

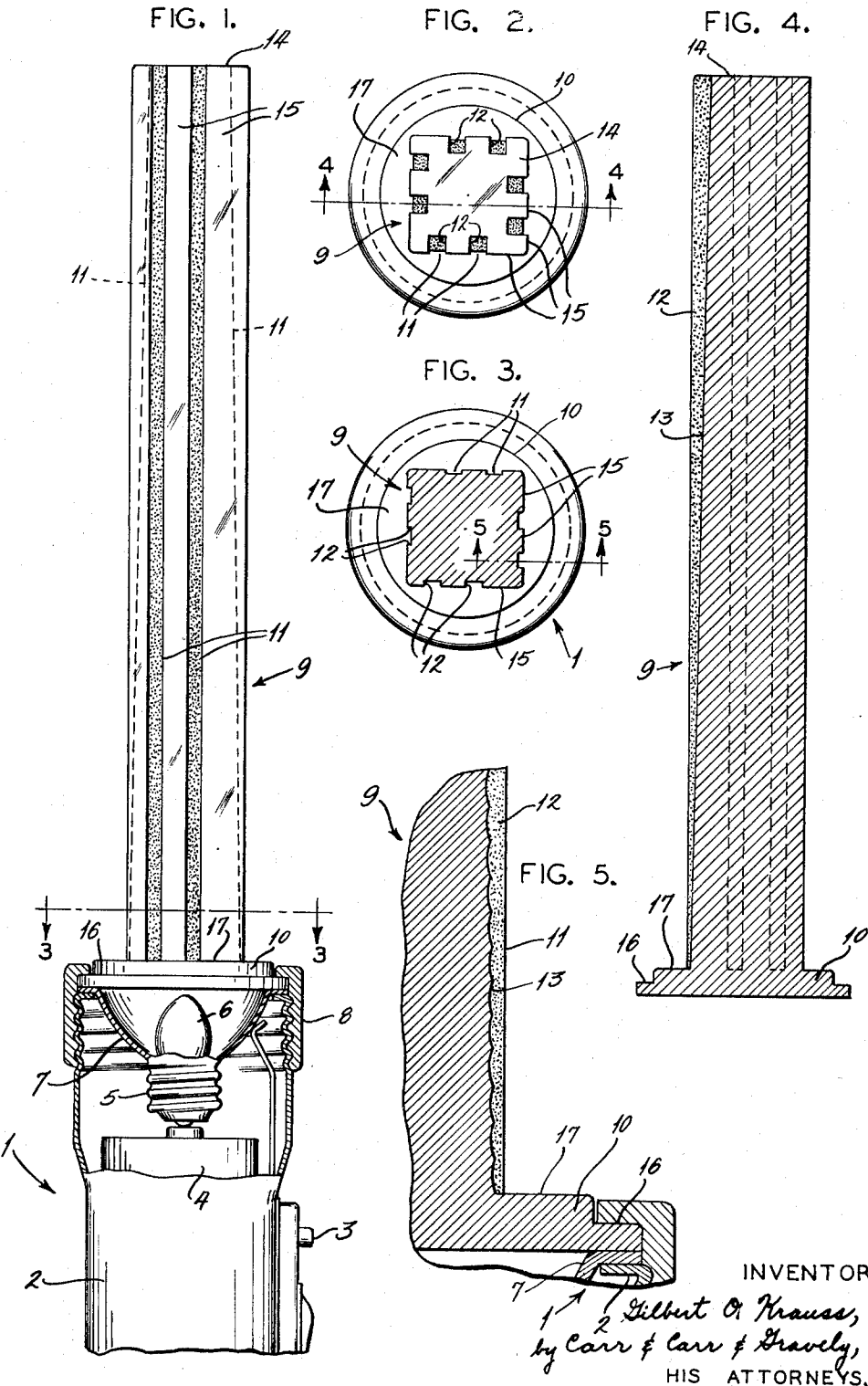
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COMBINATION FLASHLIGHT AND SIGNALING DEVICE

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SIGNALING DEVICE

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This invention relates to a combination flashlight and signalling device for various uses such as traffic directing, signalling at airports, ushering in theaters, and for use on boats.

The principal object of the present invention is to provide a simple and economical combination flashlight and signalling means, light in weight, which has a high rose or red brilliancy so that it is visible at distances up to and exceeding 5000 feet when used for signal purposes and which casts a beam approximately 300 feet at the same time.

Another object of this invention is to provide a combination flashlight and signalling means which can withstand stresses placed thereon and which will not break or be rendered otherwise inoperative by inadvertently hitting objects while signalling.

Another object is to provide a combination flashlight and traffic signalling means which can also be used by police as a club.

A further object is to provide an easily disassembled combination flashlight and traffic signalling means which will fit in the glove compartment of an automobile or other small storage space when not in use.

A still further object of this invention is to provide a combination flashlight and signalling means which utilizes all the available light coming from the reflector of the flashlight without blocking off any portion thereof.

The present invention comprises a slotted or grooved column secured to a base which can be mounted on an ordinary flashlight.

This invention also consists in the parts and arrangements and in the combination of parts hereinafter described and claimed. In the accompanying drawings, which form part of the specification and wherein like numerals refer to like parts wherever they occur,

Fig. 1 is a full size vertical view of my new signalling means mounted on an ordinary flashlight shown partly in cross-section,

Fig. 2 is a top plan view of the signalling means shown in Fig. 1,

Fig. 3 is a horizontal cross-sectional view taken along the line 3—3 in Fig. 1,

Fig. 4 is a vertical cross-sectional view of the column taken along the line 4—4 in Fig. 2,

Fig. 5 is an enlarged fragmentary vertical cross-sectional view taken along the line 5—5 in Fig. 3.

An ordinary flashlight 1 consists of a case 2 with a switch 3 thereon, battery 4 in said case 2, a socket 5, said socket 5 having a light bulb

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6 therein, a reflector 7, and a threaded collar 8 on said case.

The signalling device comprises a rod or column 9 mounted on a base portion 10 which is secured to the flashlight 1.

The column 9 is made from a crystal clear acrylic polymer plastic, such as "Plexiglas," of substantially square cross-section. The base portion 10 is made from the same material and has a circular cross-section.

While the column 9 and base portion 10 could be made from a single piece of material, it is easier and more economical to make each part separately and secure them together by an adhesive, preferably a methylene dichloride such as that sold under the trademark "LupeX."

The column 9 has longitudinal, unpolished slots or grooves 11 having sides 12 and dished or undulated bottoms 13 which slope inwardly toward the center of the column at the top surface 14 of said column 9. The outer surfaces 15 between said grooves 11 and the top surface 14 are highly polished. The grooves 11 are so positioned that the grooves 11 on one wall of the column 9 fall opposite to an outer surface 15 on the opposite wall of said column 9. The sides 12 and undulated bottoms 13 of said grooves 11 are not polished.

The polished base portion 10, made from a blank having a circular cross-section, is thicker than the ordinary flashlight lens in order to be able to withstand the stresses placed thereon by the weight of said column 9 and leverage placed on said column 9. The base portion 10 has a peripheral or annular channel 16 which cooperates with the threaded collar 8 on the flashlight 1. The column 9 is secured to the center of said base portion 10 leaving polished flat lens portions 17 surrounding the intersection of the column 9 with the base section.

The sides 12 and bottoms 13 of the grooves 11 are dyed, preferably light rose or red, by a transparent dye comprising 60% acetone and 40% water. Light rose is ideal for all purposes and produces a brilliant signalling device when viewed from the side. Of course, the color which the column 9 is dyed may vary according to its use; for example, green may be used in indoor theaters.

A column 9 and a base portion 10 exactly as shown in the figures is preferable for use as a signalling device. The column 9 has two grooves 11 on each of the four sides, said grooves 11 staggered so that a groove 11 on one side is opposite to an outer surface 15 on the opposite

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side. The grooves 11 are preferably about $\frac{1}{4}$ inch wide with an outer surface 15 of about .2 inch therebetween. The outer edge of one of said grooves 11 is preferably about $\frac{1}{8}$ of an inch from a corner of said column 9. The grooves 11 are flush or nearly flush with the outer surface 15 near the base portion 10 and slope inwardly to a depth of about .2 inch at the top surface 14. The column 9 may be made in various sizes from 4 to 8 inches in length but is preferably about 7 $\frac{1}{2}$ inches long with the groove dimensions mentioned above. The width of each side of the column 9 is about $\frac{2}{3}$ the diameter of the base portion 10.

By using the above length of column, and slope to the bottom of the grooves, a better brilliance and a more uniform brilliance are attained. A deeper slope for this length will weaken the clear beam passing through the column and a smaller slope will produce only a dull glow in the column rendering it less efficient as a signalling means.

One of the factors which gives this column a better brilliance is that none of the available light coming from the reflector is blocked out, but all light either travels through the column 9 or the flat lens portions 17.

Various color combinations may be used depending upon the primary purpose for which the combination flashlight and signalling means is to be used. For example, when intended for use at airports a red base portion 10, red grooves 11, a clear center in said red base portion 10 under the column 9, and a clear top surface 14 are used to secure a wand or column 9 which is visible for about 5000 feet and a red or pink beam which travels about 300 feet. For use in directing traffic, a clear base portion 10, red grooves 11, a red center in said clear base portion 10 under the column 9, and a clear top surface 14 are used to secure a wand or column 9 which is visible for about 5000 feet and a white beam which travels about 300 feet.

What I claim is:

1. A combination flashlight and signalling means comprising a circular transparent base portion and a solid partially transparent column mounted on said base portion, said column being of substantially square cross-section and having unpolished longitudinal grooves therein with polished outer surfaces therebetween, said grooves having bottoms which slope inwardly toward the center of the column at the top surface thereof.

2. A combination flashlight and signalling means comprising a circular transparent partially colored base portion and a solid partially transparent column mounted on said base portion, said column being of substantially square cross-section and having unpolished longitudinal

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colored grooves therein with polished outer surfaces therebetween, said grooves having undulated bottoms which slope inwardly toward the center of the column at the top surface thereof and positioned so that grooves on one side of said column are opposite to a polished surface on the opposite side of said column.

3. A combination flashlight and signalling means adapted to be secured to an ordinary flashlight, said means comprising a circular transparent base portion mounted in said flashlight and a solid partially transparent column mounted on said base portion, said column being of substantially square cross-section and having unpolished longitudinal grooves therein with polished outer surfaces therebetween, said grooves having bottoms which slope inwardly toward the center of the column at the top surface thereof.

4. A combination flashlight and signalling means adapted to be secured to an ordinary flashlight, said means comprising a circular transparent partially colored base portion mounted in said flashlight and a solid partially transparent column mounted on said base portion, said column being of substantially square cross-section and having unpolished longitudinal colored grooves therein with polished outer surfaces therebetween, said grooves having undulated bottoms which slope inwardly toward the center of the column at the top surface thereof and positioned so that grooves on one side of said column are opposite to a polished surface on the opposite side of said column.

5. A signalling means adapted to be secured to a source of light, said signalling means comprising a circular transparent base portion adapted to transmit therethrough the light received from said light source, and a solid polished partially transparent column of smaller cross-sectional area than said base portion having the property of transmitting light in an axial direction by internal reflection, said column having unpolished longitudinal grooves therein which allow some of the light passing through the interior of said column to escape therethrough.

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