Sept. 30, 1952 F. BERMAN 2,612,598

FLASHLIGHT WITH H-SHAPED FRAME FORMING OPPOSED HOLDERS FOR DRY CELLS AND LAMP HEAD

Filed Oct. 17, 1950 2 SHEETS--SHEET 1

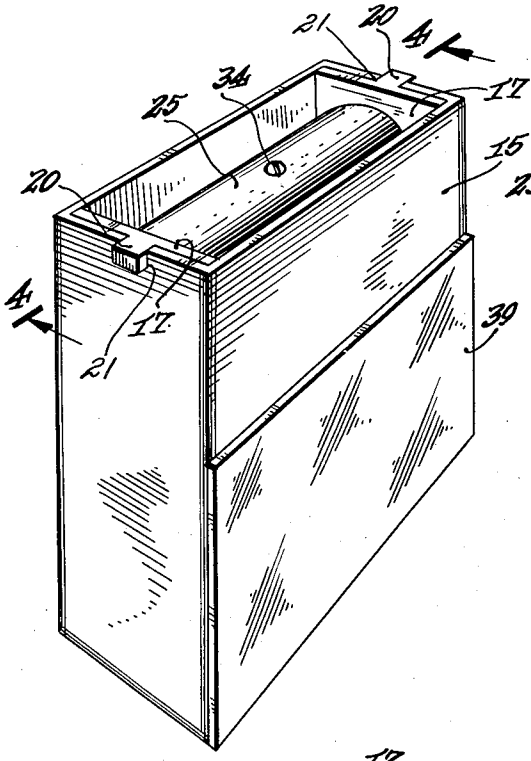


FIG. 1.

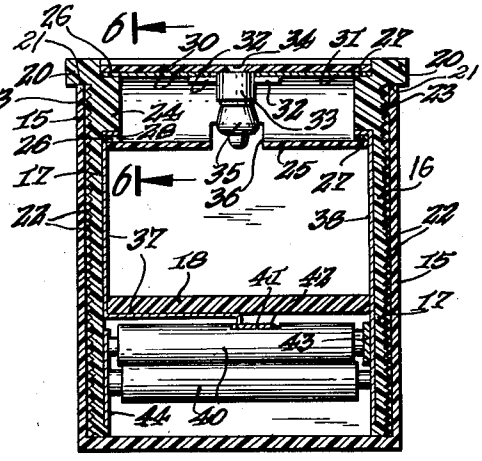


FIG. 4.

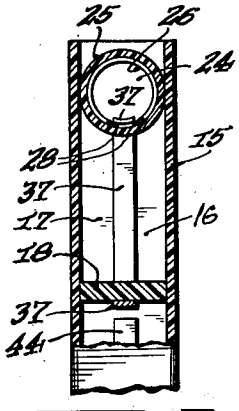


FIG. 6.

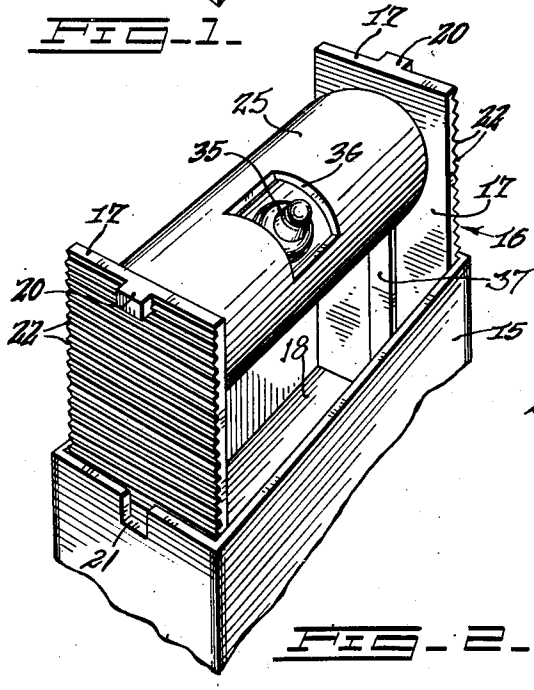


FIG. 2.

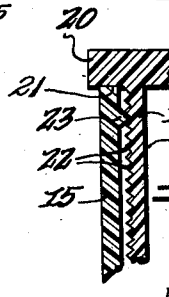


FIG. 5.

INVENTOR.
FRANK BERMAN
BY
ATTORNEY.

Sept. 30, 1952 F. BERMAN 2,612,598

FLASHLIGHT WITH H-SHAPED FRAME FORMING OPPOSED HOLDERS FOR DRY CELLS AND LAMP HEAD

Filed Oct. 17, 1950 2 SHEETS—SHEET 2

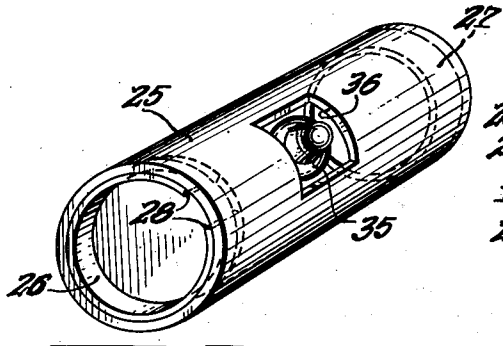


FIG. 3.

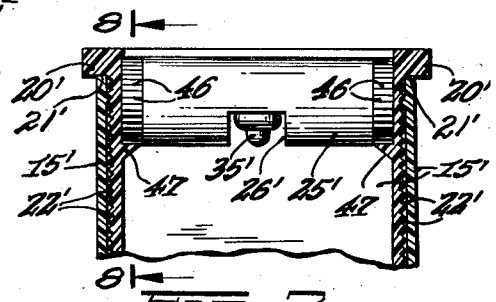


FIG. 7.

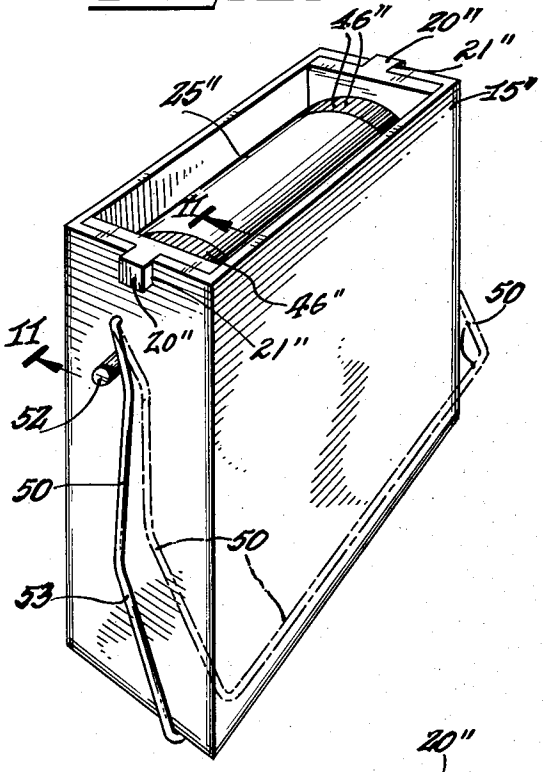


FIG. 9.

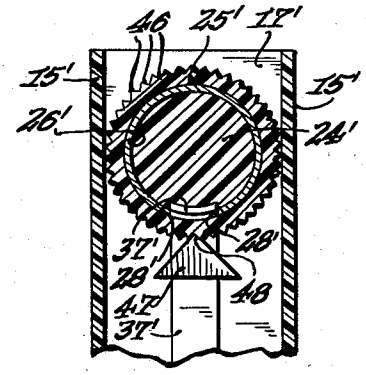


FIG. 8.

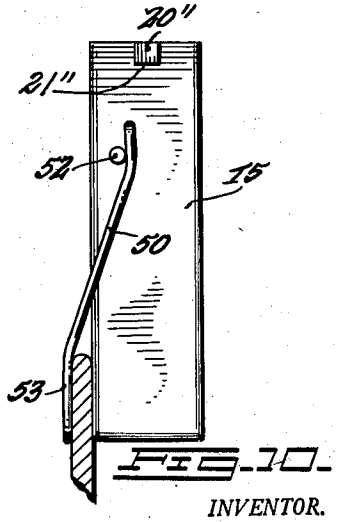


FIG. 10.

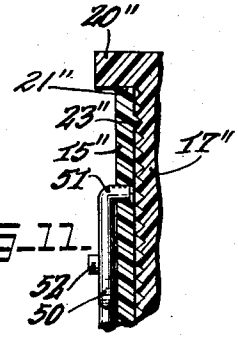


FIG. 11.

INVENTOR.
FRANK BERMAN
BY Zoltan A. Polacheck
ATTORNEY.

Patented Sept. 30, 1952 2,612,598

UNITED STATES PATENT OFFICE

2,612,598

FLASHLIGHT WITH H-SHAPED FRAME FORMING OPPOSED HOLDERS FOR DRY CELLS AND LAMP HEAD

Frank Berman, Pewaukee, Wis.

Application October 17, 1950, Serial No. 190,594

2 Claims. (Cl. 240—10.65)

1

This invention relates to new and useful improvements in portable lighting units and has for its particular aim the provision of such a unit for the automobile steering wheel storage unit disclosed in my co-pending application Serial No. 180,497, filed August 19, 1950.

The storage unit consists, in general, of a disc mounted on a steering wheel and having depending therefrom a plurality of pockets to receive writing implements, cigarettes, a flashlight, a writing pad and the like. The lighting unit or flashlight of the present invention is ideally adapted to be stored in one of the pockets of said storage unit.

One object of the invention is to construct the flashlight so that the illuminating means thereof is normally completely encased in an outer housing, but is partially removable from the housing and settable to direct a beam of light in any desired angular direction.

Another object of the invention is the provision of means for maintaining the setting of the illuminating means.

Still another object of the invention is the provision of automatic switching means operated by the act of setting the position of the illuminating means.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a perspective view of the unit of the invention in normal condition.

Fig. 2 is a partial perspective view of the unit in set position.

Fig. 3 is a perspective view of a rotor forming part of the unit.

Fig. 4 is a sectional view on line 4—4 of Fig. 1.

Fig. 5 is an enlargement of a portion of Fig. 4.

Fig. 6 is a fragmentary sectional view on line 6—6 of Fig. 4.

Fig. 7 is a fragmentary sectional view similar to Fig. 4 but illustrating a slightly modified construction.

Fig. 8 is an enlarged fragmentary sectional view on line 8—8 of Fig. 7.

Fig. 9 is a perspective view of another modified form of the device.

Fig. 10 is a side elevation of the device of Fig. 9 and illustrates an operative position of a part thereof.

2

Fig. 11 is an enlarged fragmentary sectional view on line 11—11 of Fig. 9.

The portable lighting unit, according to the first form of the present invention shown in Figs. 1 to 6, includes a rectangular housing 15 having an open top as shown. Said housing preferably is formed of a plastic material. Mounted in the housing 15 for sliding movements up and down relative to the open top thereof is a carriage 16 which may be either H-shaped or U-shaped, but which, as here shown, is of the H-shape, having side arms 17 and a cross bar 18.

In order to facilitate raising and lowering the carriage 16 the upper ends of the side arms 17 thereof are provided with lugs 20 which extend outward through suitable slots 21 in the upper edge of housing 15. As shown, the said lugs project beyond the housing wall and afford finger grips.

It is desired that the carriage be held automatically in whatever position it is located relative to housing 15. To this end the outer edge of each carriage side arm 17 has serrations 22 and each side wall of housing 15 is provided with a detent extrusion 23 which engages said serrations. It will be seen, therefore, that the engagement of said detents in said serrations will retain the carriage in whatever position it is raised or lowered to.

Near its upper end each carriage side arm 17 is provided on its inner face with a circular bearing extrusion 24 on which is mounted one end of a circular hollow rotor 25 of plastic material. Referring particularly to Figs. 3, 4 and 6, the rotor 25 has mounted in either end thereof a ring 26 or 27 of electrically conductive material, said rings bearing on the bearing extrusions 24. As shown the ring 26 has a breach 28 therein but the ring 27 is continuous. Extending from the rings 26 and 27 are strips 30 and 31, respectively, said strips at their inner ends engaging the contact ears 32 of an ordinary bulb socket 33 secured within the rotor in any suitable way, such as by a screw 34. Mounted in socket 33 is an electric lamp 35 which projects toward an opening 36 in the cylindrical wall of the rotor, said opening being disposed in alignment with the breach 28 in ring 26, angularly speaking. Contact is made with the rings 26 and 27 by conductor strips 37 and 38 which extend along the inner faces of the carriage side arms 17 in grooves therein, and have their upper ends bent off in grooves formed in the undersides of the bearing extrusions 24.

The conductor strips 37 and 38 extend through suitable holes at the ends of the carriage cross

bar 18, and in a manner presently to be described, are connected to the terminals of a pair of dry cells 40 mounted between the lower ends of the carriage side arms 17. If desired, clips may be provided for the dry cells 40 but such are not required, the tension of the arms 17 being sufficient to hold them in place.

The conductor strip 37 extends along the underside of cross bar 18 and has a downward extension 41 contacting the casing or negative terminal of the uppermost dry cell through a cutout 42 in the insulative cover thereof. The conductor strip 38 extends downward and contacts the positive terminal of the lowermost dry cell 40. Secured to the strip 38 in position to insulate the same from the end of the uppermost dry cell 40 is a pad 43 of insulative material. The electrical circuit is completed by a conductor strip 44 which extends along the opposite arm 17 and connects the positive terminal of the upper dry cell with the negative terminal of the lower dry cell.

The construction is such that when carriage 16 is in its lowermost position, the rotor is so positioned that the breach 28 of ring 26 is positioned over the bent over end of conductor strip 37 and the circuit to lamp 35 is open. However, the carriage may be raised to any desired position and the rotor 25 rotated to any desired angular position. The rotation of the rotor 25 brings the ring 26 into contact with the bent over end of strip 37 completing the circuit and illuminating lamp 35. It will readily be seen that with this arrangement the lamp 35 can be positioned to direct a beam of light in any desired angular direction.

It was mentioned above that the carriage 16 may be of U-shape. In this form the area below the cross bar 18 would be enclosed and would constitute a housing for the dry cells.

It is to be mentioned that, if desired, the side arms of the carriage may be telescopic so that the rotor may be extended even further above the housing 15. Further, if desired, the rings 26 and 27 may be provided on the outside of rotor 25.

For innumerable purposes, a mirror 39 may be cemented or otherwise secured on the front face of the housing 15.

A modified form of the invention is illustrated in Figs. 7 and 8 wherein like parts are given the same reference numerals as above with a prime added. The purpose of this form of the invention is to provide means for retaining the rotor 25 in the angular position to which it is set. To this end the cylindrical wall of rotor 25' is serrated as indicated at 46 and a detent 47 extends from each side arm 17' to engage said serrations, said detents straddling the grooves for the conductor strips 37' and 38'. Aligned with the center of the breach 28' in ring 26' is a deep groove 48 in the cylindrical wall of rotor 25', said groove serving to hold the rotor in its normal position with lamp 35' extinguished even more securely than the serrations 46 hold the rotor in its operated or set positions. The remainder of the device is the same as described above.

Another modified form of the invention is illustrated in Figs. 9, 10 and 11, wherein like parts are given the same reference numerals as heretofore with a double prime added. The purpose of this modification is to provide the device with a combined stand and clip whereby it can be stood on a level surface or can be clipped to a convenient object such as the sun visor of an automobile. To this end a stiff wire yoke 50 has its ends

turned in and engaged in wells 51 in the side walls of housing 15''. As shown, the side arms of the yoke extend downward in contact with said side walls, and the cross bar of the yoke extends across the bottom of the housing. It will readily be seen that the said yoke is movable to some such position as that shown in dot and dash lines in Fig. 9 to support the housing 15'' on a level surface.

A short distance below the wells 51 a stud 52 projects from each side wall of the housing 15'' and is engaged by a side arm of the yoke 50 when the latter is in normal position with the upper portions of its side arms parallel with the side edges of the housing. As shown, the lower portions of the yoke side arms and, therefore, the latter's cross bar, are offset angularly away from the stud 52 as at 53. Thus, if the yoke side arms are sprung about the studs 52 as a fulcrum the offset portions 53 become parallel with the side edges of the housing 15'' and form with the latter a strong clip to secure the same to any member 55 such as an automobile sun visor or the like.

In this last form of the invention the construction of the unit is the same as described above except for the changes described.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and the right is reserved to all changes and modifications coming within the scope of the invention as defined in the appended claims.

Having thus described my invention, what I claim as new, and desire to secure by United States Letters Patent is:

1. A lighting unit comprising, an H-shaped carriage having spaced side arms and a cross bar extended between said side arms, a bearing extrusion on the inner face of each side arm of the carriage near the upper ends thereof, a hollow rotor mounted on said bearing extrusions, a conductor ring in either end of the rotor engaged about said bearing extrusions, a breach in one of said rings, a lamp socket mounted in said rotor, electrical connections between said rings and said socket, a lamp in said socket directed in the same angular direction as said breach, an opening in the wall of the rotor adjacent said lamp, dry cells mounted between the side arms of the carriage below the cross bar thereof, and electrical connections between said dry cells and said rings.

2. A lighting unit comprising, an H-shaped carriage having spaced side arms and a cross bar extended between said side arms, a bearing extrusion on the inner face of each side arm of the carriage near the upper ends thereof, a hollow rotor mounted on said bearing extrusions, a conductor ring in either end of the rotor engaged about said bearing extrusions, a breach in one of said rings, a lamp socket mounted in said rotor, electrical connections between said rings and said socket, a lamp in said socket directed in the same angular direction as said breach, an opening in the wall of the rotor adjacent said lamp, dry cells mounted between the side arms of the carriage below the cross bar thereof, and electrical connections between said dry cells and said rings including conductor strips extended along the inner faces of said side arms, each conductor strip having a bent off extension engaged in a groove in the underside of each bearing extrusion in position to

engage one of the rings to complete the circuit to the lamp in all turned positions of said rotor except in the position in which the breach of the said one ring is aligned with the bent off end of the respective conductor strip.

FRANK BERMAN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
D. 113,146	Ritter	Jan. 31, 1939
1,315,457	Benedict	Sept. 9, 1919
1,404,362	Goodfellow	Jan. 24, 1922
1,699,927	Stearns	Jan. 22, 1929
1,792,185	Reynolds	Feb. 10, 1931
2,258,543	Cressaty	Oct. 7, 1941
2,262,011	Kunkel et al.	Nov. 11, 1941
2,539,974	Riddell	Jan. 30, 1951