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Kim

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(54) **SEARCHLIGHT GRIP**

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(51) **Int. Cl.**
F21L 4/04 (2006.01)

(52) **U.S. Cl.** **362/205**; 362/177

(58) **Field of Classification Search** 362/205, 362/199

See application file for complete search history.

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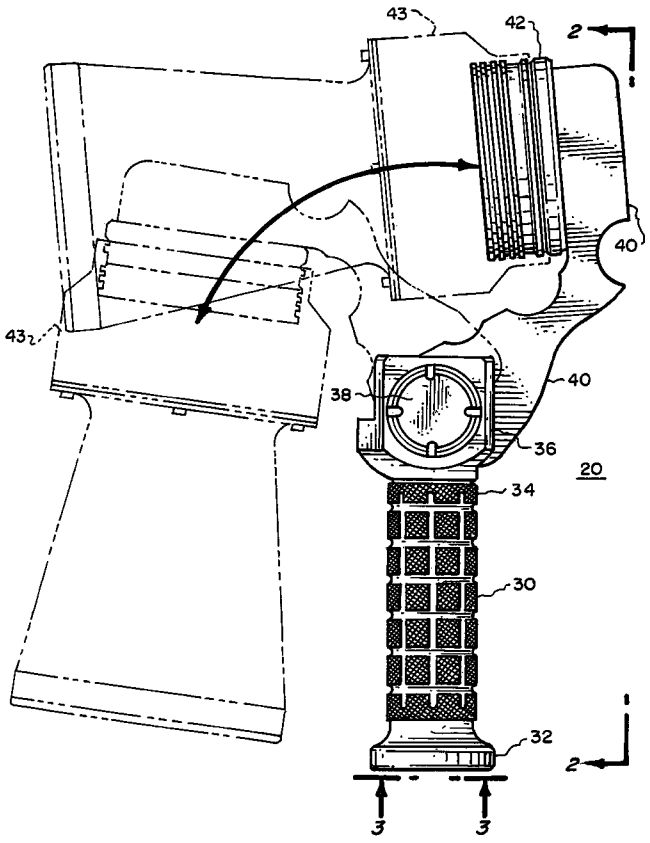
Primary Examiner—Hargobind S. Sawhney

(57) **ABSTRACT**

A multi-position switched grip for a searchlight includes a two-ended hand-grip. Each end has a thumb-operable push-button switch. A person holds the grip between palm and fingers with thumb on one or the other switch. One end has a hinge to which are connected an electrical power receptacle and a lamp mount. The hinge has a release which is normally biased to lock the hinge in one or the other of two orientations relative to the grip body. Pressing the release inward unlocks the hinge and allows the stein to rotate between the two orientations. The switches are configured and electrically connected such that pressing either switch once and releasing it alternates the searchlight between the ON and OFF conditions.

21 Claims, 9 Drawing Sheets



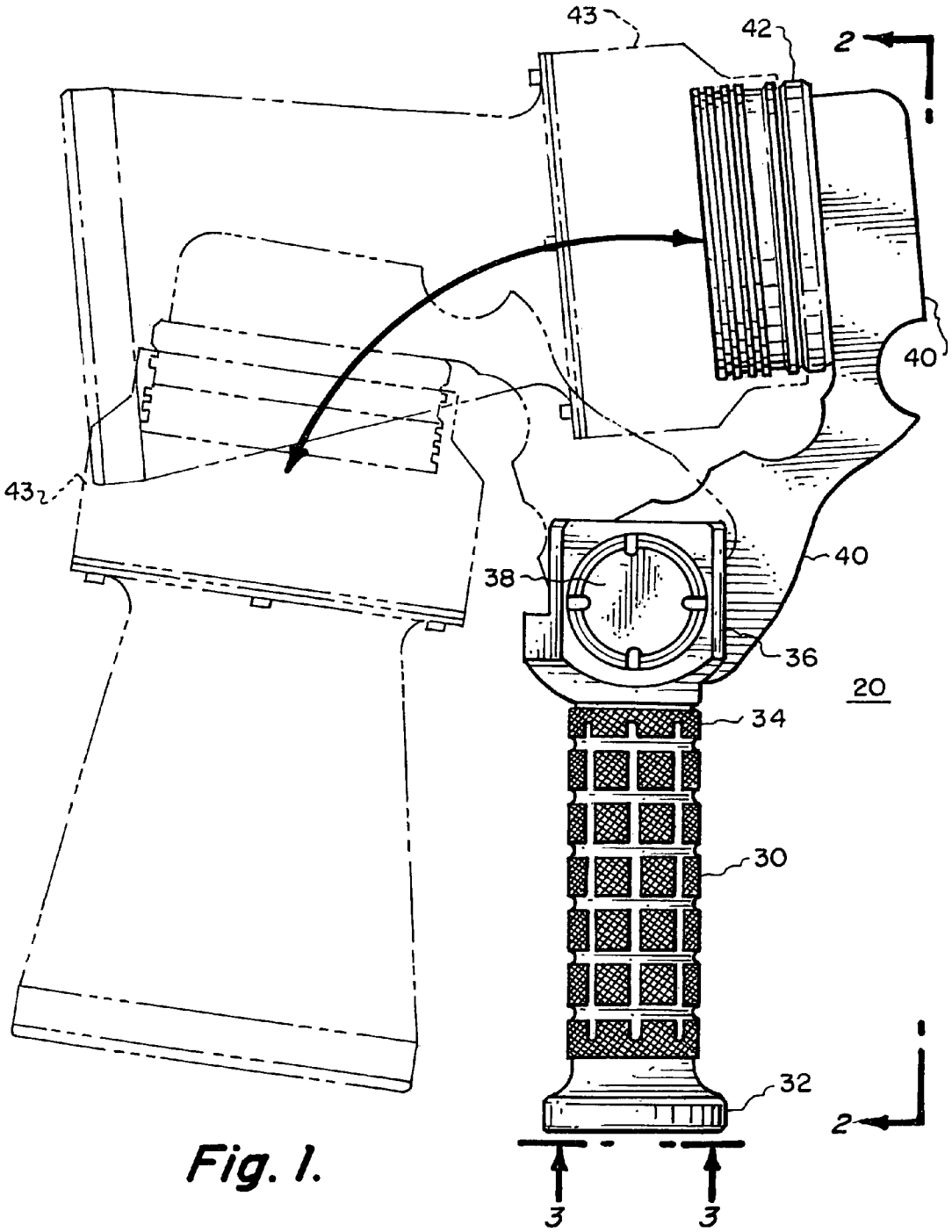


Fig. 1.

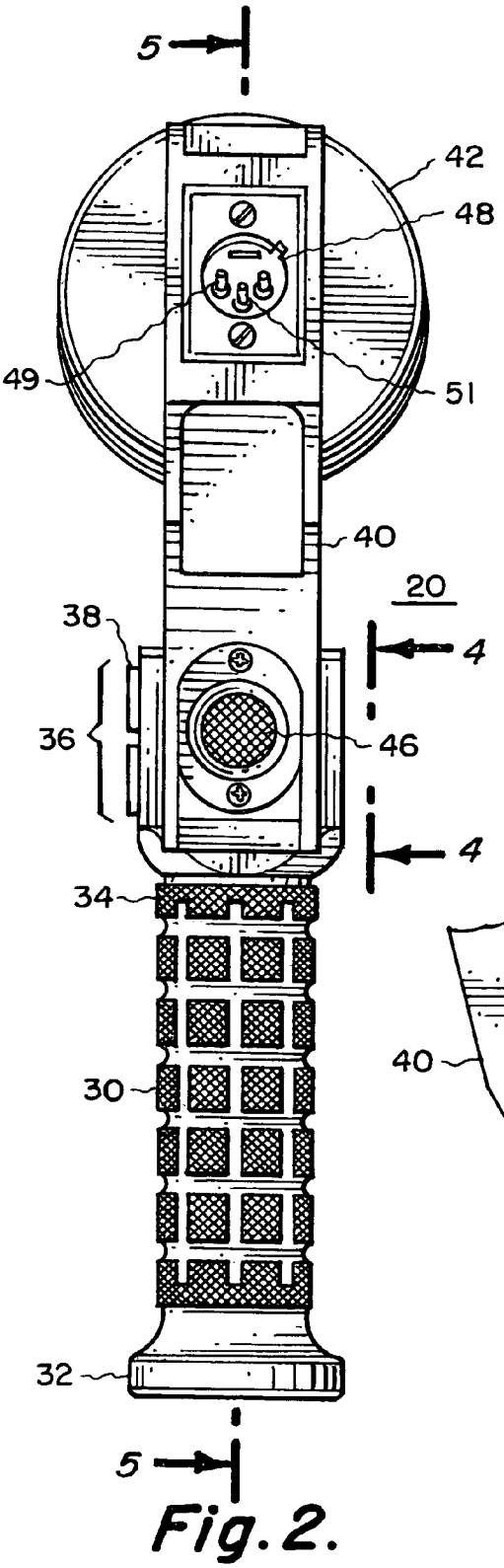


Fig. 2.

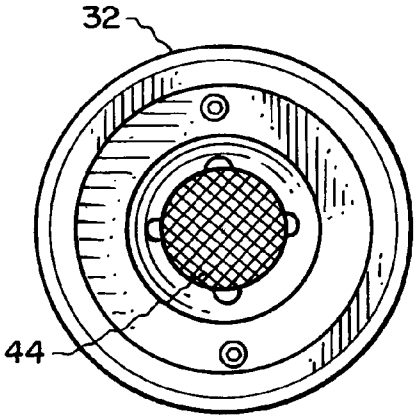


Fig. 3.

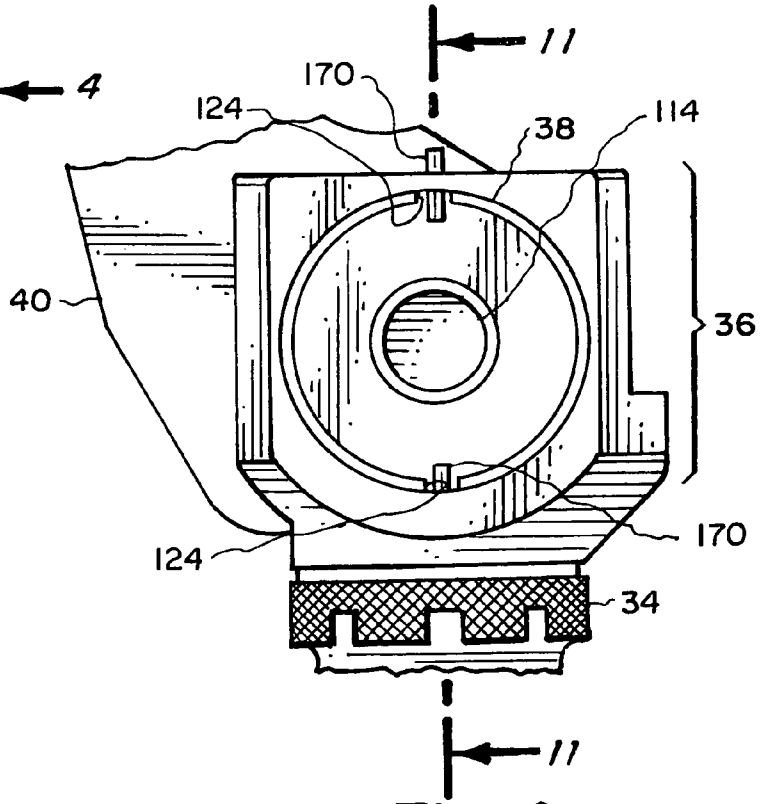


Fig. 4.

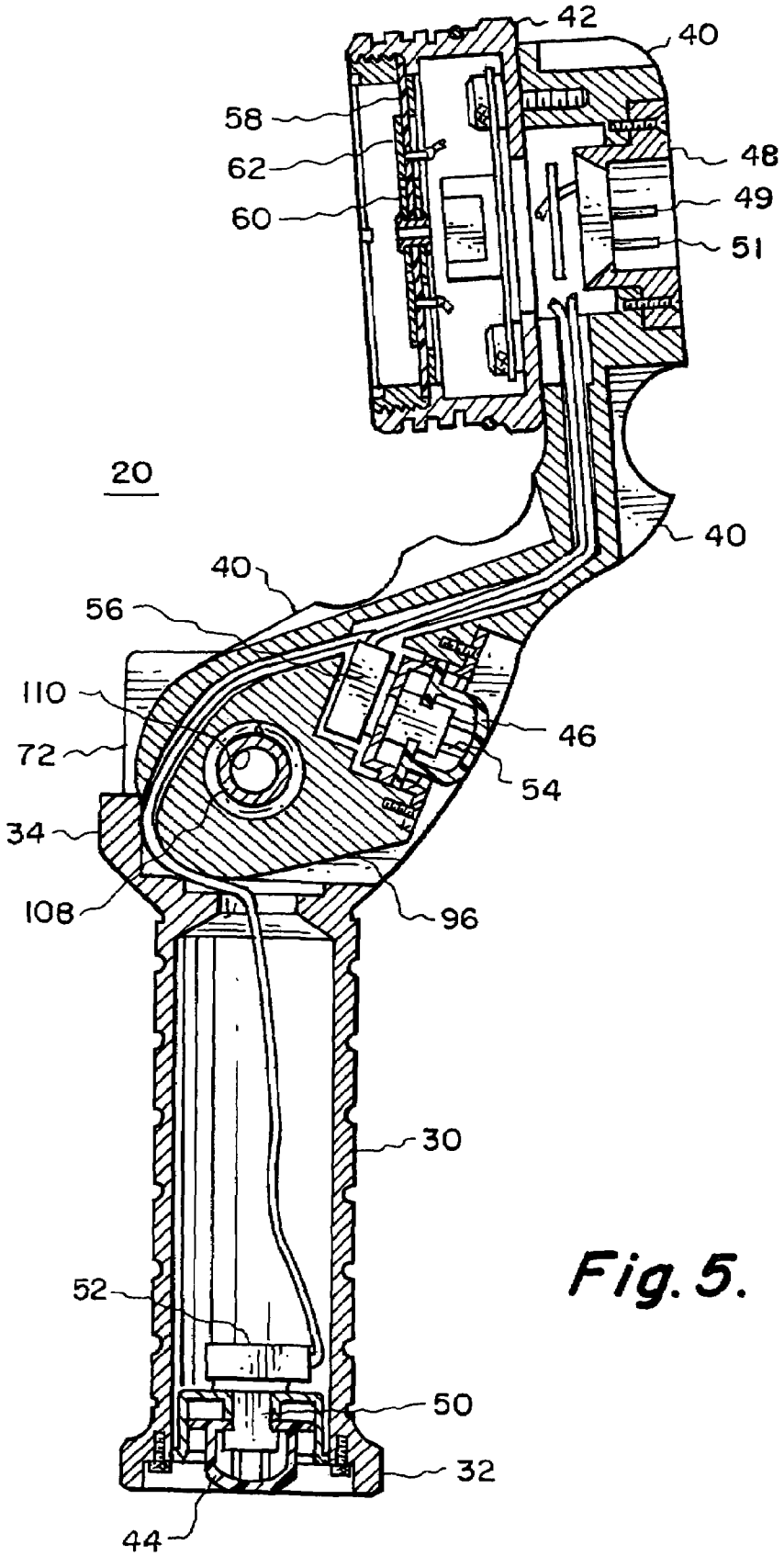

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Fig. 5.

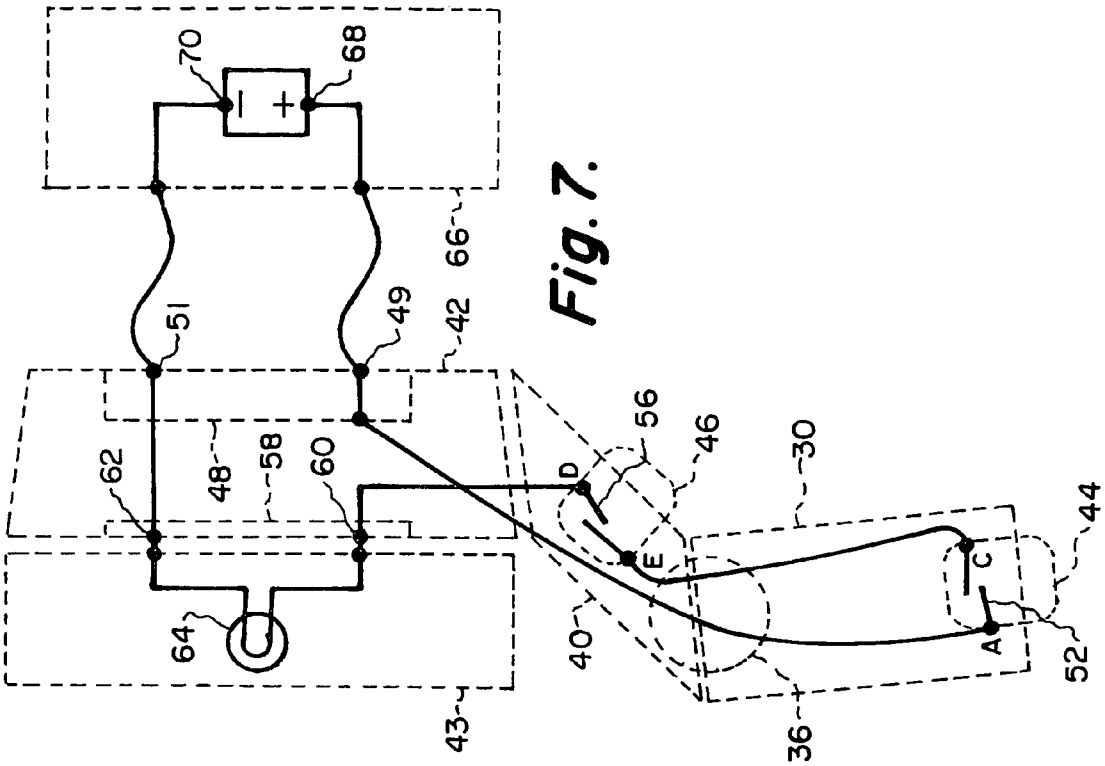
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Fig. 7.

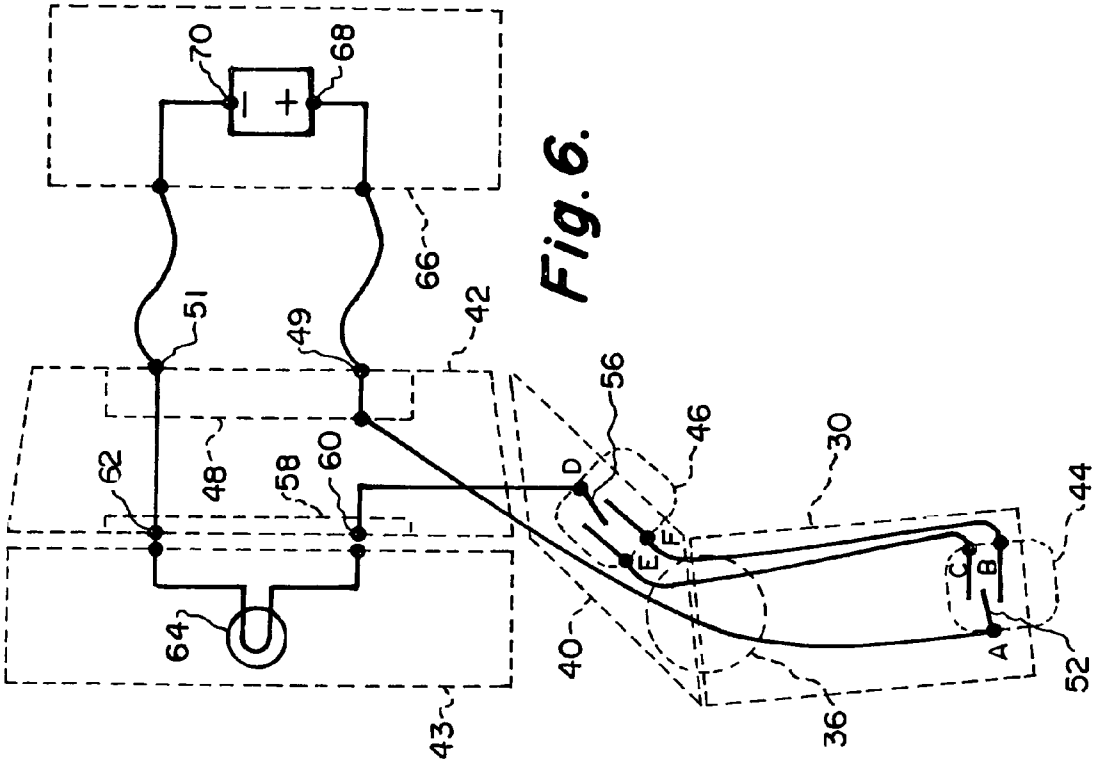
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Fig. 6.

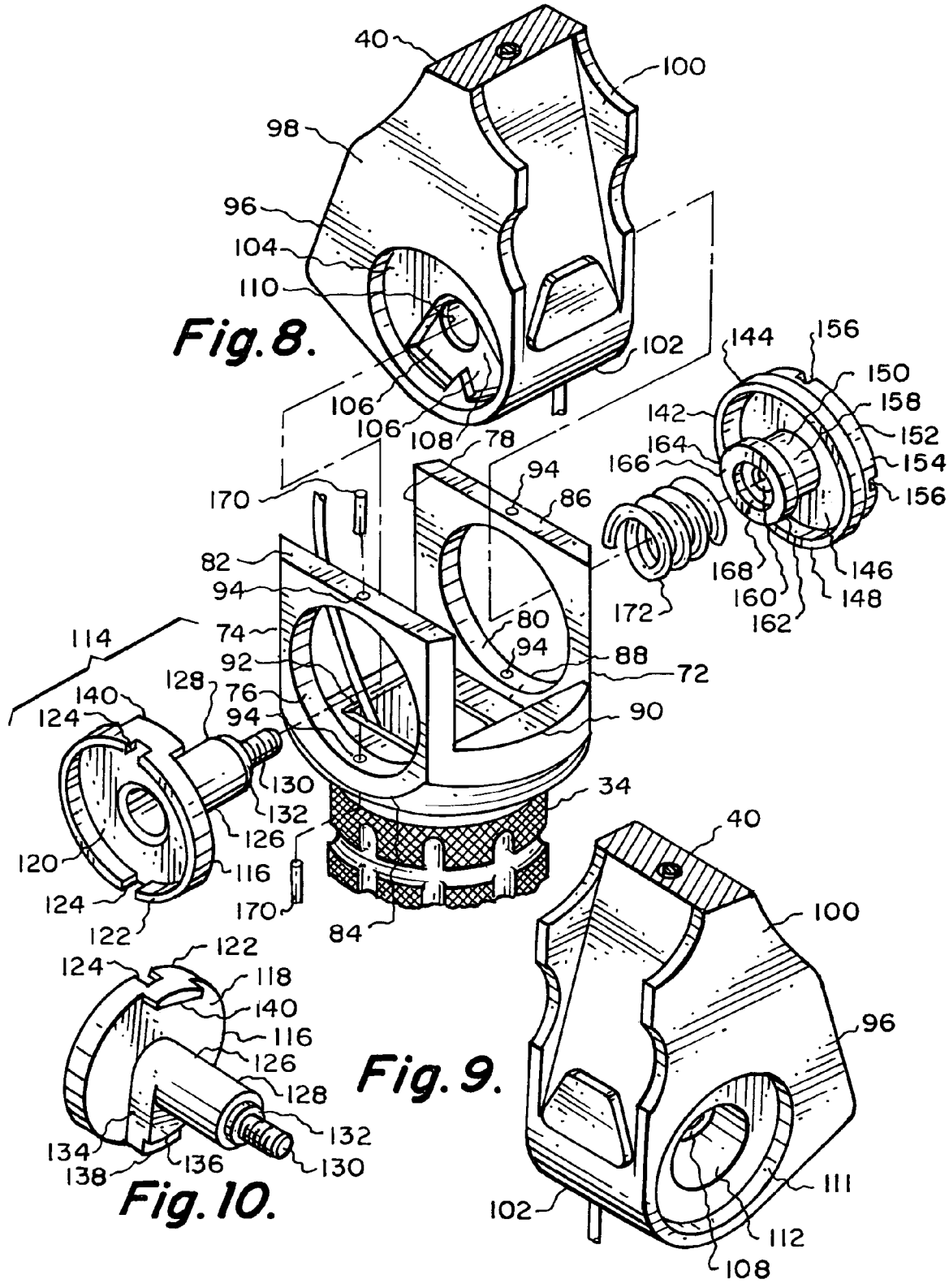

Fig. 8.

Fig. 9.

Fig. 10.

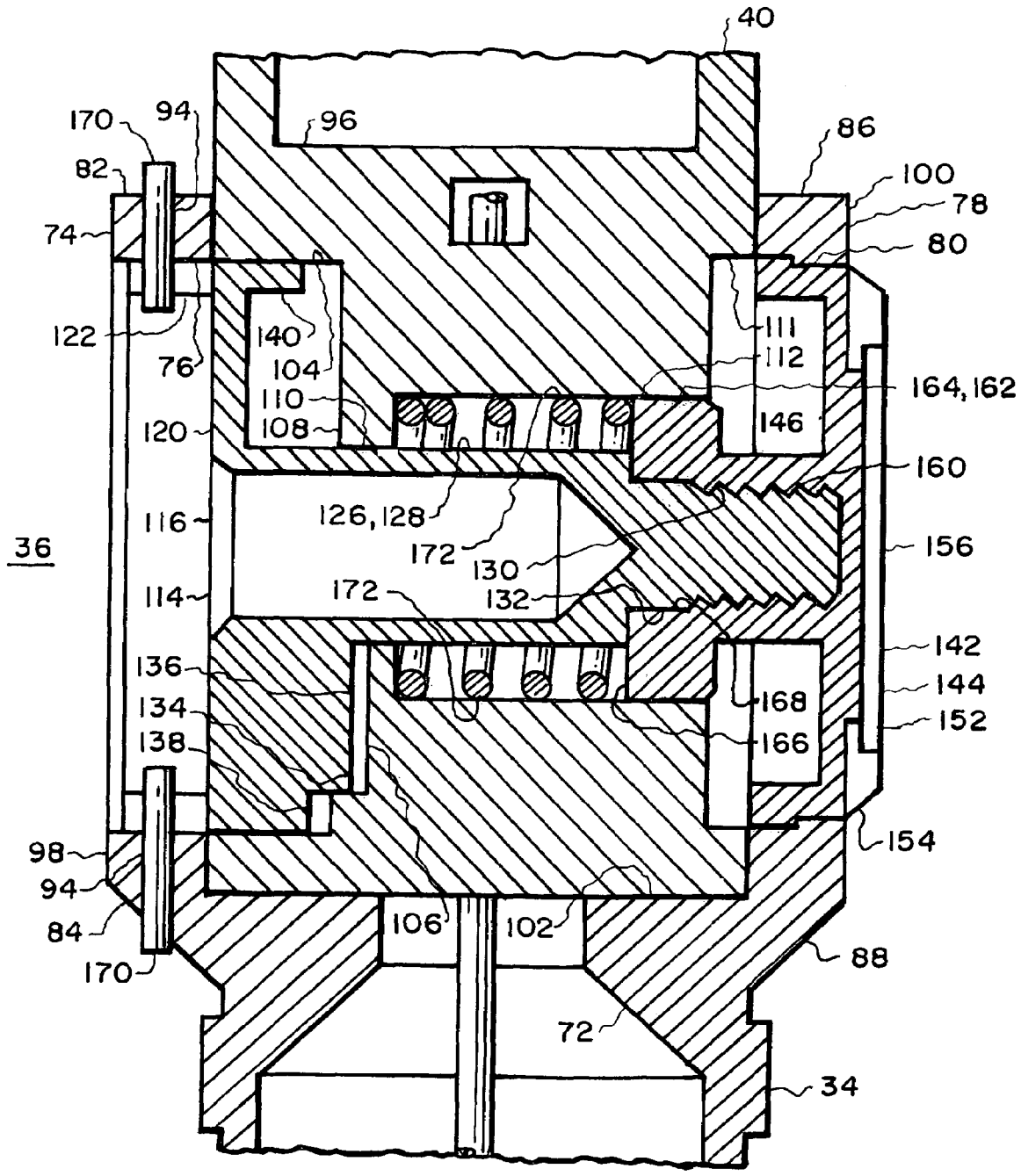
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Fig. 11.

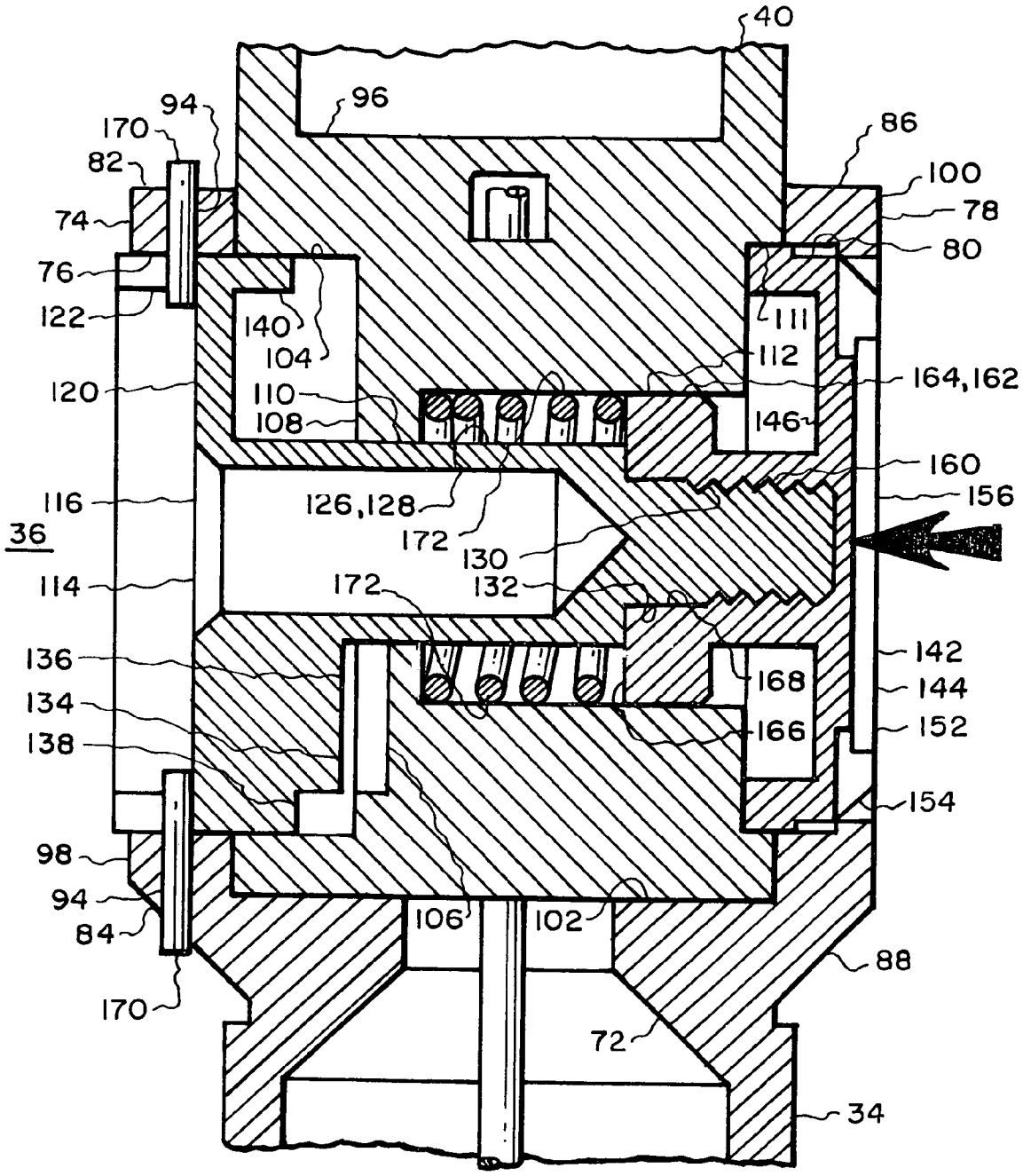
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Fig. 12.

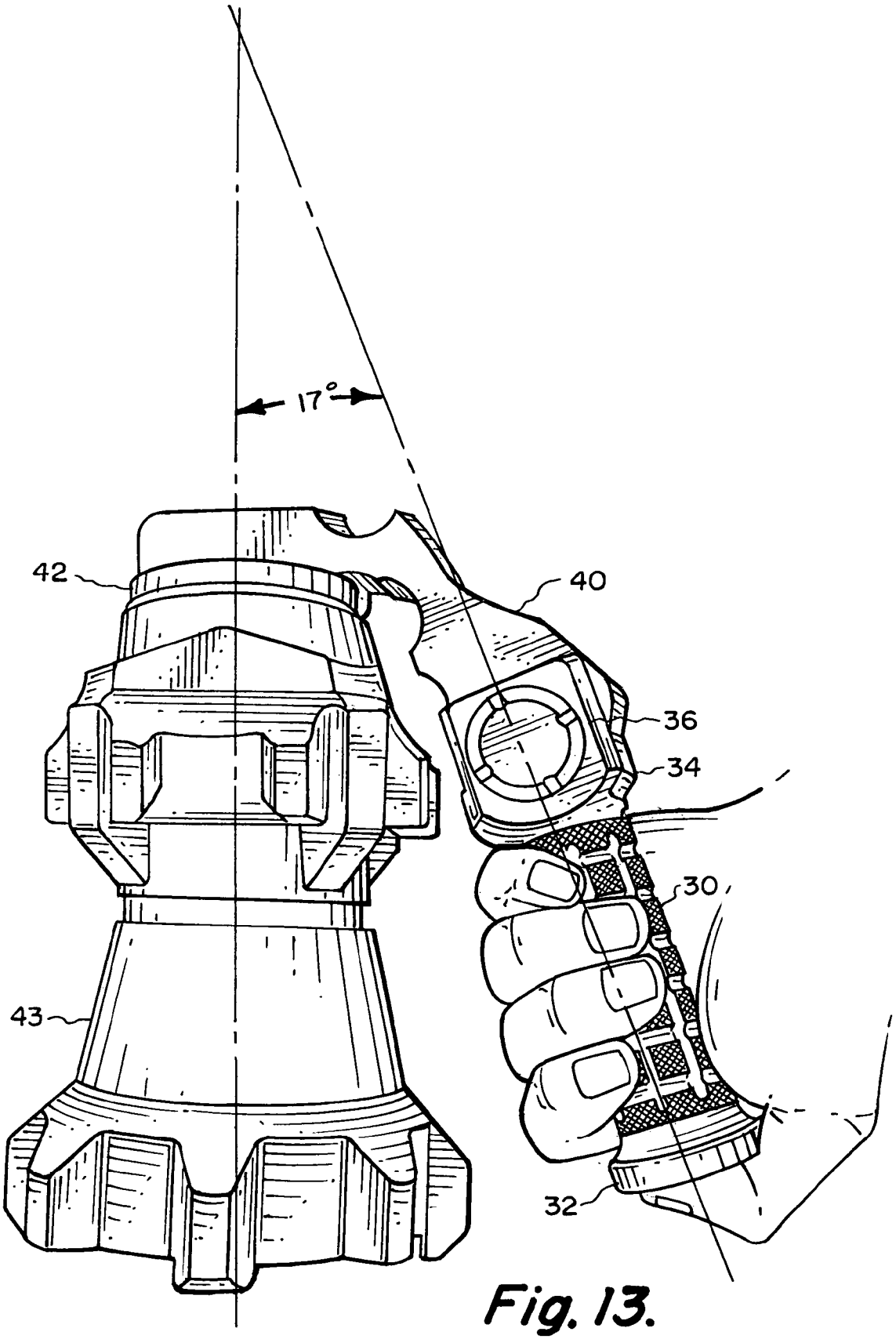

Fig. 13.

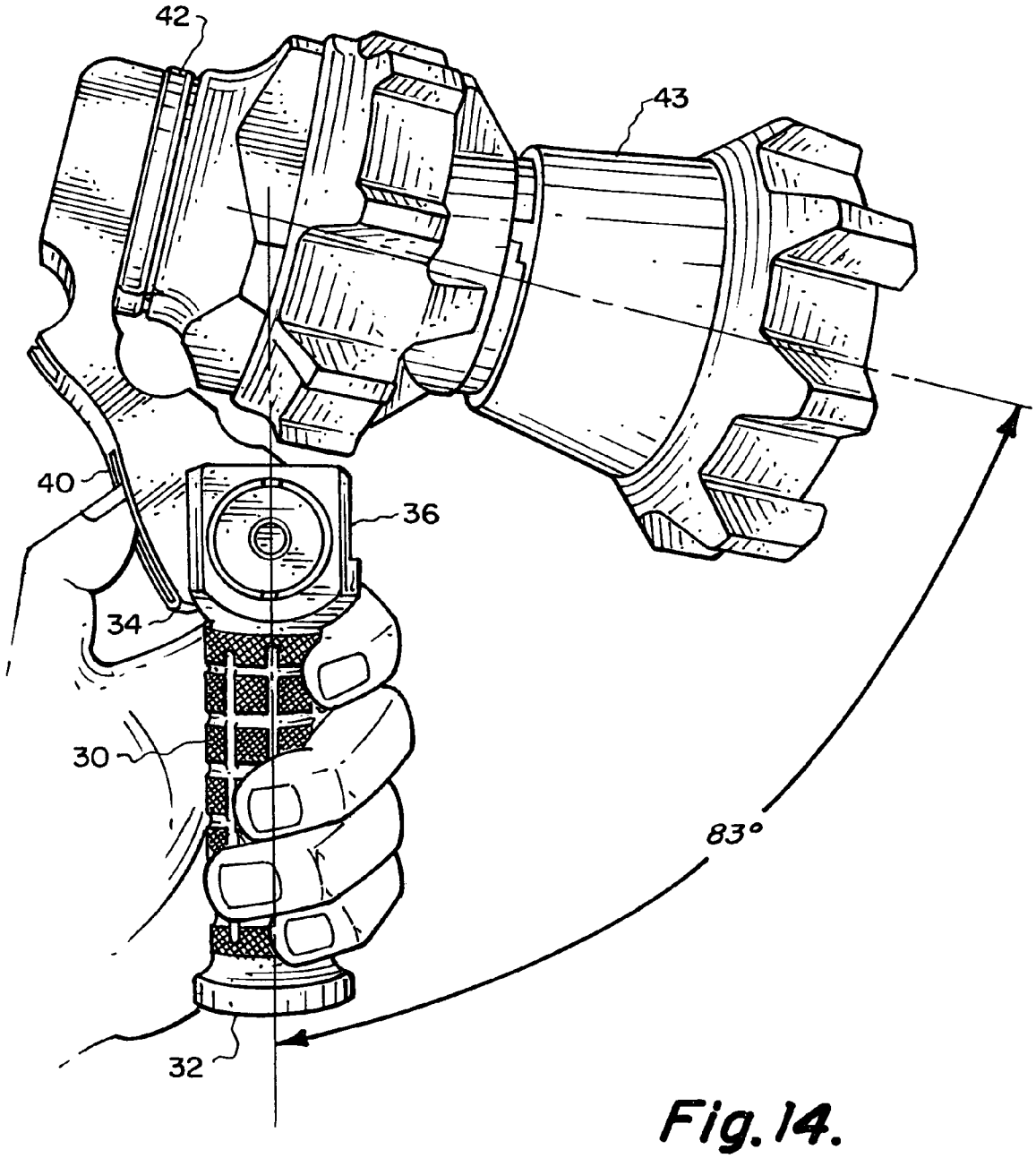

Fig. 14.

SEARCHLIGHT GRIP

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a searchlight for use in combat, search and rescue, or inclement weather, more particularly to a searchlight having an adjustable-angle hand grip, and especially to such a grip which includes switches for operating the searchlight.

2. Description of the Related Art

A person using a searchlight in an emergency or combat situation may prefer to have the searchlight mounted on a hand grip. To direct the beam of light forward while holding the searchlight in hand with one's forearm horizontal, one would prefer the searchlight to be attached substantially perpendicular to the beam. The grip may be held either with the light above the hand, or with the light below the hand, depending only on which way the grip is held. To direct the beam forward while holding the searchlight in hand with one's forearm vertical, one would prefer the searchlight to be attached substantially parallel to the beam. The grip may then be held either with the forearm extended upward, above the person's shoulder, with the beam projecting forward, or with the forearm extended downward, at the person's side, and the beam projecting forward. Transition between these two positions involves reversing the person's hold on the grip.

A person using such a searchlight also prefers to know in advance where the on-off switch is, how to reach it, and how to operate it without inspecting it or experimenting with it. In the above-described situation, it would be helpful to find the switch in substantially the same place and to operate it in substantially the same manner regardless of which way one holds the grip and of how the grip is oriented relative to the searchlight.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a tactically adapted multi-position switched searchlight grip whose switching means are hand-operable by substantially the same acts, independent of how the grip is oriented relative to the searchlight and independent of the orientation in which a person holds the grip.

In accordance with these objects and with others which will be described and which will become apparent, an exemplary embodiment of a multi-position searchlight grip in accordance with the present invention includes an elongated grip body; a first end formed on the grip body and including a first actuator; a second end formed on the grip body and including a second actuator and means for attaching a lamp to the grip body; and means for connecting the first actuator and the second actuator to control illumination of a lamp that is attached to the body.

In another exemplary embodiment of a multi-position switched searchlight grip in accordance with the present invention, each of the first actuator and the second actuator includes a thumb-operable push-button.

In another exemplary embodiment, each push-button is operatively connected to a switch and each switch is operatively connected to the means for connecting.

In another exemplary embodiment, each switch is an electrical switch electrically connected to the means for connecting.

In another exemplary embodiment, the means for connecting are operatively connected in substantially the same manner to each of the first actuator and the second actuator.

In another exemplary embodiment, the means for connecting include a stem rotatably connected to the second end and a lamp mount formed on the stem.

In another exemplary embodiment, the means for connecting include an electrical circuit including a first power input, a second power input, a first power output, and a second power output. The means for connecting are operable in an ON state wherein the first power input is electrically connected to one of the first power output and the second power output, and the second power input is connected to the other of the first power output and the second power output. The means for connecting are also operable in an OFF state, wherein at least one of the first power input and the second power input is electrically disconnected from both of the first power output and the second power output; and a single operation of one of the first actuator and the second actuator causes the means for connecting to alternate from one to the other of the ON state and the OFF state.

In another exemplary embodiment, each of the first actuator and the second actuator includes a push-button.

In another exemplary embodiment, each push-button is operatively connected to a switch and each switch is operatively connected to the means for connecting.

In another exemplary embodiment, each switch is an electrical switch electrically connected to the means for connecting.

In another exemplary embodiment, the means for connecting include a stem rotatably connected to the second end and a lamp mount formed on the stem.

Also in accordance with these objects, an exemplary embodiment of a multi-position grip for a searchlight, tool, weapon, or the like in accordance with the present invention includes a grip body, a lamp portion operatively coupled to the grip body, and a hinge pin movably disposed through the grip body and through the lamp portion. The the hinge pin has a first position, wherein the hinge pin rotationally fixes the lamp portion to the grip body, and a second position, wherein the lamp portion is rotatable relative to the grip body.

In another exemplary embodiment, the hinge pin is biased in the first position and displaceable to the second position in response to applied pressure.

In another exemplary embodiment, one of the lamp portion and the grip body has a tongue, the other of them has a yoke, and the tongue is disposed in the yoke.

In another exemplary embodiment, the hinge pin is disposed through the tongue and the yoke and cooperates with the tongue and the yoke to define an axis of rotation of the tongue relative to the yoke.

In another exemplary embodiment, the hinge pin is rotationally fixed relative to the yoke and is movable, parallel the axis of rotation, relative to the yoke, between the first position and the second position. In this exemplary embodiment, the hinge pin may also be biased in the first position and displaceable to the second position in response to applied pressure.

Another exemplary embodiment includes a push-button located on the grip body and proximate the hinge pin, the push-button being operatively coupled to the lamp portion for controlling the lamp portion.

BRIEF DESCRIPTION OF THE DRAWINGS

For a further understanding of the objects and advantages of the present invention, reference should be had to the following detailed description, taken in conjunction with the accompanying drawing, in which like parts are given like reference numbers and wherein:

FIG. **1** is a side view a preferred embodiment of a multi-position searchlight grip **20** in accordance with the present invention;

FIG. **2** is rear view of the grip of FIG. **1** taken along line **2-2** of FIG. **1** in the direction of the appended arrows;

FIG. **3** is a bottom view of a first end of the grip of FIG. **1** taken along line **3-3** of FIG. **1** in the direction of the appended arrows;

FIG. **4** an enlarged side view of a hinge taken along line **4-4** of FIG. **2** in the direction of the appended arrows;

FIG. **5** is a side sectional view of the grip of FIG. **2** taken along line **5-5** of FIG. **2** in the direction of the appended arrows;

FIG. **6** is a schematic diagram of the electrical interconnection of an exemplary embodiment of a multi-position searchlight grip **20** in accordance with the present invention;

FIG. **7** is a schematic diagram of the electrical interconnection of an alternative embodiment of a multi-position searchlight grip **20** in accordance with the present invention;

FIG. **8** is an exploded perspective view of the hinge portion of the grip in accordance with the present invention;

FIG. **9** is a reversed perspective view of the tongue portion thereof;

FIG. **10** is a reversed perspective view of the hinge pin thereof;

FIG. **11** is a front sectional view of the hinge and the release taken along line **11-11** of FIG. **4** in the direction of the appended arrows;

FIG. **12** is a front sectional view of the hinge and the release taken along line **11-11** of FIG. **4** in the direction of the appended arrows;

FIG. **13** is a perspective view of a searchlight incorporating a multi-position searchlight grip **20** in accordance with the present invention being hand held in a first orientation; and

FIG. **14** is a perspective view of a searchlight in accordance with the present invention being hand held in an orientation different from that shown in FIG. **13** and with the hinge locked in a different position.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The invention will now be described with reference to FIG. **1**, which illustrates in side view a preferred embodiment of a multi-position searchlight grip **20** in accordance with the present invention, comprising an elongated metal grip body **30** having a first end **32** and a second end **34**. The second end **34** includes a metal hinge portion **36** having a release **38**. A metal stem **40** projects from the hinge portion **36** and forms a metal lamp mount **42** which is threaded for engagement with an interchangeable lamp **43** (drawn in phantom).

With continued reference to FIG. **1**, the release **38** is normally biased to lock the hinge portion **36** and thus fix the stem **40** in either of two orientations relative to the grip body **30**. Responsive to externally applied pressure, the release **38** is displaceable parallel to the axis of rotation of the hinge portion **36** whereupon the release **38** unlocks the hinge portion **36**. When the hinge portion **36** is unlocked, a force applied to the stem **40** may rotate stem **40** out of one orientation. When the stem **40** reaches the other orientation, the release **38**, being biased, will lock the hinge portion **36**, again fixing the stem **40** relative to the grip body **30**. A person may grasp and stabilize the grip body **30** by encircling it with the fingers and palm of one hand, and may use the other hand to press the release **38** and to rotate the stem **40** relative to the grip body **30**. For improved grasp and control, the grip body **30** is notched and textured and the first end **32** and second end **34** are enlarged relative to the grip body **30**.

FIG. **2** is a rear view taken along line **2-2** of FIG. **1**. FIG. **3** is a bottom view of the first end **32** taken along line **3-3** of FIG. **1**. Taken together, FIG. **2** and FIG. **3** show the first end **32**, the grip body **30**, the second end **34**, the hinge portion **36**, the release **38**, the stem **40**, and the lamp mount **42**. As shown in FIG. **3**, the first end **32** has a first actuator which includes a downward-facing first pushbutton cover **44**. As shown in FIG. **2**, the stem **40** has a rearward-facing electric power receptacle **48** having a plurality of rearward-projecting electrical contact pins including a positive power input contact pin **49** and a negative power input contact pin **51**.

FIG. **4**, an enlarged side view of the hinge portion **36** taken along line **4-4** of FIG. **2**, shows the second end **34**, the hinge portion **36**, and the stem **40**. Also shown are the hinge pin **114** and the head **116** thereof having retainer notches **124** in which are disposed retainer pins **170**.

FIG. **5**, a side sectional view taken along line **5-5** of FIG. **2**, shows the first end **32** with the first pushbutton cover **44** and the first plunger **50** and first switch **52**; the grip body **30**; and the second end **34** including a yoke **72** in which is disposed a tongue **96**. The tongue **96** has a central wall **108** which forms a left transverse center bore **110**. Attached to the yoke **96** is a stem **40** with the second actuator including a second pushbutton cover **46**, the second plunger **54** and the second switch **56**; the receptacle **48** with the positive power input contact pin **49** and the negative power input contact pin **51**; and the lamp mount **42**.

With continued reference to FIG. **5**, a first plunger **50** connects the first pushbutton cover **44** to a first switch **52** housed within the first end **32** of the grip body **30**. A second plunger **54** connects the second pushbutton cover **46** to a second switch **56** housed within the stem **40** above and rearward of the hinge portion **36**. The first switch **52** and the second switch **56** are electrically connected to the receptacle **48** and to the lamp mount **42**, as will be discussed in greater detail hereinbelow.

With continued reference to FIG. **5**, a round, flat, rigid, electrically insulating mounting board **58** is disposed in the lamp mount **42**. The mounting board **58** includes a forward-facing central contact plate **60** and, radially spaced apart therefrom, an electrically discrete forward-facing peripheral contact ring **62**. The peripheral contact ring **62** is electrically wired to the negative power input contact pin **51**. It will be understood that the lamp module (shown only in FIG. **1**, in phantom) is provided with electrical contacts (not shown) disposed at radii appropriate for establishing electrical continuity with the central contact plate **60** and the peripheral contact ring **62** when the lamp module is threaded onto the lamp mount **42**.

With continued reference to FIG. **5** and now also with reference to FIG. **6**, a schematic diagram of the circuit of an exemplary embodiment of a multi-position searchlight grip **20** in accordance with the present invention, the electrical interconnections are described. FIG. **6** shows the grip body **30** with the first pushbutton cover **44** and the first switch **52**; the hinge portion **36**; the stem **40** with the second pushbutton

cover **46** and the second switch **56**; the lamp mount **42** with the receptacle **48** and the mounting board **58**; and the lamp module **43** containing a light source **64**. Also shown is an external power module **66** including a positive power output **68** and a negative power output **70**. The positive power input contact pin **49** is electrically connected to the positive power output **68**. The negative power input contact pin **51** is electrically connected to the negative power output **70**.

With continued reference to FIGS. **5** and **6**, the first switch **52** has three electrical contacts which are not shown in FIG. **5**, but which are shown in FIG. **6** as contacts A, B, and C. Contact A is electrically connected to the positive power input contact pin **49** by a wire which passes from the first switch **52** through the grip body **30** and the stem **40** to the receptacle **48**. The second switch **56** has three electrical contacts, also not shown in FIG. **5**, shown in FIG. **6** as contacts D, E, and F. Contact D is electrically connected to the central contact plate **60** by a wire which passes from the second switch **56** through the stem **40** to the mounting board **58** inside the lamp mount **42**. Contact B is electrically connected to contact F by a wire which passes from the first switch **52** through the grip body **30** to the second switch **56** in the stem **40**. Contact C is electrically connected to contact E by a wire which passes from the first switch **52** through the grip body **30** to the second switch **56** in the stem **40**. The first switch **52** connects contact A to one and only one of contact B and contact C and alternates between these connections each time the first plunger **50** is depressed and released. The second switch **56** connects contact D to one and only one of contact E and contact F and alternates between these connections each time the second plunger **54** is depressed and released.

With continued reference to FIG. **6**, the reader will deduce that a change in position of either the first switch **52** or the second switch **56** will open the circuit A-D if it is closed, or close it if it is opened. Thus, pressing either the first switch **52** or the second switch **56** will alternate between connecting the light source **64** to the external power module **66** and disconnecting it therefrom.

FIG. **7** shows a schematic diagram of the circuit of an alternative embodiment of a multi-position searchlight grip **20** in accordance with the present invention. As does FIG. **6**, FIG. **7** shows the grip body **30** with the first pushbutton cover **44** and the first switch **52**; the hinge portion **36**; the stem **40** with the second pushbutton cover **46** and the second switch **56**; the lamp mount **42** with the receptacle **48** and the mounting board **58**; and the lamp module **43** containing a light source **64**. Also shown is an external power module **66** including a positive power output **68** and a negative power output **70**. The positive power input contact pin **49** is electrically connected to the positive power output **68**. The negative power input contact pin **51** is electrically connected to the negative power output **70**.

With continued reference to FIG. **7**, the first switch **52** has two electrical contacts which are not shown in FIG. **5**, but which are shown in FIG. **7** as contacts A and C. Contact A is electrically connected to the positive power input contact pin **49** by a wire which passes from the first switch **52** through the grip body **30** and the stem **40** to the receptacle **48**. The second switch **56** has two electrical contacts, also not shown in FIG. **5**, shown in FIG. **7** as contacts D and E. Contact D is electrically connected to the central contact plate **60** by a wire which passes from the second switch **56** through the stem **40** to the mounting board **58** inside the lamp mount **42**. Contact C is electrically connected to contact E by a wire which passes from the first switch **52** through the grip body **30** to the second switch **56** in the stem **40**. The first switch **52** alternately closes and opens electrical connection of contact A to contact C each time the first plunger **50** is depressed and released. The second switch **56** alternately closes and opens electrical connection of contact D to contact E each time the second plunger **54** is depressed and released.

With continued reference to FIG. **7**, the reader will deduce that both the first switch **52** and the second switch **56** must be closed in order for current to flow. Some users may prefer this arrangement to reduce the likelihood of unintended premature illumination in situations where it would have unmanageable consequences. First one switch, then the other, would have to be activated, before the light would shine.

FIG. **8** shows an exploded perspective view of the hinge portion **36** of the grip **30** in accordance with the present invention. The second end **34** of the grip **30** forms a yoke **72** which has a left side panel **74** forming a left transverse throughbore **76** of thickness about 4.5 mm and diameter about 31.5 mm, a right side panel **78** forming a right transverse throughbore **80** also of thickness about 4.5 mm and diameter 31.5 mm, a front **90**, and a rear **92**. The left side panel **74** has a top surface **82** and a bottom surface **84**. The right side panel **78** has a top surface **86** and a bottom surface **88**. Between the left side panel **74** and the right side panel **78**, the front **90** of the yoke **72** is cut down to about 23 mm below the top surfaces **82** and **86** of the side panels **74** and **78**; the rear **92** of the yoke **72** is cut down to about 38 mm below the top surfaces **82** and **86** of the side panels **74** and **78**. Each side panel **74** and **78** has a retainer bore **94**, diameter about 2.5 mm, extending vertically from the transverse throughbore **76** and **80** to the top and bottom surfaces **82**, **84**, **86**, and **88**.

With continued reference to FIG. **8** and now also with reference to FIG. **9**, a partial perspective view taken from the opposite side, a tongue **96** is formed on the stem **40** and has a left face **98** and a right face **100**, spaced apart about 27.5 mm, and a half-cylindrical bottom surface **102** extending therebetween. The left face **98** has a milled left recess **104** of diameter about 31.5 mm and depth about 5.5 mm, and, cut an additional 2.5 mm rightward therein, a plurality of milled radially oriented channels **106** angularly spaced apart by about 80 degrees. The channels **106** are about 12 mm wide and intersect at the center of the left recess **104**. Rightward of these channels **106**, the stem **40** forms a central wall **108** of thickness about 1 mm. A left transverse center bore **110** of diameter about 11 mm is formed in the central wall **108** at the center of the left recess **104**.

In the right face **100** there is formed a milled right recess **111** of diameter about 31.5 mm and depth about 2.5 mm and, centered therein, a right transverse center bore **112** of diameter about 15 mm extending leftward into the stem **40**. The right transverse center bore **112** meets the left transverse center bore **110** at the central wall **108**, at a depth of about 16 mm leftward of the depth of the right recess **111**.

The tongue **96** fits between the left side panel **74** and the right side panel **78** of the yoke **72**. The left transverse center bore **110** and the right transverse center bore **112** are centered relative to the transverse throughbores **76** and **80** in the side panels **74** and **78** of the yoke **72**.

With continued reference to FIGS. **8** and **9** and now also with reference to FIG. **10**, another partial reverse perspective view, a hinge pin **114** is provided and, as set forth below, will be inserted rightward to hold the tongue **96** in the yoke **72**. The hinge pin **114** has a head **116** of diameter about 31 mm matched to fit in the left transverse throughbore **76** of the left side panel **74** of the yoke **72** and into the left recess **104** on

the left face **98** of the tongue **96**. The head **116** has a flat inner surface **118**, a flat outer surface **120**, and a raised periphery **122** around the outer surface **120**. The raised periphery **122** has a height of about 4.5 mm. Two diametrically opposite retainer notches **124** are cut in the periphery **122**.

A cylindrical shaft **126** projects from the center of the inner surface **118** of the head **116**. The shaft **126**, length about 30 mm from the inner surface **118** of the head **116**, includes a proximal shaft portion **128**, length about 20 mm, diameter about 11 mm; a distal shaft portion **130**, length about 8 mm, diameter about 5 mm with external threading; and a short intervening shaft portion **132**, length about 1-2 mm, diameter about 9 mm.

With continued reference to FIG. **9** and now also with reference to the reversed perspective view of the hinge pin **114** shown by FIG. **10**, a raised stop **134** is formed on the inner surface **118** of the head **116**. The stop **134** extends radially from the shaft **126** to the periphery **122** of the head **116**. The stop **134** includes a proximal stop portion **136**, about the first 9 mm from the shaft **126**, which is raised about 5 mm from the inner surface **118** of the head **116**. The stop **134** includes a distal stop portion **138**, about the distal 1.5 mm of the stop **134**, which is raised about 2.5 mm from the inner surface **118** of the head **116**. The stop **134** is about 11 mm wide.

Diametrically opposite the stop **134**, a tooth **140** is formed on the inner surface **118** of the head **116** at the periphery **122**. The tooth **140** is raised about 2.5 mm from the inner surface **118** of the head **116**, the same height as the distal portion of the stop **134**.

A closed nut **142** is provided and, as set forth below, will be used to hold the hinge pin **114** in place. The nut **142** has a head **144**, diameter about 31 mm, having a flat inner surface **146**, a raised inner rim **148**, and a sleeve **150** projecting leftward from the center of the inner surface **146** to a distance of about 5 mm beyond the level of the inner rim **148**. The nut **142** also has a flat outer surface **152** with a raised periphery **154** having four key notches **156** cut into it to permit the engagement of a cruciform key (not shown) for tightening and loosening the nut **142**.

The sleeve **150** includes a proximal sleeve portion **158**, length about 2.5 mm, diameter about 9 mm, forming a sleeve bore **160** of diameter about 5 mm having internal threading; and a distal sleeve portion **162**, length about 2.5 mm forming a flange **164** of diameter about 15 mm, which diameter is matched to diameter of the right transverse center bore **112** of the tongue **96**. The flange **164** has a leftward facing inner surface **166**, the central 9 mm of which is milled to form a flange recess **168** of depth 1-2 mm surrounding the internally threaded sleeve bore **160**. The diameter of the flange recess **168** is matched to that of the intervening shaft portion **132**.

After the tongue **96** is placed in the yoke **72**, the hinge pin **114** is inserted through the left transverse throughbore **76** of the yoke **72** and into the left recess **104** of the tongue **96**, oriented so that the retainer notches **124** are aligned with the retainer bores **94** of the left side panel **74** of the yoke **72**. With the hinge pin **114** so oriented, the stop **134** on the inner surface **118** of the head **116** of the hinge pin **114** sinks into one of the channels **106** in the left recess **104** of the tongue **96**. The shaft **126** now extends through the left transverse center bore **110** and into the right transverse center bore **112**. One retainer pin **170** is lodged in each retainer bore of the left side panel **74** of the yoke **72**. Each retainer pin **170** extends into one of the retainer notches **124** in the periphery **122** of the head **116** of the hinge pin **114**. As a result, the hinge pin **114** is retained on the yoke **72** and is prevented from rotating relative to the yoke **72**.

A metal helical spring **172**, outside diameter 15 mm, inside diameter 13.5 mm, length 14 mm, is inserted into the right transverse center bore **112** of the tongue **96** and is advanced leftward until it encounters the central wall **108** of the tongue **96**. The spring **172** is now positioned around the shaft **126** of the hinge pin **114**.

The nut **142** is inserted through the right transverse throughbore **80** of the right side panel **78** of the yoke **72** and into the right recess **111** of the tongue **96**. The flange **164** of the sleeve **150** of the nut **142** passes into the right transverse center bore **112**, where it encounters the spring **172**. The internally threaded sleeve bore **160** engages the externally threaded distal shaft portion **130**. The nut **142** is turned onto the shaft **126** until the intervening shaft portion **132** occupies the flange recess **168**. A cruciform key (not shown) or other suitable tool is used to engage the key notches **156** in the periphery **154** of the nut **142** and is used to tighten the nut **142** on the shaft **126**. When this is accomplished, the spring **172** is compressed between the flange **164** and the wall of the tongue **96**. The spring **172** therefore biases the flange **164**, and thus the nut **142** and the hinge pin **114**, rightward relative to the tongue **96**, firmly seating the stop **134** of the hinge pin **114** in the channel of the left recess **104** of the tongue **96**.

FIGS. **11** and **12** are front sectional views of the hinge portion **36** locked and unlocked, respectively. FIGS. **11** and **12** both show the hinge **36**, stem **40**, yoke **72**, left side panel **74**, left transverse throughbore **76**, right side panel **78**, right transverse throughbore **80**, top surface (of left side panel) **82**, bottom surface (of left side panel) **84**, top surface (of right side panel) **86**, bottom surface (of right side panel) **88**, retainer bore **94**, tongue **96**, left face **98**, right face **100**, bottom surface (tongue) **102**, left recess **104**, channels **106**, central wall **108**, left transverse center bore **110**, right recess **111**, right transverse center bore **112**, hinge pin **114**, head (of hinge pin) **116**, inner surface (of head) **118**, outer surface (of head) **120**, periphery (of head) **122**, retainer notches **124**, shaft **126**, proximal shaft portion **128**, distal shaft portion **130**, intervening shaft portion **132**, stop **134**, proximal stop portion **136**, distal stop portion **138**, tooth **140**, nut **142**, head (of nut) **144**, inner surface (of nut) **146**, inner rim (of nut) **148**, sleeve **150**, outer surface (of nut) **152**, periphery (of nut) **154**, key notches **156**, proximal sleeve portion **158**, sleeve bore **160**, distal sleeve portion **162**, flange **164**, inner surface (of flange) **166**, flange recess **168**, retainer pin **170**, and spring **172**.

With reference to FIG. **11**, as long as the stop **134** (see FIG. **10**) is seated in a channel **106** (see FIG. **8**), the tongue **96** will not rotate relative to the yoke **72** and, therefore, the stem **40** will not rotate relative to the grip **30**. However, with reference to FIG. **12**, a person may press leftward on the nut **142**, further compressing the spring **172** and urging the hinge pin **114** leftward until the stop **134** disengages from the channel. The person may then rotate the stem **40** relative to the grip **30** and withdraw the pressure from the nut **142**. When the hinge pin **114**, again biased rightward by the spring **172**, rotates into position over a channel **106**, the stop **134** seats in the channel **106**, once again fixing the stem **40** relative to the grip **30**.

With reference again to FIG. **8**, this exemplary embodiment of the present invention has two channels **106** machined such that the two rotational positions of the stem **40** relative to the grip **30** will aim the lamp mount **42** about 17 and about 83 degrees, respectively, from the longitudinal axis of the grip **30**.

With reference to FIG. **13**, a perspective view of a searchlight incorporating a multi-position searchlight grip **20** in accordance with the present invention being hand held with the hinge **36** locked at the 17-degree setting, one may, for example, hold the grip **30** with one's thumb proximate the first end **32** of the grip **30**. If one holds the searchlight in this manner with one's arm extending downward at one's side and the grip **30** oriented horizontally, the lamp mount **42** and the lamp module **43** will point generally forward and slightly downward. This comfortable, relaxed hold on searchlight is useful for navigation while walking over terrain.

With reference to FIG. **14**, a perspective view of a searchlight in accordance with the present invention being hand held in a manner opposite that shown in FIG. **13** with the hinge **36** locked in the 83-degree setting, one may, for example, hold the grip **30** with one's thumb proximate the second end **34** of the grip **30**. If one holds the searchlight in this manner with one's forearm extending forward or upward and the grip **30** oriented vertically, the lamp mount **42** and the lamp module **43** will again point generally forward and slightly downward. This manner of carrying the searchlight is consistent with pointing a spotlight at an object of interest some distance ahead.

While the foregoing detailed description has described several embodiments of a multi-position searchlight grip in accordance with the present invention, it is to be understood that the above description is illustrative only and not limiting of the disclosed invention. Indeed, it will be appreciated that the embodiments discussed above and the virtually infinite embodiments that are not mentioned could easily be within the scope and spirit of the present invention. Thus, the present invention is to be limited only by the claims as set forth below.

What is claimed is:

1. A searchlight grip, comprising:

an elongated grip body having a first end and a second end, said second end adapted for attaching a lamp to said grip body;

a first ON/OFF switch and a second ON/OFF switch carried by said grip body;

a first actuator for said first switch, said first actuator positioned on said grip body in the vicinity of said first end;

a second actuator for said second switch, said second actuator positioned on said grip body in the vicinity of said second end; and

an electrical circuit including said first switch, said second switch, said lamp attached to said grip body, and a power source.

2. A searchlight grip as set forth in claim **1**, wherein each of said first actuator and said second actuator includes a push-button.

3. A searchlight grip as set forth in claim **1**, wherein said electrical circuit is operatively connected in substantially the same manner to each of said first switch and said second switch.

4. A searchlight grip as set forth in claim **1**, including a stem rotatably connected to said second end and a lamp mount formed on said stem for attaching said lamp to said grip body.

5. A searchlight grip as set forth in claim **1**, wherein:

said electrical circuit includes a first power input, a second power input, a first power output, and a second power output;

said electrical circuit is operable in an ON state wherein said first power input is electrically connected to one of said first power output and said second power output, and said second power input is connected to the other of said first power output and said second power output;

said electrical circuit is operable in an OFF state, wherein at least one of said first power input and said second power input is electrically disconnected from both of said first power output and said second power output; and

a single operation of one of said first actuator and said second actuator causes said electrical circuit to alternate from one to the other of said ON state and said OFF state.

6. A searchlight grip as set forth in claim **5**, wherein each of said first actuator and said second actuator includes a push-button.

7. A searchlight grip as set forth in claim **5**, including a stem rotatably connected to said second end and a lamp mount formed on said stem for attaching said lamp thereto.

8. The searchlight grip as set forth in claim **1**, wherein said electrical circuit is configured to effect said connecting and disconnecting upon actuation of either one of said first actuator and said second actuator.

9. The searchlight grip as set forth in claim **1**, wherein said electrical circuit is configured to effect said connecting upon actuation of both of said first actuator and said second actuator.

10. A searchlight, comprising:

a grip body;

operatively coupled to said grip;

a hinge pin movably disposed through said grip body and through said lamp portion, said hinge pin biased in a first position wherein said hinge pin rotationally fixes said lamp portion to said grip body; and

a depressible member carried by said grip body for urging said hinge pin against the bias to a second position wherein said lamp portion is rotatable relative to said grip body a first ON/OFF switch and a second ON/OFF switch carried by said grip body; a first end formed on said grip body and including a first for said first switch; a second end formed on said grip body and including a second actuator for said second switch; a lamp portion including a lamp coupled to said second end of said grip body; a circuit coupling said first switch, said second switch and said lamp portion for connecting said lamp to a power source connected in said circuit upon selective actuation of said first actuator and said second actuator.

11. A searchlight as set forth in claim **10**, wherein:

one of said lamp portion and said grip body has a tongue, the other of said lamp portion and said grip body has a yoke, and said tongue is disposed in said yoke.

12. A searchlight as set forth in claim **11**, wherein:

said hinge pin is disposed through said tongue and said yoke, and

said hinge pin cooperates with said tongue and said yoke to define an axis of rotation of said tongue relative to said yoke.

13. A searchlight as set forth in claim **12**, wherein:

said hinge pin is rotationally fixed relative to said yoke, and

said hinge pin is movable, parallel said axis of rotation, relative to said yoke, between said first position and said second position.

14. The searchlight as set forth in claim **12**, wherein said hinge pin includes a stop and said tongue includes a first channel and a second channel angularly spaced from said

first channel, each of said first channel and said second channel configured for alternatively receiving said stop for rotationally fixing said lamp portion to said grip body.

15. The searchlight as set forth in claim **14**, wherein each of said first channel and said second channel radially extends with respect to said axis.

16. The searchlight as set forth in claim **15**, wherein said stop radially extends with respect to said axis.

17. A searchlight comprising:

an elongated grip body;

a first ON/OFF switch and a second ON/OFF switch carried by said grip body;

a first end formed on said grip body and including a first actuator for said first switch;

a second end formed on said grip body and including a second actuator for said second switch;

a searchlight head including a lamp coupled to said second end of said grip body; and

a circuit coupling said first switch, said second switch and said searchlight head for connecting said lamp to a power source connected in said circuit upon selective actuation of said first actuator and said second actuator.

18. A searchlight as set forth in claim **17**, wherein each of said first switch actuator and said second switch actuator is push-button operable.

19. A searchlight as set forth in claim **17**, including a selectively actuable mechanism pivotally coupling said head to said second end in at least two alternative angular positions of said head with respect to said grip body.

20. A searchlight as set forth in claim **19**, wherein each of said first switch actuator and said second switch actuator is push-button operable.

21. A searchlight as set forth in claim **17**, wherein said selectively actuable mechanism is push-button operable.

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