United States Patent

Keith

[15] **3,665,451**

[45] **May 23, 1972**

[54] HEAD ATTACHED SAFETY LIGHT

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[22] Filed: **Aug. 31, 1970**

[21] Appl. No.: **68,339**

[52] **U.S. Cl.** .....**340/321,** 240/6.4 W

[51] **Int. Cl.** **G08b 5/00**

[58] **Field of Search** .....240/6.4 W, 2 ME, 10 F; 46/228; 2/171; 340/321

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[57] **ABSTRACT**

A head supported safety light device primarily for use when riding a bike, walking alongside a dimly lighted road or traversing a similarly dangerous area. It comprises a readily attachable harness embodying an adjustable head encircling strap suspended and held by a complemental bridle-like strap saddled over the wearer's head. An encased flashlight battery is perched atop the bridle-like strap and is cooperable with current conducting wires and a suitable switch. These wires are passed upwardly through tubular hingedly mounted arms which are ornamental, if desired, and which have socket members atop the elevated upper ends equipped with easy-to-see bulbs with or without built-in flashers.

4 Claims, 4 Drawing Figures

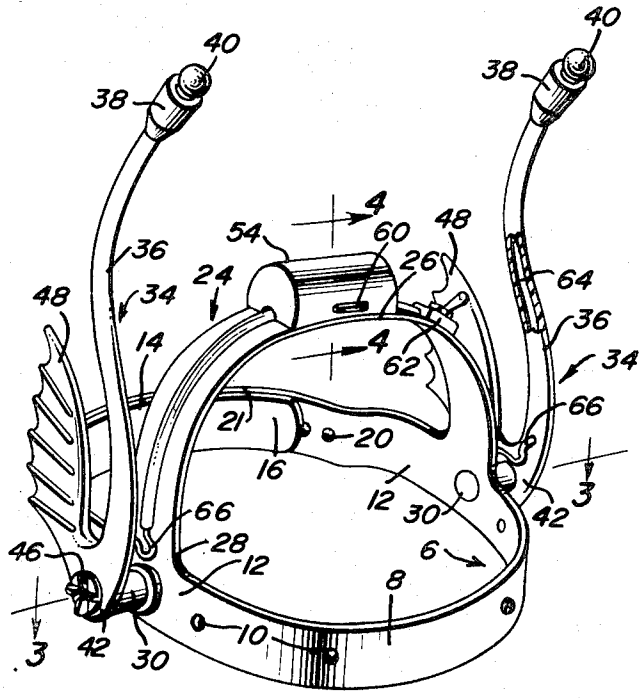


Fig. 1

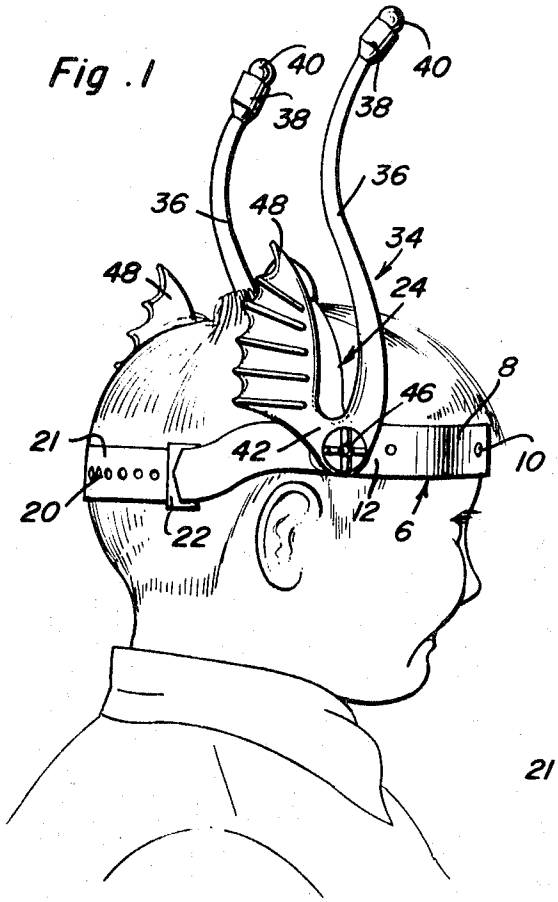


Fig. 3

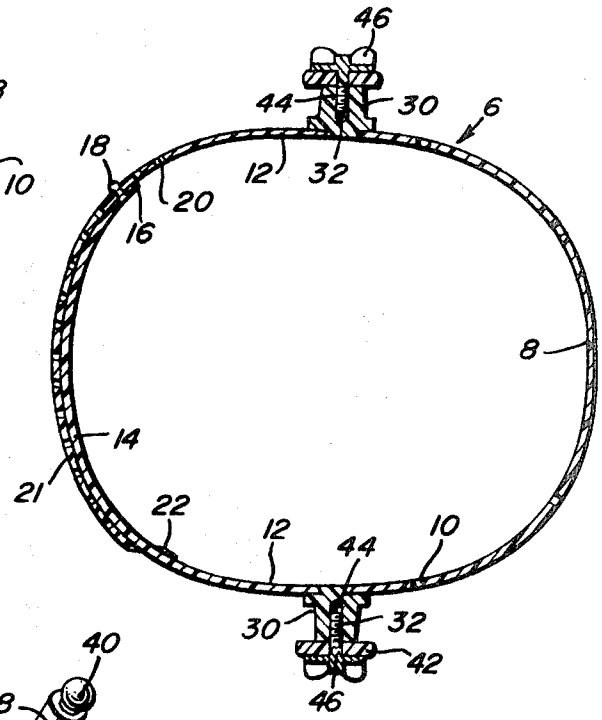


Fig. 2

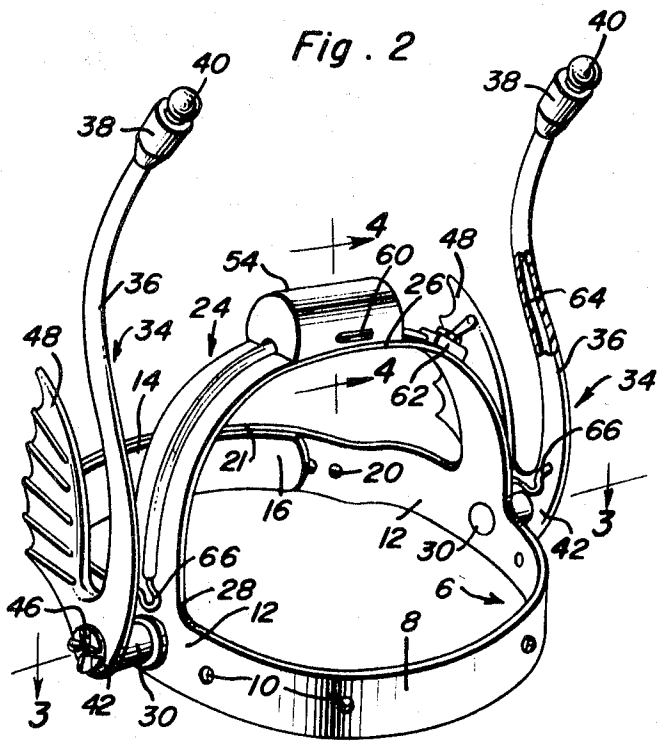
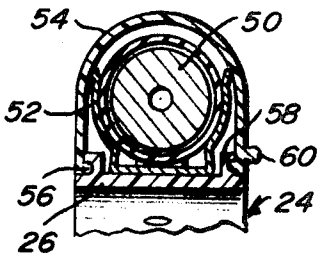


Fig. 4



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HEAD ATTACHED SAFETY LIGHT

This invention relates to safety light devices which are designed and expressly adapted to be attached to and worn on the head of the user and has to do with an innovation which lends itself to feasible use by adults or children and is characterized by a readily applicable and removable head embracing harness, a pair of flashlight or equivalent bulbs, and elevating and positioning means which functions to present the lighted bulbs for use in an efficient and reliable manner.

Intermittently actuatable safety lights which are attachable to the head of pedestrian users are not, as is known, new in the field of endeavor herein under advisement. Many and varied styles and forms of head-mounted safeguarding lights have been offered for use by others. Although several prior patents could perhaps be properly mentioned here it will suffice for background purposes to cite only the Samuel Campanell patent, that is U.S. Pat. No. Re 24,631.

An object of the present invention is to advance the art of head-mounted and supported safety lights and, in so doing, to provide an adaptation which lends itself to practical use by adults and children and is feasible and serviceable when the wearer is called upon to ride a bicycle or to walk along a dark road or to traverse a dimly lighted area.

Briefly the safety light device is characterized by a readily attachable and detachable head-embracing harness which is conformingly adapted and can be removably attached to and worn on the head of the wearer, said harness being provided with a complemental self-contained source of illumination which lends itself to readily and reliably recognizable use whether the wearer is riding a bike, walking, or in some other manner traversing a poorly and dimly lighted area.

More specifically the source of light or light means is characterized by a pair of vertically elongated upstanding arms which are supported at their lower ends on component parts of the harness. These arms have socket members on their upper free ends and the socket members are provided with unobstructedly viewable and accessibly and removably mounted flashlight bulbs. These arms, if desired, can be ornamentally designed in any one of a number of different ways. In addition, the lower detachably and hingedly mounted or bracketed ends can, if desired, be provided with uniquely designed and attractive wings when, for example, the device is worn not only for utility but fun-provoking purposes, particularly when the wearer is a youngster.

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

FIG. 1 is a view in perspective showing a head attached safety light device or appliance, for example, the ornamental style which is adapted to be worn, as illustrated, on the head of a youngster.

FIG. 2 is a view on an enlarged scale in perspective with a portion shown in section and wherein all of the essential component parts are illustrated in oriented and coordinating relationship.

FIG. 3 is a section taken approximately on the plane of the horizontal section line 3—3 of FIG. 2, looking in the direction of the indicating arrows.

FIG. 4 is an enlarged cross-section taken on the vertical section line 4—4 of FIG. 2.

As will be evident from the views of the drawing, the component parts of the overall ready-to-use attachment are made, if desired, of suitable moldable commercial plastic materials.

The aforementioned head-embracing harness is denoted by the numeral 6. This harness is made up primarily of two straps or bands which are of flexible material and are appropriately broad so that they may be conveniently and fittingly applied to the head of the wearer in the manner illustrated in FIG. 1. The first or primary head-encircling strap is of requisite length and when in use is adapted to snugly and conformingly ring the

wearer's head. This strap has a forward portion 8 which bridges the forehead and is provided with suitable ventilating holes 10. The median temple-bridging portions are denoted at 12. One terminal rear end portion is denoted by the numeral 14 and the free tip 16 thereof is provided with a headed pin or detent 18 which is adapted to be selectively snapped and fitted into keeper holes 20 provided at longitudinally spaced points in the other free end portion 21. The terminal of this end portion is provided with a buckle-like loop 22 which slidingly receives the end 14 whereby to thus provide a strap which not only encircles the head but is adjustable and can be made to fit with requisite nicety. The bridle-like inverted U-shaped strap is denoted by the numeral 24 and has a central crest portion 26 and depending end portions 28, integrally joined with the median portions 12 as brought out in FIG. 2 in particular. To the ends desired the median portions 12 are provided at diametrically opposite points (FIG. 3) with suitably anchored outstanding studs or adapters 30 having axial screw-threaded sockets 32 formed therein. These adapters serve as mountings for the paired upstanding arm units 34. Each unit comprises an upstanding tubular or hollow arm 36 of requisite height which is suitably curved for design or ornamenting purposes as is evident from both FIGS. 1 and 2. The upper end of the arm is provided with an appropriate internally screw-threaded socket member 38 which serves to accommodate the attachable and detachable flashlight bulb 40. The lower substantially V-shaped end portion of the arm has a central or bight portion 42 which is positioned and stabilized against the end of the aforementioned adapter stud 30. This end portion is apertured to accommodate a screw-threaded shank 44 of a winged nut 46 which is mounted and assembled in the manner illustrated in FIGS. 2 and 3 in particular. Thus the lower end portions of the arms are detachably and adjustably mounted. Each lower end portion is preferably provided with a rearwardly upwardly directed ornamental wing-like extension 48 which is delineated primarily for ornamental purposes when worn by children as illustrated in FIG. 1. The power source for illuminating the bulbs 40 preferably comprises, as shown in FIGS. 2 and 3, a flashlight battery 50 which is retentively fitted into suitably attached clip means 52, the clip means and battery being confined in an elongated appropriately shaped housing or case 54. This case is provided on its flanged side walls with ribs 56 which fittingly snap into grooves in ribs 58 which are provided therefor. A finger-gripping knob 60 is provided on one wall to facilitate attaching and removing the hood-like housing and in a manner to facilitate access to the dry cell battery 50. The numeral 62 (FIG. 2) designates an appropriate off-and-on switch which is mounted on the crest 26 toward one end of the battery housing. This switch is incorporated in the wiring means which is here shown as embodying appropriate wires 64 (FIG. 2) which are passed through the hollow portions of the arms and are appropriately connected to the flashlight bulbs 40 (not detailed). The wires have flexible portions 66 also as shown in FIG. 2 and these portions are superimposed on the strap 24 which is saddled over the head of the user when in use. The inner ends of the wires are appropriately electrically connected with the battery (not detailed). It follows that the hingedly mounted bulb-equipped units or arms 36 can be swung forwardly, rearwardly or positioned upright as shown in FIGS. 1 and 2. As already mentioned it is within the purview of the inventive concept to employ arms which are colorful and ornamental or to merely use simple tubular arms which are straight from end to end (not shown). It is reiterated that the invention is primarily adapted for safety purposes when riding a bike or walking along a dark road and for other purposes where a light source is or would be desirable.

It is also within the purview of the invention to employ self-contained intermittent flashers (not shown) which could be built into the socket members 30 or incorporated in the wiring means between the switch 62 and battery 50.

The manner in which the head-encircling band 8 is attachable and usable for adjustment purposes is believed to be

evident from the description and views of the drawing. Likewise the manner in which the inverted U-shaped bridle-like strap 24 is saddled over the crown of the head of the user is self-evident particularly from FIG. 1. Other significant aspects of the concept both from the standpoint of a toy and a safety light source of significant utility are thought to be understood. Accordingly, a more extended description is believed to be unnecessary.

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

What is claimed as new is as follows:

1. A safety light designed and adapted for use by adults or children when riding a bike or walking along a dark road or a similar dimly lighted unsafe area, a head supported safety light comprising: a head embracing harness embodying two coacting flexible straps, (1) a head encircling strap having a forward forehead portion, side temple bridging portions and overlapping separably and adjustably connected rearward end portions and (2) an inverted U-shaped bridle-like suspension and restraining strap which is adapted to bridge over the crown of the wearer's head and which has depending lower ends united with median portions of said side temple portions, and complemental self-contained safety light means characterized by a pair of vertically elongated upstanding arms having lower ends hingedly and clampingly mounted on said side temple portions and having upper free ends provided with screw-threaded socket members, said socket members being provided with readily viewable and accessible as well as removably mounted flashlight bulbs operatively connected to power supply means, said arms being tubular and relatively high with the socket member normally occupying a plane well above the plane of said U-shaped suspension strap, the upper portions of said arms being longitudinally bowed, the lower end portions being substantially V-shaped in side elevation and having rearwardly directed ornamental wings, said side temple portions having outstanding studs on which said lower end portions are hingedly clampingly mounted.

2. The head supported safety light defined in and according to claim 1, and in combination, said power supply means comprising a flashlight battery, clip means for said battery removably mounting said battery atop a median portion of said U-shaped strap, a housing mounted on said median portion and enclosing said battery, an off-and-on switch also mounted atop said median portion, and current conducting wires passing through the hollow portions of said arms and operatively connected at outer ends with the respective bulbs and at inner ends with said switch and battery respectively.

3. The head supported safety light defined in and according to claim 1 and, in combination, resilient clip means cooperatively mounted atop a median portion of said U-shaped strap, said power supply means comprising a flashlight battery removably mounted in said clip means, a housing detachably mounted on said median portion and enclosing said clip means and battery, an off-and-on switch cooperatively associated with said battery, and current conducting wires operatively connecting said battery with respectively cooperable flashlight bulbs.

4. A readily applicable and removable safety light structurally designed and functionally adapted for use by adults or children when, for example, riding a bike, walking along a dark road, or traversing a similar dimly lighted unsafe area, a head supported safety light comprising, in combination, a head embracing harness embodying a circumferentially adjustable head encircling strap, an inverted U-shaped bridle-like harness positioning and retaining strap adapted to bridge itself across the crown of the wearer's head and having depending lower ends structurally and supportively united with oriented and coordinating portions of said head encircling strap, a pair of elongated arms adapted to assume vertical upstanding positions when in use, said arms having lower ends hingedly and clampingly connected with coacting portions of said straps, said arms having upper free ends provided with readily viewable and accessible flashlight bulbs, upper portions of said arms being longitudinally bowed, said arms having lower end portions provided with rearwardly directed ornamental wings, a flashlight battery, a housing mounted atop a median portion of said bridle-like strap and protectively mounting and enclosing said battery, an off-and-on switch cooperatively associated with said housing and battery, and current conducting means for conducting current from said battery to said flashlight bulbs.

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