Jan. 7, 1958 E. H. CAMPBELL 2,818,585

HEAD SUPPORT WITH PIVOTED BACKREST

Filed Dec. 28, 1955 2 Sheets-Sheet 1

Fig. 1

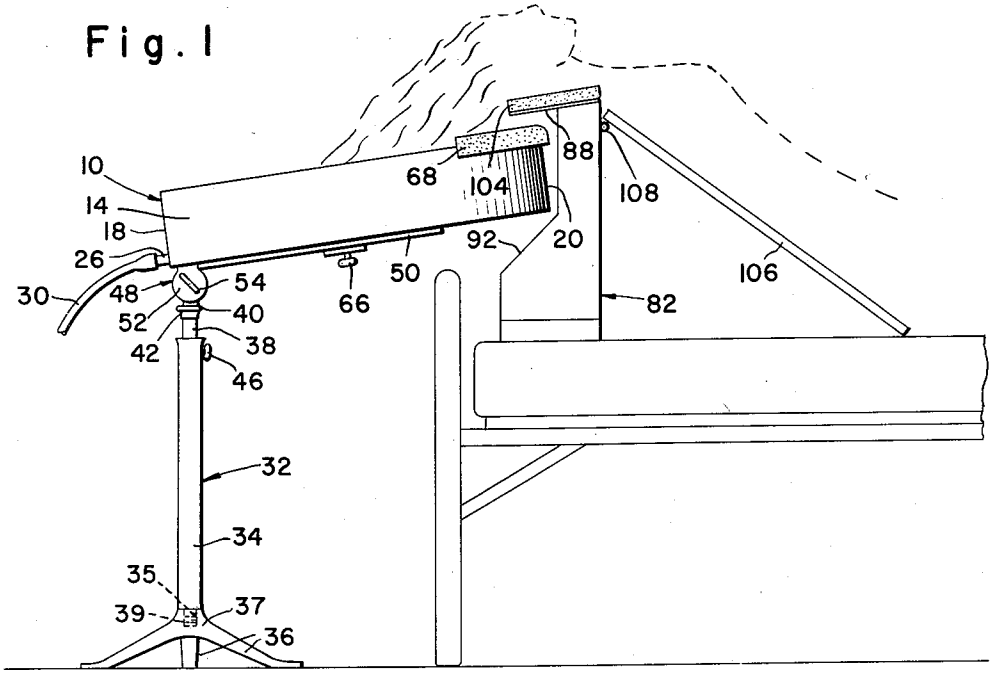
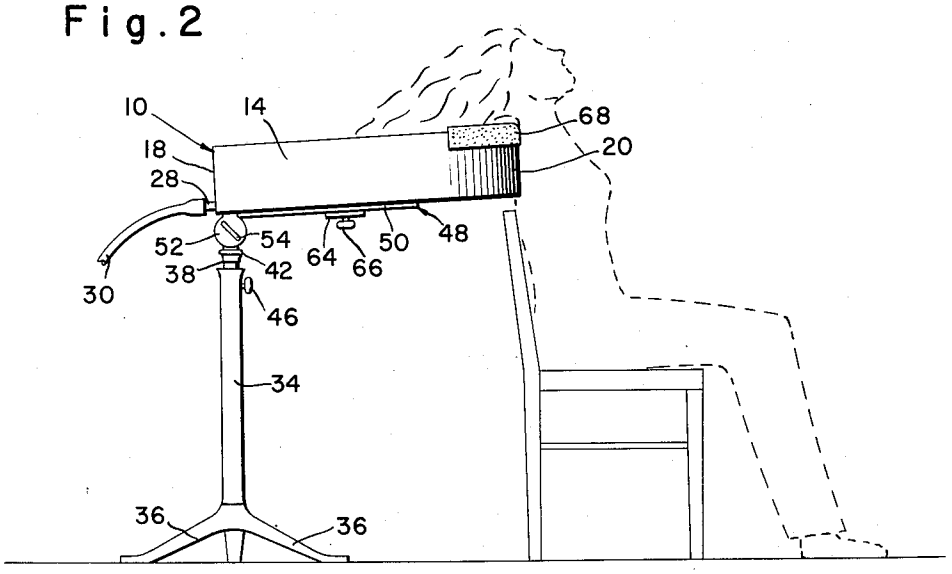


Fig. 2



INVENTOR.

ELLEN HESS CAMPBELL

BY

Fidler, Crouse & Beardsley

ATTORNEYS

Jan. 7, 1958 E. H. CAMPBELL 2,818,585

HEAD SUPPORT WITH PIVOTED BACKREST

Filed Dec. 28, 1955 2 Sheets-Sheet 2

Fig. 3

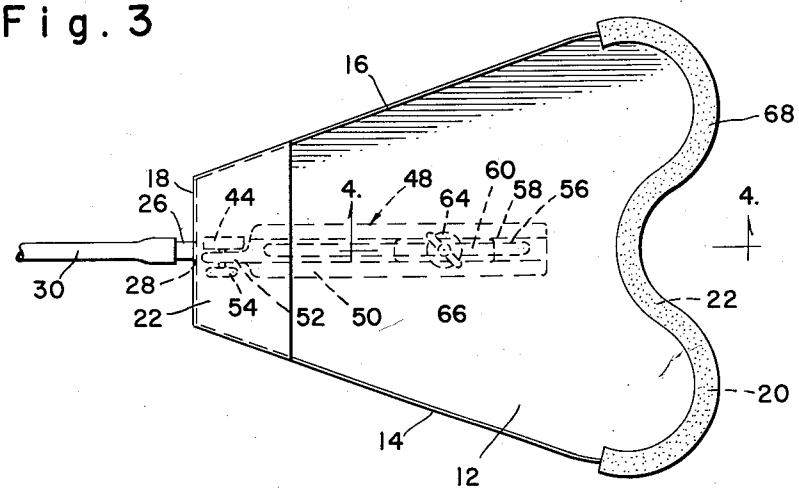


Fig. 5

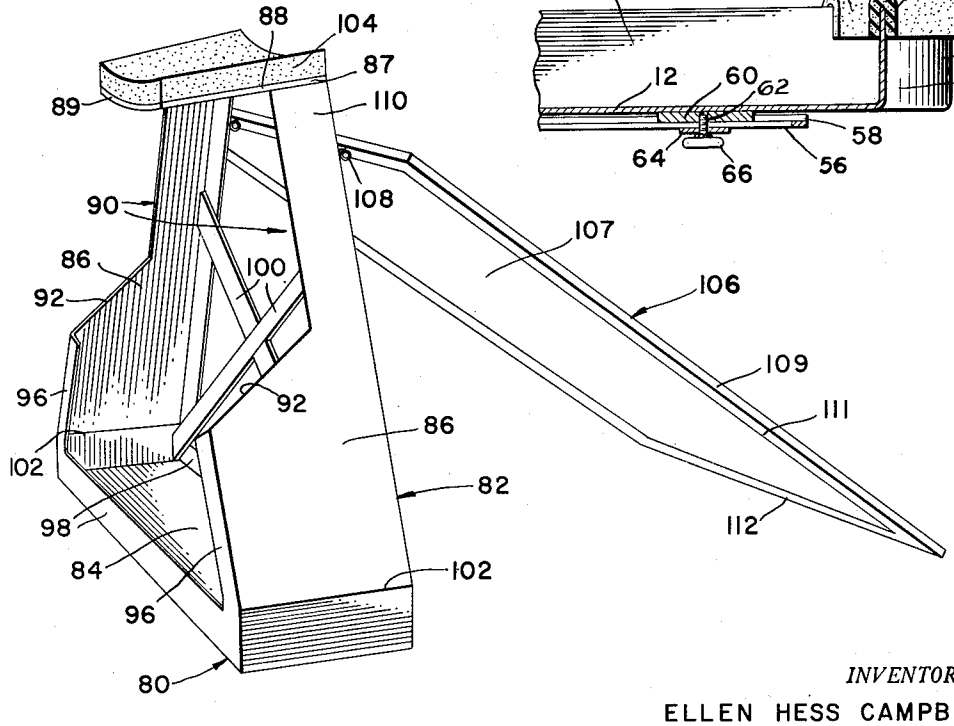


Fig. 4

INVENTOR.

ELLEN HESS CAMPBELL

BY

Fidler, Cruise & Beardsley

ATTORNEYS

United States Patent Office 2,818,585 Patented Jan. 7, 1958

2,818,585

HEAD SUPPORT WITH PIVOTED BACKREST

Ellen Hess Campbell, Harrisville, W. Va.

Application December 28, 1955, Serial No. 555,842

4 Claims. (Cl. 5—327)

This invention relates generally to a shampooing device, and has to do more particularly with a shampooing device which is adapted for shampooing the hair of persons in reclining positions as well as of persons seated upright.

Shampooing devices heretofore developed have been adapted for shampooing the hair of persons either lying in bed or seated on chairs and the like. However, no such device has been developed to perform both of those shampoo operations interchangeably. Moreover, the former devices adapted for one shampooing operation have not at all been well adapted to the other operation even on a make-shift basis. Hospitals, convalescent homes, visiting and practical nurses, as well as any person or home caring for an invalid, all have a special need for a shampooing device having dual capabilities of use, for the relative immobility of invalids and convalescents renders it impractical to adjust or position those persons to render a prior, single-operation device operative in a manner for which not constructed.

An object of this invention is to provide a device adapted for interchangeable use in shampooing the hair of persons in reclining positions as well as of persons seated relatively upright, which renders it unnecessary, in either manner of use, for the subject of the shampoo to leave his bed or seat.

Another object is to provide a shampooing device having a tray with a cushioned neck-accommodating portion and a neck and back support cooperating with the tray, the support being adapted to partially overlie the tray when the device is being used to shampoo the hair of a reclining person to prevent the cushioned portion from interfering with the shampooing operation, while the cushioned portion is adapted for use when the neck and back support is removed for use of the tray to shampoo the hair of persons seated upright.

Another object is to provide a device for interchangeable use in shampooing the hair of persons in reclining positions as well as of persons seated upright, which device is capable of use remote from a running water supply, and which has drainage means which can cooperate with a pail of other water-collection means so that the device may be utilized remote from a sink or drain means.

Yet another object is to provide a device adapted for shampooing the hair of persons in reclining positions as well as of persons seated upright, which device has a novel neck and back support removably cooperative with a shampooing tray, and by means of which neck and back support a reclining person's neck can be comfortably and securely supported relative to the shampoo tray.

A further object is to provide a device for shampooing the hair of persons in reclining positions as well as of persons seated relatively upright, which device includes a tray support structure having a three-way adjusting mechanism, so that a shampooing tray can be quickly and easily raised or lowered to accommodate all standard bed and chair heights in either manner of operation without necessity of interchange of parts, projected and

retracted laterally of the support structure to accommodate a wide variety of shapes of beds, chairs and other body-supporting members, and pivoted in a vertical plane to adjust the angle the shampooing tray makes with the horizontal, so that the rate of water-drainage from the tray may be controlled.

Yet a further object is to provide a shampooing device and a cooperating neck and back support therefor which can be quickly and easily disassembled and compactly collapsed for convenient carrying and storage thereof.

A still further object is to provide a shampooing device for invalids, the sides and drain portions of which are so formed as to reduce any tendency toward splashing or spilling of water therefrom.

Other objects and advantages of this invention will be apparent from the following description thereof taken in connection with the appended drawings, in which:

Figure 1 is an elevational view of a preferred embodiment of this invention positioned for shampooing the hair of a person in reclining position;

Figure 2 is an elevational view of the device of Figure 1 reduced in size and with the neck and back support removed for shampooing of the hair of a person seated upright;

Figure 3 is an enlarged top plan view of the shampooing tray of the device of Figure 1;

Figure 4 is a fragmentary elevational sectional view of the shampooing tray of Figure 3 taken on line 4—4 thereof;

Figure 5 is an enlarged perspective view of the neck and back support of Figure 1.

The device of the present invention is particularly well adapted for shampooing the hair of invalids or persons confined to bed or to rooms where facilities might not be available for giving those persons shampoos. The device, accordingly, is described herein in connection with such uses. However, it is to be understood that this invention is capable of use in barber or beauty shops and other establishments where shampoos are regularly given.

Referring now particularly to Figure 1, a preferred embodiment of the invention is shown positioned for shampooing the hair of a person in reclining position on a bed. The shampooing device includes a water-retaining tray **10**, having a substantially heart-shaped flat floor **12** and wall portions upstanding from the periphery thereof. The wall portions include side walls **14** and **16**, a drain wall **18** truncating the tip of the heart-shaped floor **12**, and a forward wall **20** with a neck-accommodating curve **22** formed therein. The wall portions are of substantial height to prevent splashing and spilling of water from the tray when in use, as hereinafter explained. Wall portions between three and four inches in height for a shampoo tray between 16 and 20 inches in length and 14 to 16 inches in width have proved satisfactory in the above respect although these dimensions are not critical. The wall portions form a water-tight basin with the floor, and are preferably separately formed and subsequently joined to the floor, although the tray may be formed as an integral unit, as through a stamping, forming or dishing operation. When the wall portions are formed separately from the base **12**, it is preferred that they be formed from a single piece of material, and that the material be fastened back onto itself to form a continuous sidewall structure. Floor and wall portions formed from a light-gauge steel sheet have produced excellent results, although other materials fashionable in molded or assembled manner into a floored and walled tray may be employed for this purpose.

It will be seen that the drain area of the tray is the

locality of the most possibility of splashing of water from the tray, since all water used for the shampooing must at one time pass through that area. Accordingly, and in addition to the substantial height of the wall portions, protection against spilling and splashing of water from the tray adjacent the drain wall **18** is provided by a cover **24** attached to the side walls **14** and **16** and to the drain wall, over and across the truncated rearward end of the tray.

A tubular drain nipple **26** projects from the drain wall **18** through an opening **28** in the lower portion of the drain wall. A drain tube **30** is slidably projected onto the drain nipple, and is of sufficient length to extend from the tray to any suitable water-collection or drainage means, usually found on the floor upon which the shampooing device may be resting.

The supporting structure for the shampooing tray includes a standard **32** having a vertical tube member **34** and a plurality of legs **36**, as for example three, extending radially and downwardly therefrom. The tube member is hollow to slidably accommodate a support rod **38** in telescoping relation therewithin. The support rod **38** carries a fitting **40** at its upper extremity, the fitting having a socket member **42** accommodating the upper end of the support rod and terminating in a vertically positioned disc-end **44**. The socket member of the fitting is held on the support rod by any suitable means, as by press fitting or by means of a set screw.

A first thumb screw **46** is provided in the upper portion of the tube member **34** of the standard, and is threaded horizontally therethrough to enable one end of the screw to be threadedly advanced into tight frictional engagement with the support rod disposed within the tube member, to prevent sliding movement of the rod relative to the tube once the tray is correctly positioned in height. When the screw **46** is backed off from contact with the support rod, the latter is free to slide within the tube member to permit adjustment of the height of the tray.

The legs **36** are preferably formed as a severable leg unit **37**, and are provided with an axial vertical threaded bore **39** adapted to receive a threaded lower end **35** of the tube member **34**. This construction permits the disassembly of the standard for compact collapse and storage of the device.

A bracket member **48** (Figures 1 and 2) is pivotally connected to the disc-end **44** of the support rod, and includes an elongate arm **50** terminating in a downwardly extending ear **52**. The pivotal connection of the bracket to the support rod includes the ear **52** of the bracket, the disc-end **44** of the support rod and a second thumb screw **54** slidably carried by the ear and threadedly engaging the disc-end to frictionally bind the two together against any relative movement. The binding contact between the ear and the disc-end is increased by the inclusion of corrugations in each of the mating faces, these corrugations extending radially from the centers thereof. The ear is positioned generally in a vertical plane including the longitudinal medial axis of the arm **50**. Therefore, when the frictional contact between the ear and the vertically-positioned disc-end **44** is released by a backing-off of the second thumb screw **54**, the bracket member **48** is pivotable in a vertical plane about the second thumb screw.

The arm **50** (Figures 3 and 4) of the bracket **48** is provided with a longitudinally-extending elongate slot **56**, and with a channel **58** of width greater than that of the slot concentrically overlying the latter. An elongate rectangular boss **60** is secured to the lower side of the tray bottom, centrally and longitudinally thereon, to engage the channel **58**. A threaded stud **62** is fixed to the boss to project downwardly therefrom for purposes hereinafter explained. The width and depth of the channel **58** are

slightly greater than and slightly less than the width and height, respectively, of the boss **60**, which is adapted to be accommodated within the channel to be slidably positionable throughout the longitudinal extent of the latter. Since the boss is rigidly secured to the tray, the tray is accordingly slidably positionable relative to the arm **50** of the bracket. The stud **62** is adapted to project through the slot **56** and to move throughout the longitudinal extent thereof as the boss slides along the channel **58**. A washer **64** and thumb nut **66** are provided on the projecting end of the stud, and provide means for retaining the boss within the channel and for tightening the boss into strong frictional engagement within the channel to permit the tray to be fastened in a desired position on the bracket arm radially from the standard. The rectangular nature of the boss prevents any transverse or pivotal movement thereof within the channel, and accordingly holds the tray substantially rigid. It can be seen that since the channel **58** is shallower than the height of the boss **60**, the only frictional contact between the tray and the bracket member is borne by the boss, not the tray bottom, which is a structure less able than the boss to withstand any abrasion caused by sliding movement of the tray on the bracket member.

A cushion **68** is provided for the forward wall **20** of the tray, and is molded substantially in the shape of the forward wall and the neck-accommodating curve **22** in that wall. The cushion is provided with a centrally positioned narrow slot **70** throughout its curved extent, by means of which the cushion is mounted on the forward wall of the tray. The cushion is preferably formed of foam rubber or other material with similar padding properties, and provides a comfortable support or abutment for the neck of a person whose hair is being shampooed.

The neck and back support **80** (Figure 5) includes a frame **82**, having a base **84** of substantial planar extent for resting upon a bed or other surface upon which a person whose hair is to be shampooed is reclining. A pair of similar side members **86** upstand from the base **84**, and preferably incline upwardly towards one another until the former are joined to opposed edges of a neck-rest **88** in the form of a shallow trough. A recess **90** is formed in the upper portion of the rearward edge of each side member **86**, such that only the forward end **87** of the neck-rest **88** is attached to the side members, while the rearward end **89** of the neck-rest overhangs the recesses. The recesses **90** are of sufficient height and depth of freely accommodate the forward end of the tray **10** to an extent where the neck-rest completely overhangs the neck-accommodating curve **22**. The side members **86** are cut away on an incline **92** to form the recesses, so that the tray may be pivoted through an arc of angular positions relative to the horizontal while accommodated within the recesses. Since the tray will normally be inclined downwardly to the rear to induce the flow of waste water toward the drain, the neck-rest is preferably positioned on a slight incline downwardly to the rear.

The structural rigidity of the frame **82** is increased by flange portions **94** and **96** on the forward and rearward edges of the side members, by flange portions **98** on the forward and rearward edges of the base, and reenforcing cross-bars **100** joining the forward flanges **94** of the side members. Additional rigidity is provided in the side members by providing a reenforcing crease **102** in each.

A cushion **104** is provided to render the neck-rest **88** more comfortable, and preferably takes the form of a pad of foam rubber of substantially the same length and width as the neck-rest, and of sufficient thickness to provide a comfortable rest for a person's neck. The cushion preferably is removably supported, not fastened, on the neck-rest so as to be easily removable for washing between shampooing operations.

A back-rest **106** in the form of a rectangular plate **107**

is pivotally attached to the frame **82** adjacent the neck-rest **88**. To this end, a hinge **108** connects the back-rest to the forward flange **94** of each of the side members **86**. The hinges **108** preferably are positioned on the side member flanges slightly below the neck-rest to provide a displacement **110** so that the neck and the back of a person in reclining position will be comfortably supported. The back-rest is of sufficient length to incline forwardly downward at a moderate angle when the forward end **112** thereof is resting on the person's bed. The back-rest is preferably formed from a light-gauge steel sheet, however it is contemplated that other materials may be used equally well in its construction. Structural rigidity is imparted to the back-rest preferably by means of a peripheral wall **109** perpendicular to the plate, and an inwardly extending flange **111** parallel to the plate and formed peripherally from the wall.

The shampooing device is set up for shampooing the hair of a person in reclining position, by first positioning the head and back support under the person whose hair is to be shampooed. It will be seen that the back-rest supports the shoulders and back of the person, while the cushioned neck-rest provides a comfortable support for the head and neck. A towel placed over the neck and back support will provide a means of promoting sanitation and of absorbing any splashed or spilled water. The neck and back support is positioned in line with the body of the person whose hair is to be shampooed, so that the recesses **88** open toward the rear of the device, away from the person's head.

The tray is thereupon readied for the shampooing operation by release of the first thumb screw **46** in the tube member **34** of the standard so that the support rod **38** may be slidably moved up or down within the tube member to correctly position the height of the tray. Once the correct vertical position of the tray is established, the thumb screw **46** is tightened down on the support rod to prevent further vertical movement. The position of the tray radially from the standard is next set by releasing the thumb nut **66** from tight frictional contact with the bracket arm **50**, so that the boss **60** and the tray **10** are freely slidable along the arm. The correct radial position for the tray depends on the construction of the head-end of the bed and position of the person on that bed, and is a position wherein the standard will rest firmly on the floor when the tray projects laterally therefrom sufficiently to reach the person on the bed. Once the correct radial position is reached, however, the thumb nut is re-tightened to fasten the tray to the bracket member **48** and therefore to the standard. The final adjustment, prior to the positioning of the tray in the recesses **90** of the neck and back support, is effected by manipulation of the second thumb screw **54** on the pivotal connection so that the angle of the tray may be adjusted to one which induces a proper rate of draining of the water from the tray.

The tray on the standard is thereupon advanced toward the person on the bed, and the forward end **20** of the tray is positioned in the recesses **90** so that the neck-rest overhangs the cushioned neck-accommodating curve. The free end of the drain tube **30** is then placed in communication with a water-collection means, such as a pail or pan, and the shampooing operation may be begun.

The device is similarly adjusted in height, radial position and inclination for use in shampooing the hair of a person seated upright, as in a chair. For this shampooing

operation, however, the neck and back support is not needed, and it is only necessary to position the tray and standard so that the neck of the person whose hair is being shampooed rests in cushioned manner in the neck-accommodating curve of the tray.

When the device is to be carried or stored, it is a simple matter to telescope the support rod down into the tube member, and to pivotally fold the tray down against the tube member. Similarly, the neck and shoulders support is easily collapsed by folding the shoulders-rest against the frame. The device may be further collapsed by removal of the radial legs from the tube member, as by unscrewing the tube member from the leg unit, should such prove convenient.

It will be seen that the present invention provides a compact and simple means of shampooing the hair of persons in reclining positions as well as in upright positions. Furthermore, the shampooing operations necessary in either situation can be accomplished without undue disturbance of or discomfort to the persons whose hair is being shampooed. Moreover, the device is easily collapsible and portable, and is adapted for use in rooms and under conditions of immobility of the person wherein facilities are not available or are inconvenient for shampoos otherwise to be given.

It can be further seen that the construction of the shampooing device of the present invention permits it to be positioned where convenient for the person whose hair is being shampooed and not merely where it will be close to a water source or to a basin or water-drainage means. The construction of the shampooing tray, particularly in respect to the sidewalls of substantial height and the splash and spill-preventing cover over the drain portion of the tray, allows the device to be used without employment of hose and spray nozzle means carrying water from a sink or basin to the tray, and permits the use of pans or other vessels for bringing water, preferably heated, to the tray for the shampooing operation.

I claim:

1. A neck and back support for supporting a person in reclining position comprising a generally upstanding frame, an arcuate neck-rest arranged on the upper portion of said frame, and a back-rest connected at one end to said frame below said neck rest, said frame and said back-rest being so proportioned and so connected that when said neck and back support is positioned for use said back-rest is inclined at a moderate angle and the portion of said neck-rest adjacent said back-rest lies substantially above the plane of said back-rest.

2. The neck and back support of claim 1 in which said neck-rest slopes downwardly away from said back-rest.

3. The neck and back support of claim 1 in which said neck-rest slopes downwardly away from said back-rest, and said frame is recessed below said neck-rest on the side away from said back-rest.

4. The neck and back support of claim 1 in which said back-rest is hingedly connected to said frame.

References Cited in the file of this patent

UNITED STATES PATENTS

973,822	Sparenburg	Oct. 25, 1910
1,660,107	Trickey	Feb. 21, 1928
2,167,572	Howe	July 25, 1939
2,425,513	Czajcinski et al.	Aug. 12, 1947
2,453,784	Conjurske	Nov. 16, 1948
2,759,195	McAdon	Aug. 21, 1956