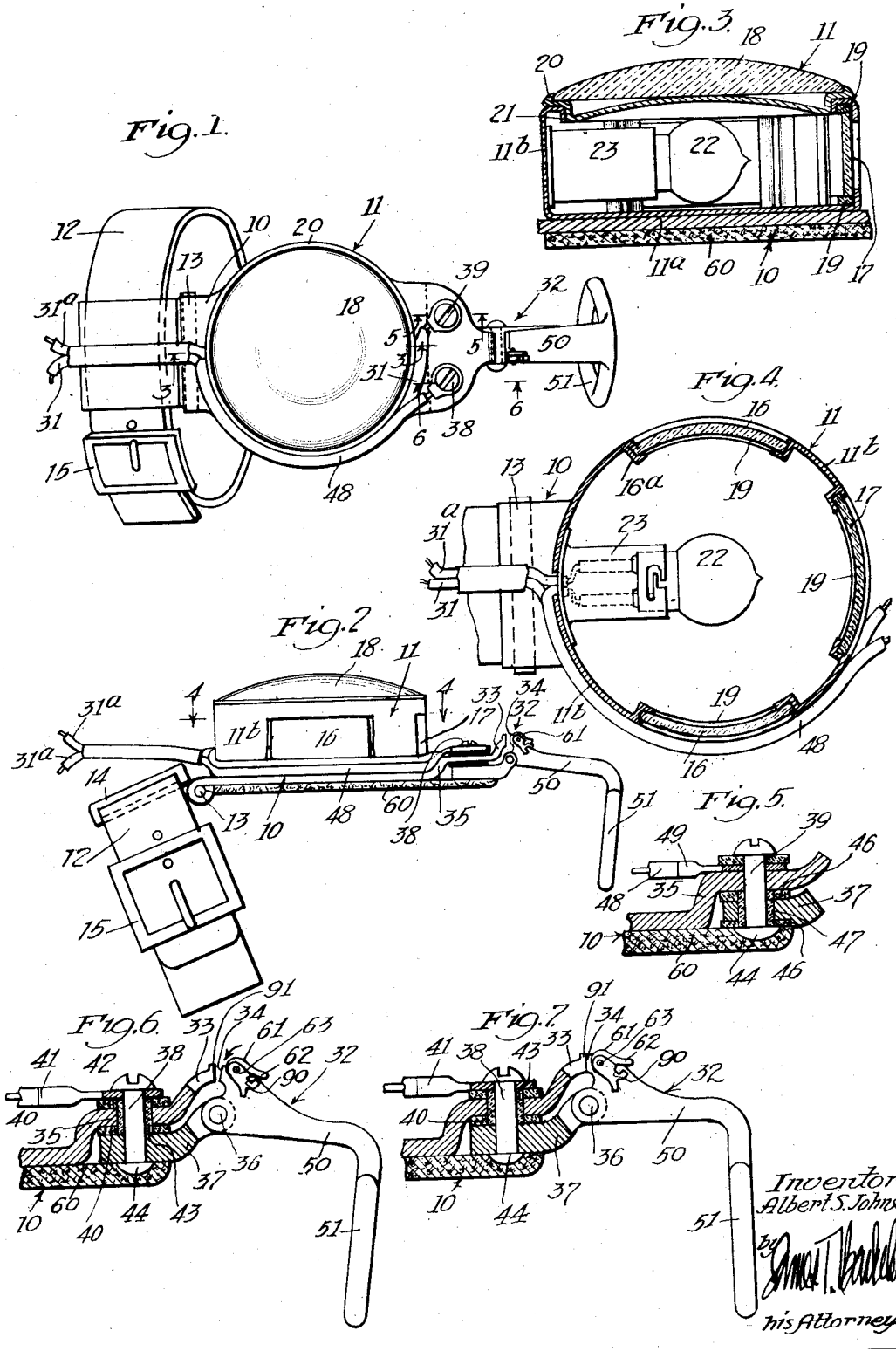
Feb. 26, 1924. 1,484,712

A. S. JOHNSON

SAFETY SIGNAL

Filed May 26, 1920



Patented Feb. 26, 1924. 1,484,712

UNITED STATES PATENT OFFICE.

ALBERT S. JOHNSON, OF OAKLAND, CALIFORNIA, ASSIGNOR TO THE FLASH-WAY CORPORATION, A CORPORATION OF CALIFORNIA.

SAFETY SIGNAL.

Application filed May 26, 1920. Serial No. 384,304.

To all whom it may concern:

Be it known that I, ALBERT S. JOHNSON, a citizen of the United States, residing at Oakland, in the county of Alameda, State of California, have invented new and useful Improvements in Safety Signals, of which the following is a specification.

This invention relates to a safety signal and more particularly to a safety signal to be used or worn by a motorist. It is an object of the invention to provide a simple and effective signal device by which a motorist can warn, or announce to, other motorists the direction in which he is about to turn, or as to the manner in which he is about to maneuver or handle his car.

An object of the invention is to provide a signal, to be worn on the hand of a motorist, which will attract the attention of other motorists when he is signalling to them with his arm or hand. The device is particularly adapted for use at night, in foggy weather, or in congested traffic, as it is provided with an electric light which illuminates the hand of the motorist and thereby makes it very attractive and conspicuous. With the aid of the device provided by the present invention a motorist is able to signal to, and warn, other motorists as to his intended action at night or under severe weather conditions thereby greatly adding to his and other motorists safety.

A particular feature of the invention is the provision of means for controlling the light in the signal so that it only burns when the motorist straightens out his hand, such as when he is signalling to a fellow motorist. This feature of the invention eliminates the necessity of an ordinary switch, or like device, which requires particular attention for its operation, and also makes the device economical in its use of electricity.

Further objects and features of the invention will be best understood from the following detailed description of a preferred embodiment of the invention throughout which reference is had to the accompanying drawings in which—

Fig. 1 is a plan view of the device; Fig. 2 is a side elevation of the device; Fig. 3 is an enlarged detailed sectional view taken as indicated by line 3—3 on Fig. 1; Fig. 4 is an enlarged detailed sectional view taken as indicated by line 4—4 on Fig. 2; Fig. 5 is an enlarged detailed sectional view taken as indicated by line 5—5 on Fig. 1 showing the control mechanism in its open or unactuated position; Fig. 6 is an enlarged detailed sectional view taken as indicated by line 6—6 on Fig. 1; and Fig. 7 is a view similar to Fig. 6 showing th mechanism in the closed position.

Throughout the drawings numeral 10 designates the frame or base of the device which is adapted to be secured to, or arranged at, the back of the motorist's hand by a strap 12. Strap 12 is carried in a loop 14 hinged to the base 10 at 13 and is adapted to fit around the wrist so that the base 10 will be carried on the back of the motorist's hand. A suitable buckle 15 is arranged in the strap 12 in order that it may be adjusted to properly fit around the motorist's wrist. The strap 12 is preferably made of leather, although it will be understood that it may be advantageously made of many other suitable flexible materials, such as fabric, rubber, or the like.

A lamp 11, comprising a bottom 11^a, a cylindrical side wall 11^b, and a top 18, is mounted on the base in the manner clearly shown in the drawings. The side wall 11^b and the bottom 11^a are preferably formed integral from sheet metal and the lamp 11 is preferably secured to the base 10 by solder, although it will be understood that any other suitable means may be employed. An electrical bulb 22 is carried by a suitable socket 23, arranged within the lamp 11. The socket 23 preferably carries the bulb 22 so that it is centrally located in the lamp 11. The bulb when lighted illuminates the signal and also illuminates the fingers of the motorist's hand by shining through transparent panels 16 and 17 arranged in the side wall 11^b. The transparent panels are preferably glass and there are preferably three of them suitably arranged in the side wall 11^b. The transparent panel 17 is arranged in the wall 11^b so that it faces outwardly and so that the light which shines through illuminates the fingers of the hand. It is preferred that the panel 17 be clear or white glass so that white light will be thrown on the motorist's fingers. Two transparent panels are arranged dimetrically opposite each other in the side wall 11^b so that light shining through them will shine from the sides of the motorist's hand. The panels 16 are preferably red glass so

that the light shining through them will be red and therefore attractive to the eyes of the other motorists. If the motorist wearing the signal device holds out his hand so that it is in a horizontal plane, for instance, with the palm thereof facing downwardly, light shining through one of the panels will be visible to motorists to the rear of the wearer of the device while light shining through the other panel 16 will be visible to motorists in front of the wearer of the device. As a matter of fact, a motorist wearing the device when holding out his hand to signal will naturally hold it so that it is more or less in a horizontal plane. For this reason, the motorist upon holding out his hand will invariably hold it so that a light is visible to motorists in front of him and to the rear of him. The red light from panels 16 combined with the white light from panel 17, shining upon the fingers of the motorist's hand, enables other motorists to clearly and accurately know the direction in which the motorist's arm is extended. For instance, when the motorist's arm is extended outwardly and downwardly the red light will appear somewhat above the motorist's fingers and the motorist's fingers will point outwardly and downwardly, while when the motorist's arm is extended upwardly and outwardly the red light will appear somewhat below the motorist's fingers and the fingers will extend upwardly and outwardly. This is an important feature of the signal as it eliminates confusion of signals by other motorists and thereby makes the device particularly effective. Further, by the provision of the white or clear transparent panel 17 the device can be effectively used at night while changing tires or making repairs.

It will be understood that the transparent panels 16 and 17 may be mounted in the lamp 11 in any suitable manner. For instance, as shown in the drawings they may be held between suitable cushions or pads 19 and in channels 16[a] (see Figs. 3 and 4). The pads 19 may be of any suitable cushioning material such as rubber or felt and one is preferably arranged at the corner formed between the bottom 11[a] and the side wall 11[b] and the other in a groove formed by the upper edge of the side wall 11[b] being turned inwardly and downwardly. The brackets 18 are preferably formed integral with the side wall 11[b] and are provided to prevent displacement of the panels 16 and 17.

The top 18, of the lamp 11, is preferably formed by a convex mirror carried in a suitable frame 20 carried within the downwardly turned portion of side wall 11[b], as clearly shown in Fig. 3. The mirror allows the motorist to ascertain whether or not there are motorists behind him without his looking to the rear. In other words, the mirror forms a rear sight mirror which is particularly cheap, convenient and effective; this makes the device particularly valuable for daytime driving. In practice the frame 20 is preferably made so that the joint between it and the inwardly turned portion of side wall 11[b] is a friction joint which allows the frame and mirror to be removed to permit of replacement of bulb 22 or to make repairs on the inside of the lamp.

The bulb 22 may be supplied with electricity from any suitable source, say a storage battery, through lead wire 31 and 31[a]. A control mechanism 32 is provided between the source of electricity and the bulb 22 so that the bulb can be controlled by the motorist. The control mechanism 32 comprises a stationary contact 33 and a hinged or movable contact 34. The stationary contact 33 is formed at and by the end of an extended portion or projection 35 on the base 10, as clearly shown in Figs. 2, 5, 6 and 7 of the drawings. The movable contact is hinged or pivotally connected at 36 to a bracket 37 mounted on, or secured to, the projection 35 by bolts 38 and 39. It will be particularly noted in the drawings that the bracket 37 is separated or insulated from the projection 35 by a layer of insulating material 40. The bolts 38 and 39 extend through the projection 35 and the bracket 37 and are riveted or headed over at 44 to prevent them from becoming displaced. Lead wire 31[a] extends directly into socket 23 while lead 31 is provided at its end with a terminal 41 which connects to the bolt 38, as clearly shown in Figs. 1, 2, 5, 6 and 7 of the drawings. The bolt 38 is insulated from the projection 35 by a sleeve 43 of insulating material while the terminal 41 of lead wire 31 is insulated from projection 35 by an insulating washer 42, interposed between the terminal 41 and the projection 35 as is clearly illustrated in the drawings. The end portion of bolt 38 and also head portion 44 of bolt 38 comes in direct contact with the bracket 37 and thereby makes an electrical connection with it. The bolt 39 engages and makes contact with the projection 35 but is insulated from the bracket 37 by washer 46 and a sleeve 47, as clearly shown in Fig. 6. A wire 48 which is connected to the bolt 39 by a terminal 49 extends between the bolt 39, or projection 35, and the socket 23, as clearly shown in the drawings

It will be readily understood how, with the construction above set forth, the bulb 22 may be controlled, or turned off and on, by movement of the contact 34 into engagement with or away from contact 33. When the contact 34 is out of engagement with the contact 33, as shown in Figs. 1, 2 and 5 of the drawings, the electrical connection between the bolt 38 and bolt 39 is broken there-

by causing the electrical connection between the lead wire 31 and the bulb 22 to be broken. When the contact 34 is moved into engagement with the contact 33, as shown in Fig. 7, an electrical connection is made between the bolts 38 and 39 through the contacts 33 and 34, thereby causing an electrical connection to be made between the lead wire 31 and the bulb 22 through the wire 48.

In the construction provided by the present invention the contact 34 has extending from it an arm 50 at the outer end of which is a loop or ring 51. The various parts of the device are so arranged and proportioned that when it is in place on the back of a motorist's hand the middle finger of the motorist's hand extends through or is carried in ring 51. Further it will be understood how the construction permits of the device being arranged either on the motorists left or right hand and how it will work equally well on either hand. When the device is in place on the motorist's hand and ring 51 around the motorist's middle finger the contact 34 may then be moved by the opening and closing of the motorist's hand. For instance, when the motorist's hand is somewhat closed as in the case when he is gripping the wheel of his machine, the ring 51 is in a somewhat down position which causes the contact 34 to be out of engagement with the contact 33; but, when the motorist's hand is open, that is, when his fingers are pointed straight out, the ring 51 is up thereby causing the contact 34 to engage the contact 33 and make contact. A motorist when driving naturally keeps his hand on the wheel of his machine and thereby causes the contact 34 to be out of engagement with the contact 33. When the motorist is about to turn, or to stop, it is customary, and in some communities compulsory for him to hold out his arm and hand and signal to fellow motorists. When a motorist wearing the device provided by the present invention holds out his arm and hand, he causes the contact 34 to be moved into engagement with contact 33 thereby making contact and lighting or turning on the bulb 22.

A particular feature of the invention is the construction which makes the light, simple, and convenient for the motorist. The device is particularly simple and inexpensive in construction and the strap 12 being secured to the base 10 by hinged joint 13 and the ring 51 being secured to the base 10 by pivot pin 36 makes the device particularly convenient and comfortable for the motorist by allowing him free movement of his hand.

It is preferred, although not necessary, that the entire device, outside of the mirror and panel 18, be colored red so that it will be particularly conspicuous and effective in signalling other motorists. It is also desirable to silver or polish the inside of lamp 11 in order to make the bulb 22 more effective. Further, it is preferred that a suitable pad 60, say of felt, be arranged on the inner surface of base 10 so that the device will be comfortable to wear.

A fiber disk 61, having an operating handle 62, is eccentrically pivotally mounted at 63 on contact 34. The disk 61 may be turned in the direction indicated by the arrow in Fig. 6 so that it will engage the contact 33 when the motorist's hand is straightened out to prevent the contact 34 from engaging contact 33. The disk 61 may be thrown into operating position when the motorist desires to positively turn the light off. Further, a hook 90 is also pivotally mounted on the contact 34 at 63. The hook 90 is adapted to be moved to engage, or to co-operate with, projection 91 formed on contact 33 to positively hold contact 34 in engagement with contact 33 and thereby cause the bulb 22 to remain lighted. This may be desirable when the device is being used as a trouble light or while making repairs, etc.

Having set forth a preferred embodiment of my invention I do not wish to limit myself to the specific details hereinabove set forth but wish to reserve to myself any changes or variations that may appear to those skilled in the art or that may fall within the scope of the following claims.

Having described a preferred form of my invention, I claim:

1. In a hand signal of the character described, a base and means for attaching the base to the wrist, a member movably connected with the base and having means for attachment and mounting on the finger so that the base is supported on the hand jointly by the base attaching means and said member attaching and mounting means, a lamp carried by the base, a switch operated by relative movement of the base and said member, and a circuit including the lamp and the switch.

2. In a hand signal of the character described, a base, a wrist encircling member connected to the base at one end thereof, a member movably connected to the other end of the base and having means for attachment and mounting on the finger, so that the base is supported on the hand jointly by the said encircling member and by said attachment and mounting means, a lamp carried by the base, a switch operated by relative movement of the base and said member, and a circuit including the lamp and switch.

3. In a hand signal of the character described, a base, a wrist encircling member connected to the base at one end thereof, a member movably connected to the other end of the base and having means for attachment and mounting on the finger, so that the base is supported on the hand jointly by the said encircling member and by said attachment

and mounting means, a lamp carried by the base, a switch operated by relative movement of the base and said member, and a circuit including the lamp and switch; and means to prevent the switch actuating movement of the said finger mounted member.

In witness that I claim the foregoing I have hereunto subscribed my name this 15th day of May, 1920.

ALBERT S. JOHNSON.

Witnesses:
ROY B. ARMSTRONG,
JAMES D. MCADAMS.