a complementary part **64** suitably secured thereto. The bight portion of the rod **56** is slightly offset from the legs thereof in order to provide the proper angle of inclination of the cover **13** and, consequently, the bonnet **29** when the cover is mounted thereon.

The legs of the U-shaped rods **56** and **57** are slidable within elongated bores **66** and **67** provided in the connecting members **59** and **60** to permit variation of the height of the bonnet. The legs of the U-shaped rod **58** are offset as indicated at **68** (see FIG. 6) and are inserted through apertures **69** in the partition **18** such that the legs of the offset segments **68** move freely therethrough for permitting the supporting structure **54** to be folded flat for storage on top of the partition **18**. Each of the offset segments **68** includes two legs **71** and **72**, the latter of which is provided with an outwardly projecting flange **73**, in the form of a washer captivated by a screw **74**, which cooperates with the underside of the partition **18** to retain the support structure in the operating position.

Since numerous changes may be made in the above described apparatus and different embodiments of the invention may be made without departing from the spirit thereof, it is intended that all matter contained in the foregoing description or shown in the accompanying drawings, shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. In a portable hair dryer, hood structure comprising: a side wall structure of generally circular cross section including a flexible outer wall and a flexible inner wall, a crown structure including a flexible top wall and a flexible bottom wall each having a generally circular shape, said top wall structure being joined to said side wall structure at one end of the latter, said top and bottom walls being joined at spaced intervals to provide air circulating channels therebetween, said inner and outer walls being joined at spaced intervals to provide air circulating channels therebetween, at least some of said channels in said side wall structure being in communication with some of said channels in said crown structure, means for introducing air into said channels in said side wall structure at the end thereof opposite said crown structure, said bottom and inner walls having apertures communicating with said channels for permitting air in said channels to exhaust therefrom.

2. Structure as specified in claim **1**, wherein the top wall is joined to said outer wall and said bottom wall is joined to said inner wall to provide an annular air circulating channel thereat.

3. Structure as specified in claim **1**, wherein the air channels in said side wall structure are disposed along the longitudinal axis thereof and the jointure between said inner and outer walls terminate intermediate the ends of said side wall structure and the periphery of said crown structure to thereby provide an annular air circulating channel at the end thereof opposite said crown structure.

4. Hair drying apparatus comprising: a carrying case including a base having an air inlet and outlet and a detachable cover, an inflatable hood, said hood comprising a crown structure and a side wall structure of generally circular cross section joined thereto, each of said structures being provided with air circulating channels and exhaust apertures, said cover having a top wall and an annular wall integral therewith, means for securing said hood adjacent said crown structure to said cover, means carried by said base for supporting said cover above said base whereby said side wall structure depends therefrom for insertion and removal of the head to be dried, said hood being collapsible into said cover for storage thereof in said case and means interconnecting said air outlet means with said hood for conveying air therebetween.

5. Structure as specified in claim **4**, wherein said air conveying comprising a flexible conduit and which includes means for permanently attaching said conduit to said outlet and said hood.

6. Structure as specified in claim **4**, wherein said support means comprises relatively movable sections whereby said cover may be supported at various levels above said base.

7. Structure as specified in claim **4**, wherein said support structure is adapted for movement from an inoperative position wherein it lies substantially parallel to said base to an operative position wherein it is substantially perpendicular to said base.

8. Structure as specified in claim **4**, wherein said crown structure comprises a top wall and a flexible bottom wall, said top and bottom walls being joined along lines at spaced intervals to provide air circulating channels therebetween, said side wall structure including an inner wall and an outer wall joined along lines at intervals along the circumference thereof to provide air circulating channels therebetween, at least some of said side wall channels being in communication with said crown channels.

9. Structure as specified in claim **8**, wherein said top wall is joined by heat welding to said outer wall and said bottom wall is joined to said inner wall to provide an annular air circulating channel thereat.

10. Structure as specified in claim **9**, wherein the side

wall jointures extend along the longitudinal axis of and are disposed intermediate the ends of said side wall structure whereby there is provided an annular air channel adjacent both ends of said side wall structure.

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