June 22, 1965 L. H. KNIBB 3,190,502

APPARATUS FOR DISPENSING LIQUID SHAMPOO

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Fig. 1

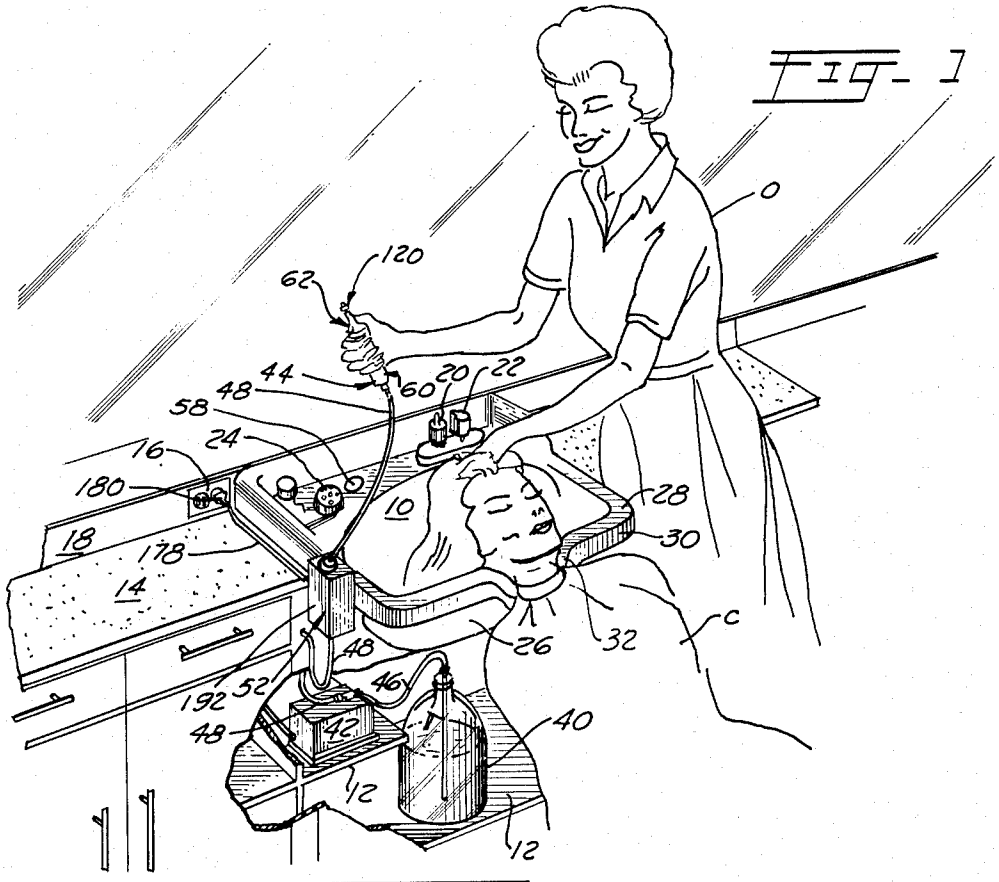


Fig. 2

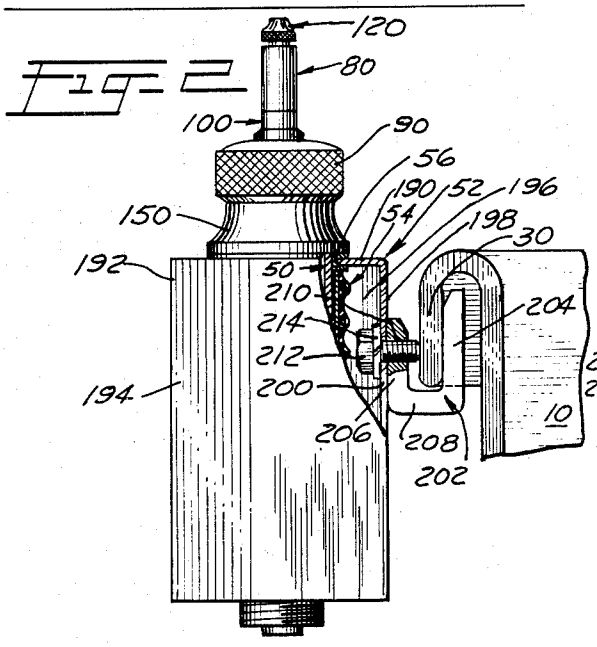
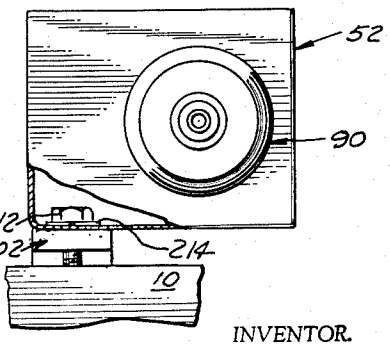


Fig. 3



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APPARATUS FOR DISPENSING LIQUID SHAMPOO

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Fig. 5

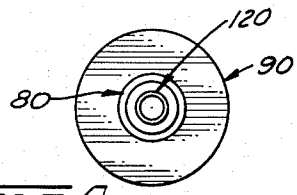


Fig. 7

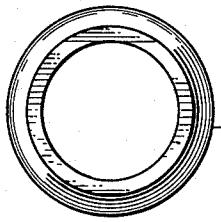


Fig. 9

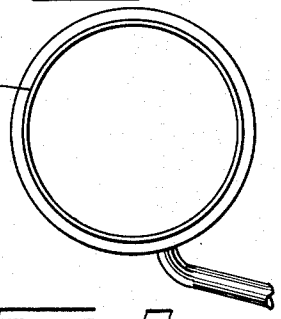


Fig. 4

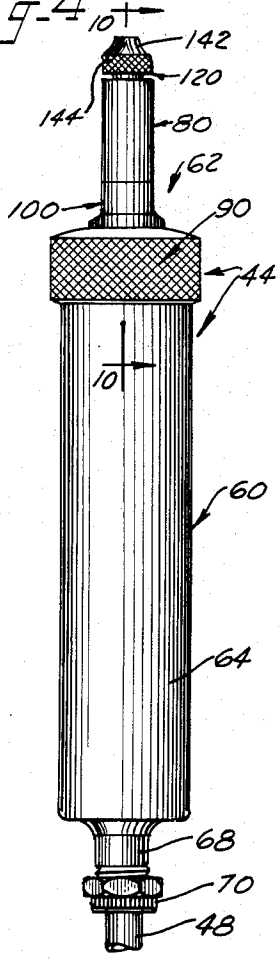


Fig. 6

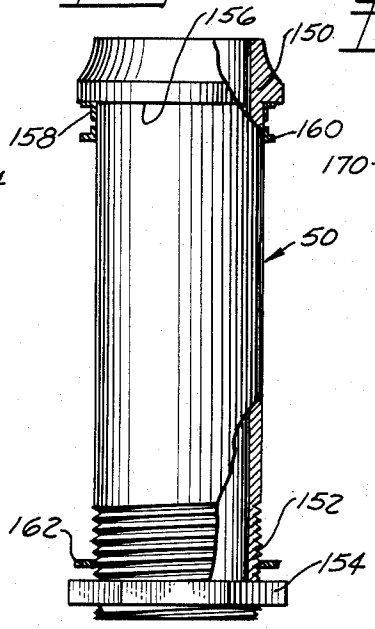
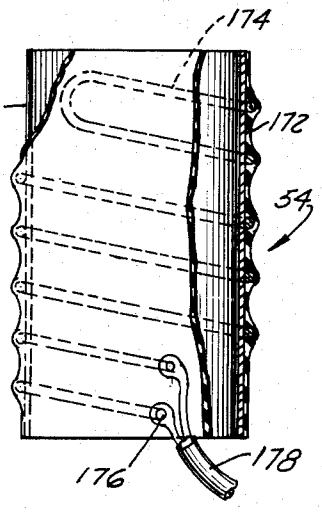


Fig. 8



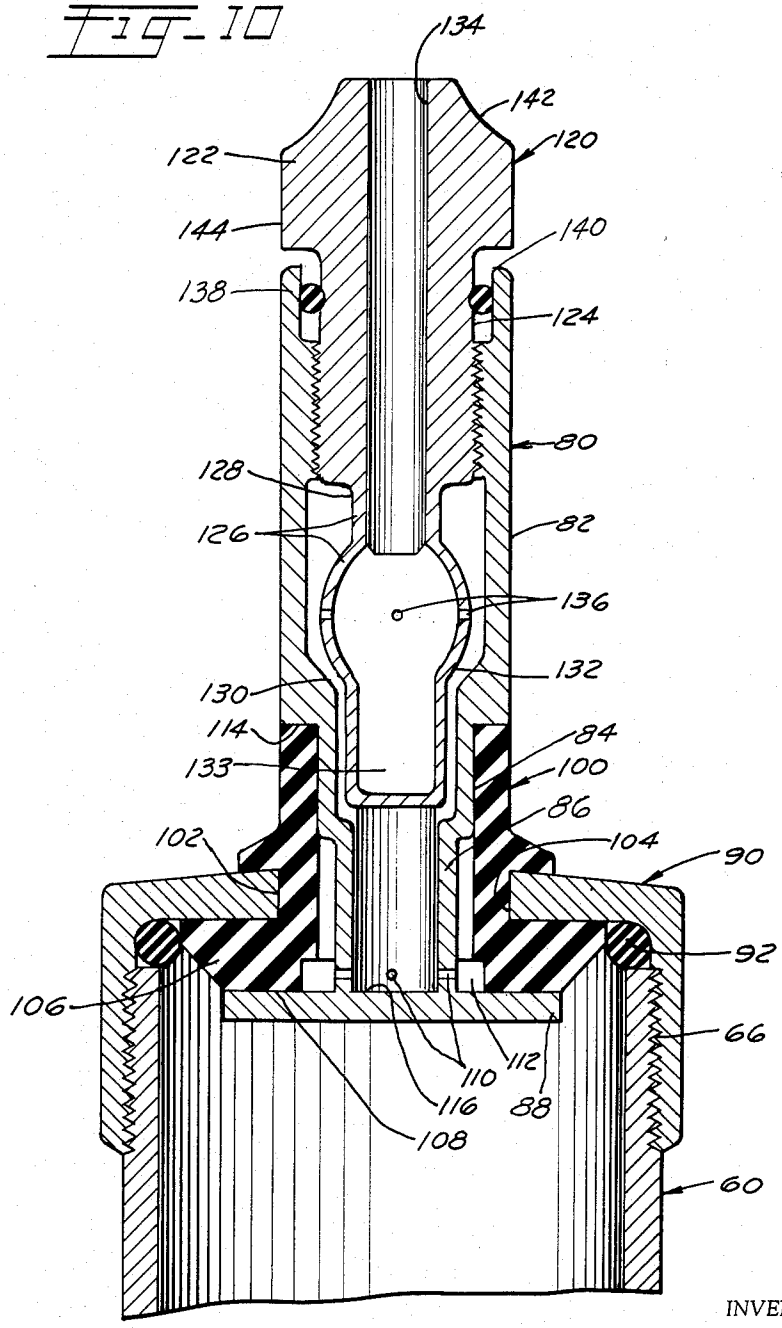
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June 22, 1965 L. H. KNIBB 3,190,502

APPARATUS FOR DISPENSING LIQUID SHAMPOO

Filed June 3, 1963 3 Sheets-Sheet 3

Fig. 10



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United States Patent Office 3,190,502 Patented June 22, 1965

3,190,502

APPARATUS FOR DISPENSING LIQUID SHAMPOO

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Filed June 3, 1963, Ser. No. 280,510
5 Claims. (Cl. 222—146)

The improved dispensing apparatus comprising the present invention has been designed for use primarily in connection with the dispensing of a liquid shampoo preparation directly onto the head of the person undergoing shampoo treatment. The invention is, however, capable of other uses and a dispensing apparatus which is constructed in accordance with the principles of the present invention may be employed, with or without modification as required, for dispensing other liquids, such as liquid soap, hand or facial creams, deodorants, and a wide variety of similar cosmetic preparations of a liquid or semi-liquid nature. Irrespective, however, of the particular use to which the present invention may be put, the essential features thereof are at all times preserved.

The invention will be found particularly useful in connection with a lavatory bowl such as is utilized in a barber shop, beauty parlor or other place where the hair and scalp are the subject of treatment, and over which bowl a shampooing operation takes place. Accordingly, the invention has ben disclosed herein as being applied to such a lavatory bowl.

Heretofore, in connection with a lavatory bowl in a professional establishment of the heretofore-mentioned type, the bowl is invariably provided with hot and cold water taps for hair-wetting and rinsing purposes, and usually the preparation which is to be applied to the hair of a customer is kept on a remote shelf in an individual bottle having a shaker top so that it is necessary to transport the bottle to the scene of a shampooing operation. After the required quantity of the preparation (shampoo liquid) has been applied to the hair of the customer, the bottle is temporarily placed on the ledge region of the lavatory bowl while the actual shampoo massage is performed, the bottle thus being available for repeated applications of its contents if desired. Ordinarily, the bottle is not restored to its position on the shelf until the final rinse and the preliminary drying operation with a towel has been completed. Inasmuch as a liquid shampoo preparation is invariably of a saponaceous nature, it is slippery to the touch and a bottle thus temporarily positioned on the ledge region of a lavatory bowl is frequently dropped during handling or is knocked over inadvertently during normal shampooing operations with the resultant danger of bottle fracture and loss of the contents. To obviate this difficulty, some establishments employ a lavatory bowl having a built-in shampoo pump, this consisting of a conventional faucet-type lift or suction pump or, in some instances, a force pump, by means of which the shampoo liquid, which is stored in quantity in a container beneath the lavatory bowl, is raised above the level of the bowl where it may be deposited into the hand of the operator for application to the hair or applied directly onto the hair. Such a lift or force pump employs a depressible plunger which is permanently installed in an opening in the bowl ledge and cannot be removed therefrom during normal operation thereof so that much liquid is lost in transferring the shampoo preparation by hand from the pump faucet to the hair. Additionally, due to the permanency of the installation, the pump fittings or parts are difficult to clean and are thus subject to accumulation of dried liquid. Finally, where a force pump is concerned, drying out of the liquid in the pump chamber or around the usual liquid ports as, for example, during a period of prolonged inactivity, may cause the pump plunger to

freeze in its surrounding cylinder thus rendering the pump inoperative until it has been taken apart and cleaned.

The present invention is designed to overcome the above-noted limitations that are attendant upon the construction and use of a conventional shampoo dispensing system for a lavatory bowl and, toward this end, the invention contemplates the provision of a novel liquid dispensing apparatus or system which incorporates as a functional element thereof a portable dispensing head which normally seats or rests by gravity within a specific fitting for it on the associated lavatory bowl and thus remains accessible at all times for limited transportation from a seated position within the fitting and on the bowl to the head of the customer, the dispensing head being adapted, immediately after use, for return to its normally seated position where it may remain during the shampoo massage operation or during rinsing operations and in readiness for a subsequent use. The dispensing head is in the form of a manually operable valve assembly which is adapted to be operatively connected to a source of the shampoo liquid under pressure. The valve element of the dispensing head is normally and yieldingly maintained in its closed or off position and it is so designed that upon manipulation of a hollow operating stem the valve element will be moved to its open position to admit the liquid through the stem for application to the hair or scalp of the customer.

The provision of a portable dispensing head and seat fitting therefor as briefly outlined above being among the principal objects of the invention, it is a further object to provide such an assembly wherein the outlet pressure leading from the dispensing head may be varied to accommodate fluctuations in source pressures to the end that the shampoo liquid will not flow too freely from the dispensing head when the valve is open. Numerous factors may contribute toward a variation in source pressure, one such factor being the use of a fluctuating or pulsating pump. Additionally, the temperature of the liquid will ordinarily affect the source pressure, a heated liquid being appreciably less viscous than a cold liquid. A cold liquid which ordinarily will flow through a dispensing valve orifice at an acceptacle rate may be transformed into a powerful jet when its temperature is raised and its viscosity decreases. Still further the physical properties of shampoo preparations originating from different sources may vary widely. According to the present invention, the dispensing head is so constructed that the size of the discharge orifice may be regulated or adjusted to attain a uniform flow of the liquid under all conditions of viscosity. A still further object of the invention is to provide a portable dispensing head and seat fitting therefor wherein the seat fitting is provided with novel means for heating the body portion of the head assembly so that the residual charge of the shampoo liquid within the valve chamber of the dispensing head will automatically be brought to a desirable temperature for application to the head of the customer.

Another object of the invention is to provide a novel seat fitting for the dispensing head as outlined above, together with a novel bracket support by means of which the seat fitting may readily be applied to a lavatory bowl when the latter is not equipped with the usual mounting opening for accommodating such a fitting. A similar and related object of the invention is to provide such a seat fitting which is capable without modification of attachment to the associated lavatory bowl either by use of the special mounting bracket or by installation thereof in a mounting opening in the bowl.

A further object of the invention is to provide in an apparatus of the type or character under consideration a dispensing head and seat fitting therefor wherein means

are provided for deflecting drippings away from the central opening in the fitting so that such dripping will not pass through or around the bowl and be deposited on the floor therebeneath.

The provision of a dispensing apparatus which is comprised largely of standard or commercially available materials, parts and assemblies and, therefore, may be manufactured at a relatively low cost; one which is simple in its construction and, therefore, is unlikely to get out of order; one which is rugged and durable and, therefore, will withstand rough usage; one which is capable of ease of assembly and dismantlement for purposes of inspection of parts, replacement or repair; one which may be supplied as original equipment on a lavatory bowl or applied to an existing bowl; one which is capable of being easily cleaned; one which is attractive in its appearance and pleasing in its design; and one which is well adapted to perform the services required of it, are further desirable features which have been borne in mind in the production and development of the present invention.

With these and other objects in view, the invention consists in the novel construction, combination and arrangement of parts shown in the accompanying three sheets of drawings forming a part of this specification.

In these drawings:

FIG. 1 is a fragmentary perspective view of a beauty parlor installation showing the dispensing apparatus of the present invention operatively applied to a lavatory bowl;

FIG. 2 is a fragmentary side elevation view partly in section showing the dispensing head and seat fitting of the present invention operatively installed upon a lavatory bowl by means of a special mounting bracket;

FIG. 3 is a top plan view, partly in section, of the structure shown in FIG. 2;

FIG. 4 is a side elevational view of the dispensing head of the present invention;

FIG. 5 is an end view of the structure shown in FIG. 4;

FIG. 6 is a side elevational view partly in section of the seat fitting for the dispensing head of FIG. 4;

FIG. 7 is an end view of the structure shown in FIG. 6;

FIG. 8 is a side elevational view partly in section of a heating jacket designed for use in connection with the seat fitting of FIG. 6;

FIG. 9 is an end view of the structure shown in FIG. 8; and

FIG. 10 is an enlarged sectional view taken on the line 10—10 of FIG. 4.

Referring now to the drawings in detail and in particular to FIG. 1, the dispensing apparatus of the present invention is shown as being operatively installed in connection with a lavatory bowl 10, the latter constituting a portion of the functional equipment of a barber or beauty shop installation. Other illustrated functional equipment of the installation includes shelving 12 beneath the bowl 10, cabinet structures 14 adjacent to the bowl and an electrical outlet 16 operatively mounted in a wall structure 18. The lavatory bowl 10 is of conventional design. It is shown in FIG. 1 as being suitably supported upon the wall structure 18 and also provided with the usual hot and cold water faucet controls 20 and 22 and an extensible spray head 24. The bowl portion proper 26 of the bowl 10 is provided with the usual rim ledge 28 having an outwardly and downwardly rolled edge 30. The forward central region of the rim ledge 28 is provided with a trough-like depression 32 to accommodate the nect of a customer, such as the customer illustrated at C, when the head is centered above the bowl portion proper for shampooing operations, for example, the massage or rinsing operation.

The shelving 12 may be employed for supporting thereon a container 40 for the liquid shampoo or other hair preparation as well as a conventional electrically-driven motor and pump assembly 42 by means of which the liquid in the container 40 may be withdrawn from the container 40 and supplied under pressure to the dispensing head 44 of the present invention. Accordingly, a flexible suction line 46 leads from the motor and container 40 to the inlet side of the pump assembly 42 while a flexible pressure line 48 leads from the pump assembly to the dispensing head 44.

The arrangement of parts thus far described is purely conventional and no claim is made herein to any novelty associated with the same, the novelty of the present invention residing rather in the particular dispensing head 44, the seat fitting 50 which is provided for the head, and the mounting bracket 52 by means of which the seat fitting 50 may be fixedly attached to the edge 30 of the rim ledge 28 of the bowl 10. Such parts will be more fully described presently.

Referring now to all of the views of the drawings and in particular to FIGS. 4, 6 and 10, the dispensing head 44 as a whole is generally of cylindrical design while the seat fitting 50 therefor likewise is of cylindrical design and is adapted removably to receive therein in telescopic nested relationship the dispensing head 44. The seat fitting 50 is adapted to be surrounded by a heating element 54 (see FIG. 8) of open-ended tubular construction, provision being made for clamping the heating element 54 in position around the seat fitting 50 so that, in effect, the heating element becomes a permanent and functional part of the seat fitting. Means are provided whereby the seat fitting 50, together with its associated heating element 54, may be projected through an opening such as the opening shown at 56 in the mounting bracket 52 or through a similar opening such as the blank opening 58 in the rear portion of the rim ledge 28 of the bowl 10 for permanent assembly upon the mounting bracket or bowl, as the case may be, all in a manner that will be made clear subsequently.

The dispensing head 44 is comprised of two principal parts, namely, a charge container 60 and a valve assembly 62. The charge container 60 is in the form of a thin-walled, microcorrosive, cylindrical body 64 having an externally threaded open upper rim portion 66 (see FIG. 10). The lower end of the body 64 is provided with a depending externally threaded nipple 68 (see FIG. 4) which is operatively connected by a suitable fitting 70 to the discharge end of the flexible pressure line 48 leading from the pump asembly 42. The capacity of the charge container 60 is somewhat greater than the maximum quantity of shampoo liquid which normally is applied to the head of a customer during any one given application so that the amount of heated shampoo liquid contained therein will be adequate for such application.

The valve assembly 62 involves in its general organization a valve body 80 of generally cylindrical design and including an upper valve-receiving cup portion 82 which, in combination with the valve member received therein, establishes a dispensing nozzle, a reduced intermediate portion 84, a lower and further reduced stem portion 86, and a bottom valve plate 88 of imperforate disc-like design. The valve body 80 is floatingly mounted in a closure cap 90 which is threadedly received over the open upper threaded rim portion 66 of the charge container 60, an O-ring 92 of elastomeric material being interposed between said rim portion 66 of the charge container and the closure cap 90 to effect a seal between the parts.

A combined mounting sleeve and valve seat 100 of rubber or other suitable elastomeric material is interposed between the valve body 80 and the closure cap 90, this sleeve being of tubular design and being formed with an external annular groove 102 into which projects the rim portion of a central opening 104 in the closure cap 90. An annular valve seat proper 106 forms the lower part of the combined mounting sleeve and valve seat 100. It underlies the rim region of the opening

104 and presents a downwardly facing annular seat surface 108 which is designed for cooperation with the disc-like valve plate 88. The upper end of the combined mounting sleeve and valve seat 100 closely hugs the reduced intermediate portion 84 of the valve body 80 and the intermediate portion of said combined mounting sleeve and valve seat is spaced from the lower stem portion 86. The extreme lower region of the stem portion 86 is provided with a series of radial fluid ports 110 therethrough, and a clearance annulus 112 is provided in the combined mounting sleeve and valve seat 100 in horizontal register with the ports 110. In the upper regions of said combined mounting sleeve and valve seat 100 the external diameter thereof is the same as the external diameter of the upper cup portion 82 of the valve body so that the combined mounting sleeve and valve seat and the valve body present an unbroken cylindrical contour at their juncture regions.

The overall diameter of the cup portion 82 of the valve body 80 is slightly less than the diameter of the opening 104 in the closure cap 90 in order to permit the valve body to be installed upon the closure cap by insertion of the cup portion 82 through said opening. The overall diameter of the valve plate 88, however, is somewhat greater than the diameter of the opening 104 so that the rim region of the valve plate 88 underlies and overhangs the rim region of the opening 104. The valve body 80 presents a downwardly facing shoulder 114 at the junction between the upper cup portion 82 and the intermediate portion 84 thereof. The elastomeric combined mounting sleeve and valve seat 100 is compressed between this shoulder 114 and the upper face 116 of the valve plate 88 so that the entire combined mounting sleeve and valve seat 100 is placed under an appreciable degree of axial compression. Thus in the normal position of the valve body 80 the upper surface 116 of the valve plate 88 is pressed against the annular seat surface 108 and the annular valve seat proper 106 is compressed between the valve plate 88 and the inside face of the top wall of the closure cap 90. Thus, fluid under pressure within the charge container 60 is prevented from passing to the interior of the combined mounting sleeve and valve seat 100. However, when manual pressure is applied to the cylindrical cup portion 82 of the valve body 80 tending to tilt it away from its normal coaxial relationship with respect to the charge container 60, a crevice or space will be opened up between the peripheral region of the valve plate 88 and the annular seat surface 108 on the side of the valve body toward which the manual pressure is applied so that fluid will enter the combined mounting sleeve and valve seat 100 around the peripheral edge of the valve plate and pass through the ports 110 and then flow upwardly through the hollow tubular valve body 80.

In order to restrict the flow of liquid outwardly through the upper open rim of the cup portion 82 of the valve body 80, a control valve member 120 is threadedly received within the upper open rim of the cup portion 82 of the valve body 80 and is vertically adjustable therein. The control valve member 120 consists of an enlarged upper head portion 122 of cylindrical design, an intermediate reduced portion 124 which is threaded exteriorly for threaded reception in the cup portion 82 of the valve body, and a lower valve plug 126 which is connected to the intermediate portion 124 by a short reduced stem portion 128.

The inner wall surface of the tubular valve body 80 adjacent to the juncture between the cup portion 82 and the reduced intermediate portion 84 is of gradually curved funnel shape design, thus providing a tapered valve seat 130 (see FIG. 10) which is designed for cooperation with the valve plug 126 in adjustably restricting the flow of liquid under pressure upwardly through the valve body 80 from the reduced intermediate portion 84 to the cup portion 82 of the valve body. The outer surface of the valve plug 126 is correspondingly tapered and has a generally frusto-conical portion 132 which is designed for seating engagement on the tapered valve seat 130 when the control valve is fully closed. Below the frusto-conical portion 132 of the valve plug 126 is a reduced stem portion 133 which projects downwardly well into the intermediate portion 84 of the valve body 80 in all normal adjusted positions of the control valve member 120. The control valve member 120 is provided with a relatively deep bore 134 which passes completely through the upper head portion 122 and the reduced portion 124 as well as through the stem portion 128 and terminates at the junction between said stem portion and the valve plug 126. The valve plug 126 of the control valve member 120 is formed with a series of radial ports 136 which establish communication between the annular space around the stem portion 128 and within the valve member 80 and the bore 134. An O-ring 138 seated in an annular groove 140 in the reduced portion 124 of the valve member 120 serves to seal the upper open end of said valve body against egress of any liquid which may be passed through the mating threads which are formed respectively on the control valve member 120 and the valve body 80. These threads are normally of a loose fitting nature to facilitate turning of the control valve member 120 and consequent adjustment of the position of the valve plug 126 with respect to the valve seat 130. The head portion 122 of the valve member 120 is provided with a tapered nozzle portion 142 and a knurled cylindrical portion 144. The cylindrical portion 144 facilitates turning of the control valve member 120 with respect to the valve body 80 in order to adjust the distance between the mating tapered valve seat 130 and the frusto-conical portion 132 to a degree commensurate with the pressure of the pumped liquid under pressure as well as with the specific viscosity of the liquid. It is apparent, therefore, that by proper adjustment of the axial position of the control valve member 120 within the tubular valve body 80, a uniform flow of the liquid at the nozzle portion 142 may be attained and the pulsating effect of the pump assembly 42 may be minimized.

Referring now to FIGS. 2 and 6, the dispensing head 44 including the valve body 80 and the charge container 60 is a self-contained unit which is adapted normally to be nested within the open-ended tubular seat fitting 50 as shown in FIG. 2 and is capable of being withdrawn therefrom by the simple expedient of manually lifting or pulling the same from the seat fitting, at which time the flexible pressure line 48 will pass upwardly through the fitting 50 to an extent sufficient to enable freedom of movement of the dispensing head 44 when applying the shampoo liquid to the hair or scalp of a customer. The seat fitting 50 includes a thin-walled open-ended tubular shank portion 146 and the upper rim region of this shank portion 146 is provided with a relatively thick enlarged tapered seating flange 150. The lower rim region of the shank portion 146 is externally threaded as at 152 for threaded reception thereover of a clamping nut 154 by means of which the heating element 54 is retained in its telescopic position on the fitting 50 and the entire assembly is clamped in position either on the support bracket 52 or the bowl 10, as the case may be. The seating flange 150 affords a downwardly facing shoulder 156 beneath which there is disposed an angle gasket 158 which may be formed of fiber material or other suitable heat insulating and sealing material. The gasket 158 fits within the opening 56 as shown in FIG. 2 and not only seals the seat fitting 50 within this opening against the passage of liquid drippings but also thermally insulates the seat fitting from the supporting bracket 52 and consequently from the bowl 10 so that there will be no heat losses by conduction to the bracket and from thence to the bowl. A second insulating and sealing gasket 160 underlies the rim region of the opening 56 and receives the upward thrust of the upper open rim of the heating element 54 when the latter is telescopically

received over the seat fitting 50 in a manner that will be set forth presently. A third sealing gasket 162 similarly receives the thrust of the lower open rim of the heating element 54 when the nut 154 is tightened thereagainst.

Referring now to FIG. 8, the heating element 54 is comprised of an inner thin wall metal tube section 170 of open-ended design and to which there is vulcanized or otherwise secured an outer sheath 172 of a moldable heat resistance elastomeric or other suitable material having embedded therein a coil 174 of electric resistance heating wire, the coil being in the form of a spirally wound loop having terminal ends 176 electrically connected to a dual lead conductor 178 (see FIG. 8) carrying a plug-in fitting 180 by means of which it may be electrically connected to the electrical wall outlet 16. The assembly which comprises the heating element 54 is telescopically received over the seat fitting 50 in close fitting relationship and is centered between the gaskets 158 and 162 when the assembly is drawn tight by means of the clamping nut 154.

In the installation of the seat fitting 50 either in the opening 56 of the mounting bracket 52 or in the opening 58 in the rear portion of the rim ledge 58 of the bowl 10, the gasket 158 is first applied against the downwardly facing shoulder 156 on the seat flange 150 of the seat fitting 50 and the latter is projected through the opening 56 so that the gasket 158 seats within the selected opening. Thereafter the gasket 160 is applied, followed by application of the heating element 54 which is telescopically received over the seat fitting. The gasket 162 is then applied and finally the nut 154 is screwed onto the screw thread 152 on the lower end of the seat fitting 50 to draw the parts together.

The mounting bracket 52 is of partial box-like design and comprises a top wall 190 (see FIG. 2) and depending side walls 192, 194, 196, 198, the bottom of the mounting bracket being open. The previously described opening 56 is formed in the top wall 190. The side wall 198 is of short height and has formed therein a vertical slot 200. A U-shaped clamp 202 is provided with an inner leg 204, an outer leg 206 and a connecting bight portion 208. The outer leg is provided with a threaded hole 210 within which there is received a clamping bolt 212. The clamp 202 is adapted to straddle the rolled edge 30 of the rim ledge 28 of the bowl 10 (see FIG. 2) in such a manner that when the clamping bolt 212 is tightened against this rolled edge, the inner leg 204 is drawn tightly against the edge and the clamp 202 is thus secured to the bowl. The slot 200 in the side wall 198 is adapted to be hooked over the bolt 212 in the manner shown in FIG. 2 and a lock washer 214 which is interposed between the head of the bolt and the side wall 198 takes up any lost motion that otherwise would be present so that the mounting bracket 52 is fixedly clamped to the U-shaped clamp 202 and the latter is in turn fixedly clamped to the bowl 10.

In the operation of the apparatus, the dispensing head 44 normally rests in telescopic fashion within the seat fitting 50 with the closure cap 90 resting upon the seating flange 150 as shown in FIG. 2. In this position of the dispensing head 44, the charge container 60 is subject to heat from the heating element 54 so that the shampoo liquid which is contained within the charge container will be brought within a normal range of application temperatures. When it is desired to apply the shampoo liquid to the hair or scalp of a customer, such as the customer C in FIG. 1, the operator O will manually engage the dispensing head 44 and lift the same from the seat fitting 50, at which time the flexible pressure line 48 will pass upwardly through the open-ended seat fitting 50. Grasping the change container 60 of the dispensing head 44 between the four fingers and palm of the hand, the operator may, utilizing her thumb, apply lateral pressure to the valve body 80 thus partially unseating the valve plate 88 in the manner previously described and allowing the shampoo liquid which is maintained under pressure in the charge container 60 to pass around the peripheral region of the valve plate and enter the elastomeric combined mounting sleeve and valve seat 100. From the latter, the shampoo liquid flows through the ports 110 to the interior of the valve body 80 at a point beneath the reduced stem portion 133 of the valve plug 126. The liquid then passes upwardly between the mating tapered valve seat 130 and the frusto-conical portion 132 and enters the control valve member 120 through the ports 136. After flowing through the ports 136, the liquid will be forcibly ejected through the tapered nozzle portion 142 of the head portion 122 of the valve member 120. The viscosity of the liquid within the charge container 60 will vary with the temperature thereof so that if at any time the dispensing head 44 is set into operation before the liquid contents of the charge container has had time to become fully warmed, the viscosity of the fluid may be sufficiently high that a sluggish action will be encountered as the liquid leaves the nozzle portion 142. In such an event, it is a relatively simple matter for the operator to engage the knurled portion 144 of the enlarged head portion 122 of the control valve 120 and turn the same relatively to the valve body 80 so as to widen the opening between the valve seat 130 and the frusto-conical portion 132 thus allowing the liquid under pressure beneath the valve plug 126 to be more readily transmitted to the bore 134 to the end that the liquid will issue freely from the nozzle portion 142. This adjustment is readily available to the operator for immediate regulation of the liquid flow through the nozzle portion 142 as conditions of viscosity may dictate.

After the dispensing head 44 has served its purpose, it may be replaced in the seat fitting 50 and, when so replaced, the closure cap 90 will rest upon the seating flange 150 of the seat fitting 50 while the charge container 60 will project downwardly into the seat fitting a sufficient distance that it will be encircled by the heating element 54. Thus, during any period of inactivity when the dispensing head 44 is not in use, the liquid contents of the charge container will assimilate heat from the heating element. Assimilation of such heat is facilitated by the fact that the metal from which the charge container is formed possesses high heat-conducting characteristics while the wall of the charge container is relatively thin.

The invention is not to be limited to the exact arrangement of parts shown in the accompanying drawings or described in this specification as various changes in the details of construction may be resorted to without departing from the spirit or scope of the invention. Therefore, only insofar as the invention has been pointed out particularly in the accompanying claims is the same to be limited.

Having thus described the invention what I claim as new and desire to secure by Letters Patent is:

1. A head adapted to dispense liquid shampoo or the like and comprising a charge container having an exteriorly threaded upper rim region and a bottom wall provided with an inlet fitting adapted to be connected to a source of liquid under pressure, a closure cap threadedly received over the upper threaded rim region of the charge container, said closure cap including a closure wall provided with an opening therethrough, an elastomeric mounting sleeve fitting within said opening and provided at its lower end with a downwardly facing valve seat, a one-piece tiltable valve body projecting completely through the mounting sleeve and including an upper tubular dispensing nozzle above and an imperforate valve plate below said mounting sleeve, the upper face of said valve plate normally cooperating with the valve seat to prevent egress of liquid from the charge container and into the dispensing nozzle and being operable upon axial tilting of the valve body to admit fluid from the charge container to the dispensing nozzle, and a manually operable control valve disposed within said dispensing nozzle and adapted to regulate the flow of liquid through the latter, said dispensing nozzle being interiorly threaded and provided

adjacent to its lower end with an internal annular valve seat, said control valve comprising a cylindrical member having an upper portion threadedly received within the dispensing head and projecting outwardly of the latter above the upper rim thereof, a lower imperforate valve plug cooperating with said annular valve seat, and an interconnecting reduced stem portion between the valve plug and upper portion, said stem portion being provided with a radial valve port therein establishing communication between the interior of the upper stem portion and the annular space surrounding the stem portion within the dispensing nozzle.

2. A dispensing head as set forth in claim 1 and including, additionally, an enlarged adjusting head on said upper portion of the cylindrical member exteriorly of the dispensing nozzle.

3. In a system for dispensing liquid shampoo or the like, a lavatory bowl, means establishing a horizontal supporting surface in associated relation with said lavatory bowl, there being an opening in said horizontal supporting surface, an open-ended tubular seat fitting embodying an enlarged seating flange supported upon the opening-defining portion of said supporting surface, said fitting also embodying a thin walled shank portion projecting through the opening and depending therebelow, means fixedly securing said fitting within said opening and to the supporting surface, a generally cylindrical tubular sheath-like heating element including an electrical resistance coil and telescopically received over the shank portion of the seat fitting directly beneath the supporting surface, a dispensing head removably disposed within the seat fitting and including a lower cylindrical charge container normally encompassed by said heating element, and an upper manually operable dispensing valve assembly, said valve assembly having an outlet side and an inlet side, a dispensing nozzle supported in the upper regions of said valve assembly, the outlet side of the valve assembly being connected to the dispensing nozzle and the inlet side of the valve assembly being connected to the charge container, said charge container normally fitting slidably within the shank portion of the tubular seat fitting with the valve assembly resting by gravity upon the enlarged seating flange, an inlet fitting depending from the lower end of the charge container, a liquid container remote from the lavatory bowl, means operatively connecting the liquid container and charge container, and a motor operated pump operatively connected to the liquid container for expelling liquid therefrom for conduction thereof to the charge container through said connecting means.

4. A dispensing system according to claim 3 and including, additionally, a box-like housing including a horizontal top wall and a depending continuous side wall, said top wall constituting said horizontal supporting surface, said depending continuous side wall of the housing encompassing said electrical resistance coil and seat fitting in concealing protective relationship with respect thereto.

5. In a system for dispensing liquid shampoo or the like, a lavatory bowl, means establishing a horizontal supporting surface in associated relation with said lavatory bowl, there being an opening in said horizontal supporting surface, an open-ended tubular seat fitting embodying an enlarged seating flange supported upon the opening-defining portion of said supporting surface, said fitting also embodying a thin-walled shank portion projecting through the opening and depending therebelow, means fixedly securing said fitting within said opening and to the supporting surface, a generally cylindrical tubular sheath-like heating element including an electrical resistance coil and telescopically received over the shank portion of the seat fitting directly beneath the supporting surface, a dispensing head removably disposed within the seat fitting and including a lower charge container normally encompassed by said heating element, and an upper manually operable dispensing valve assembly, said charge container being exteriorly threaded at its upper end, a closure cap forming part of the valve assembly and threadedly received on the upper end of the charge container, there being a central opening in said closure cap, said valve assembly including a tubular valve body having its lower end region projecting into said charge container through the opening in said closure cap, a combined resilient mounting sleeve and valve seat disposed within said opening in the closure cap and through which the lower end region of the valve body projects in sealing relationship and within which sleeve and seat the valve body is floatingly mounted for limited universal tilting movement, an imperforate valve plate on the lower end of said valve body and normally bearing upwardly against said combined mounting sleeve and valve plate in sealing relationship, said imperforate valve plate being adapted, upon tilting of the valve body in any direction, to become partially unseated from said combined mounting sleeve and valve seat, the portion of the valve body immediately above said valve plate being of reduced diameter to afford an annular clearance between the valve body and combined mounting sleeve and valve seat, there being a series of radial fluid ports in said reduced portion of the valve body for the inward flow of fluid when said valve plate is partially unseated, a tubular dispensing nozzle carried at the upper end of the valve body, said charge container normally fitting slidably within the shank portion of the tubular seat fitting with the dispensing nozzle resting by gravity upon the enlarged seating flange, an inlet fitting depending from the lower end of the charge container, a liquid container remote from the lavatory bowl, means operatively connecting the liquid container and charge container, and a motor-operated pump operatively connected to the liquid container for expelling liquid therefrom for conduction thereof to the charge container through said connecting means.

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