

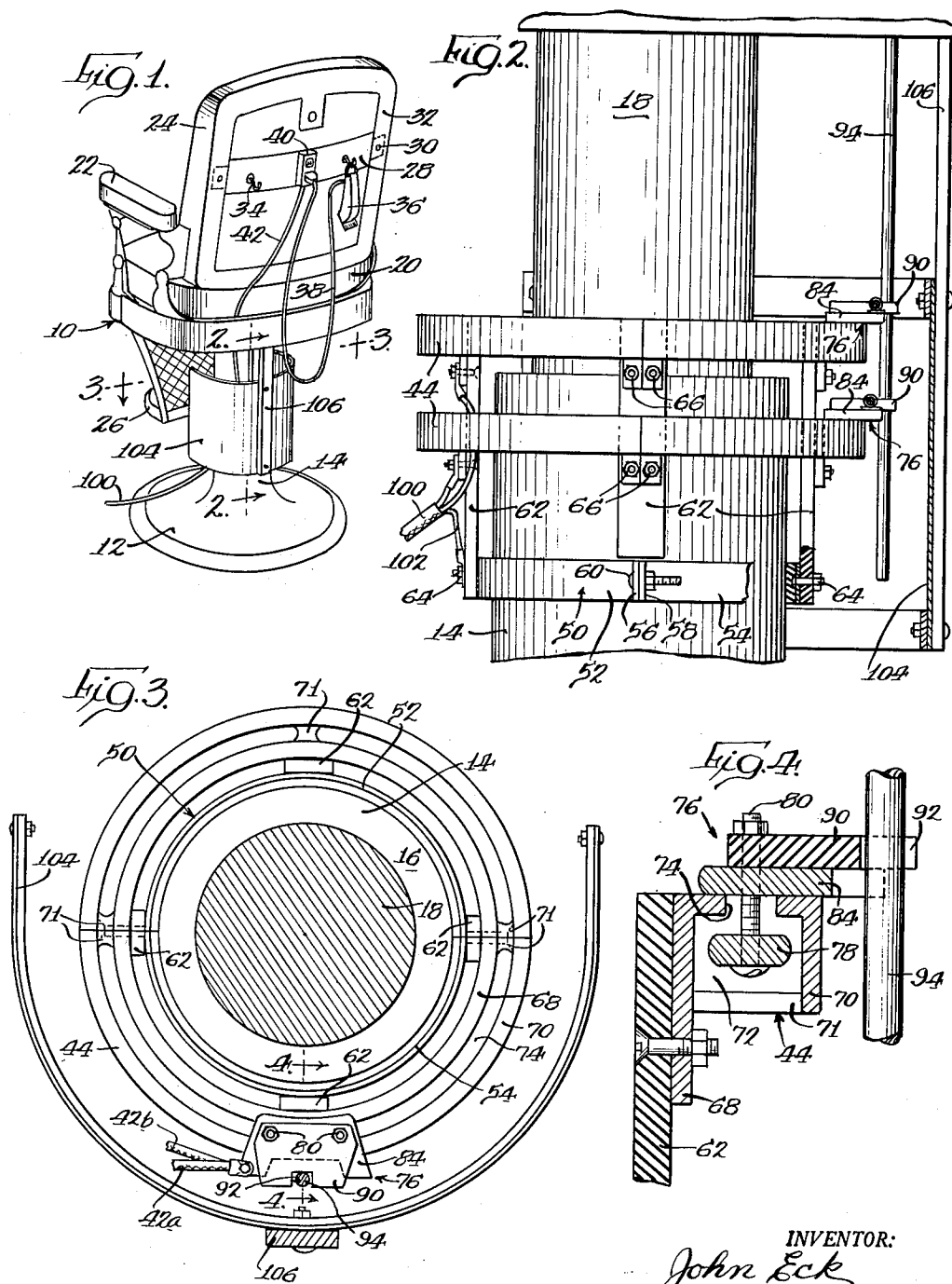
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J. ECK

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ELECTRIC SUPPLY FOR BARBER CHAIRS

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INVENTOR:

BY *John Eck*

Gary, Desmond & Parker
Attys

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ELECTRIC SUPPLY FOR BARBER CHAIRS

John Eck, 3518 W. 107th St., Chicago, Ill.

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This invention relates to vertically reciprocable revolving chairs as used in beauty salons, barber shops, etc. More particularly, it is directed to provision on a barber shop chair of a convenient source of electrical energy available to the operator who uses power tools such as hair clippers and the like.

In using electrically powered tools in connection with tonsorial and hair dressing activities, the electrical cords are normally attached to an electrical outlet spaced from the chair. In order to reach certain areas on the patron's head, the operator as he moves from one portion to the other progressively moves the powered implement. Consequently, the electrical cord is draped about the patron's neck and shoulders and is frequently contacted by the operator. Obviously with time and use, the cord becomes frayed, or the insulation ages, and even though care is exercised, the cord is inherently dangerous and can result in a short with unfortunate results. Also, the operator in the course of his work is hampered by the cord, both by the presence of the same adjacent his hands and the neck and shoulders of the patron, and by the extension of the same between the chair and a back counter.

The object of my invention is to provide in conjunction with a revolving chair used by the beautician and tonsorial professions a convenient source of electrical energy within easy reach of the operator and mitigating the disadvantages above noted.

Another object of my invention is to provide an economical and easily installed attachment for barber and beauty shop chairs affording a convenience outlet on and movable with the chair for supply of electrical energy to various hair dressing implements, whereby the implements may be disposed conveniently at hand for instant use without danger of dangling wires and electrocution.

A further object of the invention is the provision of an improved electrical supply for barber chairs comprising a readily installed electrical attachment including a pair of conductor rings to be secured to the chair base in encircling relation thereto, a power supply cord for the rings, a pair of contacts slidably engaged with respective ones of said rings, means operatively connecting said contacts to the chair for rotation therewith, said connecting means including a lost-motion connection in the vertical direction accommodating vertical reciprocation of the chair, and a power cord leading from said contacts to a convenience outlet on the back of the chair, whereby the outlet and cords coupled thereto are movable with the chair and do not pose an obstacle to the barber or the patron.

Other objects and advantages of the invention will become apparent in the following detailed description.

Now, in order to acquaint those skilled in the art with the manner of making and using my electrical supply means for barber chairs, I shall describe, in connection with the accompanying drawing, a preferred embodiment of the supply means and the preferred manner of making and using the same.

In the drawing:

FIGURE 1 is a perspective view showing a barber chair and my attachment in position thereon;

FIGURE 2 is a vertical section taken along line 2-2 of FIGURE 1;

FIGURE 3 is a transverse section taken on line 3-3 of FIGURE 1; and

FIGURE 4 is a fragmentary vertical section, on an enlarged scale, taken along line 4-4 of FIGURE 3.

The revoluble barber chair 10, illustrated as an example and not to be construed as a limitation of the principle underlying my invention, has a base 12 from which extends integrally a cylindrical member or housing 14 in which is concealed a cylinder 16. A vertically reciprocable hydraulically actuated shaft 18 is journaled within said cylinder 16, and can be revolved therein to the desired position. A suitable seat 20, including arm rests 22, a back rest 24 and foot supports 26, is secured to the upper end of the shaft 18, whereby the seat or chair proper may be raised, lowered and rotated relative to the base 12. An ornamental and protective skirt or guard is sometimes provided to conceal the base and cylinder of the lower part of the chair, but for sake of clarity it is not shown for it forms no part of this invention.

Across the rearward portion 28 of the back rest 24, there is attached an implement carrier plate 28 whose ends 30 are secured to the framing 32 by any suitable means such as screws, or the like. The carrier plate 28 is preferably of a material and a finish in keeping with the decor and decorative motif of the chair 10. The ends 30 are shown in phantom since they are concealed by the finished covering or frame that extends around the margins of the body of the chair 10.

The implement carrier plate 28 has positioned thereon at preselected places one or more holders or hooks 34, upon which can be hung the implements, such as clippers 36, and the like, in a ready and conveniently accessible position ready for use by the operator. The electrical power needed to operate the clippers 36 (or any other device) is supplied, via the implement's cord 38, from a convenience outlet 40 mounted on the plate 28. The outlet 40 is connected through electrical conductor or cord 42 to a source of electrical power comprised of current feed elements 44 mounted about the housing 14 of the upright portion of the chair base 12.

For sake of clarity the electrical conductor 42 is shown mounted on the rear exterior of the back rest 24, but obviously it can be concealed within the interior of the back rest 24 and other parts of the chair per se since it is stationary with the chair.

The current feed elements 44 are mounted on the base 12 by one or more annular clamps 50 comprising two semi-circular portions 52 and 54 which are fastened together at their ends 56 and 58 respectively. These are demountably secured about the housing 14 and are also vertically adjustable on the housing by virtue of the nut and bolt fasteners 60. Preferably, the inner faces of the portions 52 and 54 are covered with a resilient friction material, such as rubber.

Upright supports 62 are secured at desired positions, preferably in each quadrant of the said clamp arrangement 50, to the said clamp either by welding or conventional nut and bolt assemblies 64. At preselected upper portions thereof, the uprights 62 mount in coaxial spaced apart relation, a pair of specially constructed current feed elements 44. It should be noted that the upright supports 62 are of a non-conductive material, such as plastic, hard rubber or the like, to electrically insulate the chair and also prevent short circuit between the spaced apart current feed elements 44.

Each current feed element 44 is secured fixedly to the insulated upright supports 62 by means of nuts and bolts 66, though obviously other means such as rivets, adhesives, etc. could be used without departing from the principles involved in my invention. Likewise, each current feed element 44 could be mounted directly on the housing 14 provided suitable insulating washers were employed.

Each element 44 is preferably comprised of two semi-

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circular segments to facilitate mounting of the same on the chair base without unduly multiplying the number of parts. Each segment may be a cast member of copper or electrically conductive aluminum alloy, or may be formed from an assembly of several structural elements shaped into the desired semi-circular form. The preferred embodiment comprises a unitary casting including two inverted L-shaped portions 68 and 70 facing each other and secured together at their lower edges by spaced braces 71. The braces 71 retain the portions 68 and 70 in spaced apart relationship to form therebetween a cavity 72 and a circular track 74. The vertical leg of the inner L-shaped portion 68 is preferably extended downwardly at the location of each upright 62 to facilitate mounting of the casting on the uprights by the bolts and nuts 66. Preferably, each ring 44 is comprised of two identical segments as described to minimize the number of different components required to make the assembly. Also, as shown herein, it is preferred that the rings be spaced from one another and the chair base and derive their insulated mounting from the uprights 62.

For cooperation with each ring 44, I provide a take-off or movable contact 76 comprising a contact bar or collector plate 84, suitably formed of aluminum and adapted to slide on the upper surface of the respective ring. The bar is retained in cooperative relation with the ring by a retainer strap 78 positioned within the cavity 72 and secured to the bar by a pair of bolts 80 which extend through the circular track 74. Preferably the bolts 80 have threaded connection with both the retainer strap 78 and collector plate 84 to hold the same in spaced relation. Mounted over the said collector plate 84 is an insulating guide 90 that extends beyond the periphery of the said current feed element 44 and the said collector plate 84. A portion of the midsection of the outer edge of the said guide is notched to provide a recess 92 adapted to substantially embrace a vertically disposed guide rod 94 that is secured to and extends downwardly from the bottom of the seat 20. As shown in FIGURE 2, the two assemblies 76 are aligned vertically, and the rod 94 is slidably received in the notch in the insulating guide 90 of each movable contact.

As the chair is swiveled around the base, the rod 94 depending from the bottom of the seat 20 is also moved and it moves the slide assemblies 76 circularly on the current feed elements 44. As the chair is raised and lowered, the guide rod 94 defines a lost-motion connection in the vertical direction between the chair and the contact means whereby the chair may be reciprocated vertically without loss of the operative rotary connection between the chair and the contacts.

The respective wires 42a and 42b of the conductor 42 are fastened respectively to the collector plates 84 of the two contact assemblies 76, thereby to conduct electrical current to the outlet 40 on the implement carrier plate 28.

As shown in FIGURE 2, the electrical energy is supplied to the current feed elements 44 by means of power lines 100. A suitable ground 102 conductively engaging the pedestal 12-14 of the chair (as by means of a fastener extending through the clamp 50 and the friction material to engage the pedestal) is provided as a measure of safety.

A protective guard 104 is provided to prevent accidental contact with the live current feed elements. This guard 104 is mounted on a support 106 that is fastened to the bottom of the seat 20.

In use, the supply cord 100 may be passed through the floor, under the floor mats in the barber shop, or be encased in protective conduits where it is entirely out of the way and does not pose an obstacle to the barber. Electrical energy is thus supplied to the rings 44 and drawn from the rings via the contacts 76 and the short cord 42 to the outlet 40, still without presenting an obstacle to the barber or his customer. With this outlet conveniently at hand, the barber may employ any elec-

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trical implement he desires, and since he usually works from the back and sides of the chair, he will not drape the cord of the implement about the neck and shoulders of the patron and he will not find the same in his way as he maneuvers about the chair. Moreover, since he can simply hook the implement on the chair, the barber will be saved many steps during the course of a day and he will not have to repeatedly store his clippers on a back counter and retrieve them therefrom.

The preferred embodiment of the apparatus as shown herein is readily attached by virtue of its split ring design to a wide variety of barber chairs. The unit itself is economically yet sturdily made for a long service life, and is economically installed to afford the barber the many advantages hereinbefore discussed.

While I have shown and described what I regard to be the preferred embodiment of my invention, it will be appreciated that various changes, rearrangements and modifications may be made therein without departing from the scope of the invention, as defined by the appended claims.

I claim:

1. In combination with a chair vertically reciprocable and revolvable on a base, a pair of vertically spaced coaxial conductor rings mounted about said base in insulated relation to one another and said base, a pair of slidable contact assemblies engaged respectively with said rings and each including a contact conductively engaging the respective ring and insulating guides including portions spaced radially from said rings, a rod depending from the chair and engaged with both of said guides for causing the contact assemblies to rotate conjointly with the chair, said rod being slidably engaged with said guides in the vertical direction and being of a length greater than the path of vertical reciprocation of the chair, electrical supply conductors connected to said rings, electrical conductors connected to said contacts, and an electrical outlet mounted on said chair and connected to the latter conductors.

2. In a combination as set forth in claim 1, mounting means for said rings comprising a split ring clamping band secured about the base of the chair, a plurality of insulated upright supports mounted on said band, said rings each comprising two semi-circular segments of a diameter larger than the base of the chair secured on said uprights in abutting relation to one another and in encircling relation to the base.

3. In a combination as set forth in claim 1, a support bracket depending from the chair radially outwardly of said rings and a protective shield secured to said bracket about said rings.

4. An attachment for a vertically reciprocable revolving chair having a stationary base, comprising a pair of coaxial vertically spaced conductor rings and means for mounting the same about the base, said means comprising a split ring clamping member adapted to encircle the base and to be secured thereto and insulated support members carried by said clamping member, each conductor ring comprising a pair of semi-circular segments mounted on said support members and adapted to encircle the base in spaced relation thereto, a slidable contacting assembly engaged with each conductor ring, a guide plate extending radially outwardly from each slidable assembly and having a notch in its edge, a rod depending vertically from the bottom of the chair and engaging loosely in the notches in said guide plates, an electrical outlet to be mounted on the chair, means to transmit electrical energy from said slidable contacting assemblies to said outlet and means to supply electrical energy to said rings.

5. An attachment for a vertically reciprocable revolving chair having a stationary base, comprising a pair of coaxial vertically spaced conductor rings, means for mounting said rings concentrically about the base in insulated relation to one another and the base, each of said rings having a slot in an exposed wall thereof about its entire periphery, a slidable contact assembly engaged with

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each ring, each contact assembly comprising elements interiorly and exteriorly of the respective ring interconnected with one another through the slot in the ring whereby said contact assemblies are interengaged with said rings for annular sliding movement only relative thereto, an insulating guide plate extending radially from each contact assembly and having a notch in its edge, an elongated rod depending vertically from the bottom of the chair and engaging in the notches in both of said guide plates, said rod being vertically movable with the chair relative to said contact assemblies, said rings and the base but coupling said contact assemblies to the chair

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for conjoint rotation therewith relative to said rings and the base, an electrical outlet to be mounted on the chair, means to transmit electrical energy from said slidable contact assemblies to said outlet, means to supply electrical energy to said rings, and an insulated protective shield depending from the chair about said rings and said contact assemblies.

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