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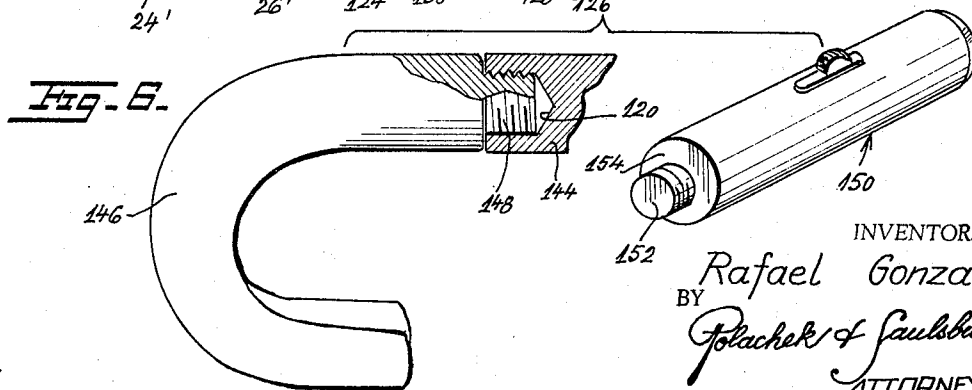
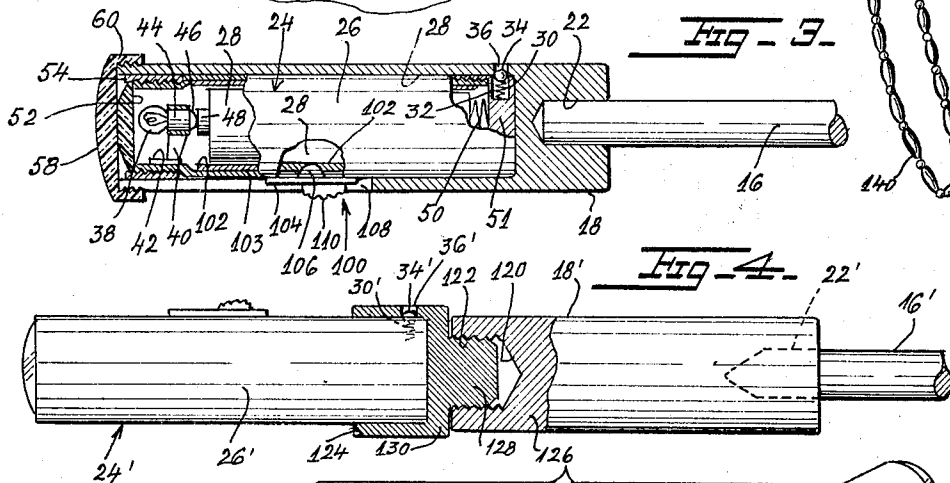
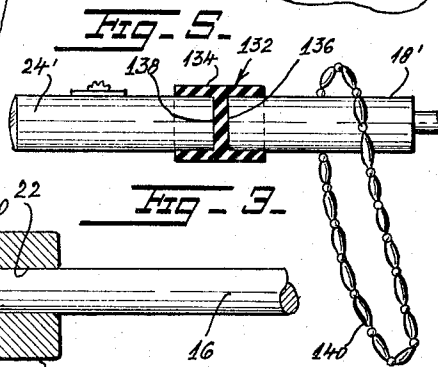
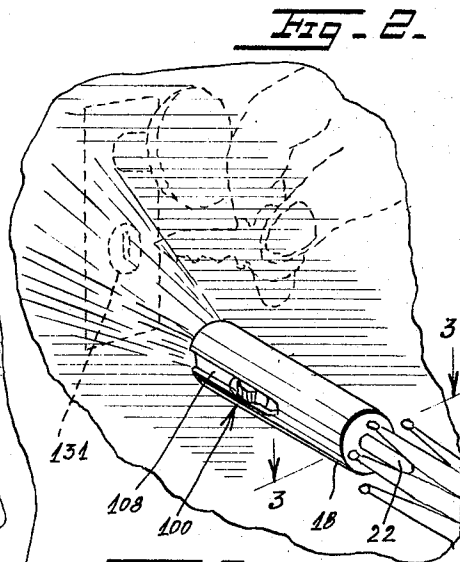
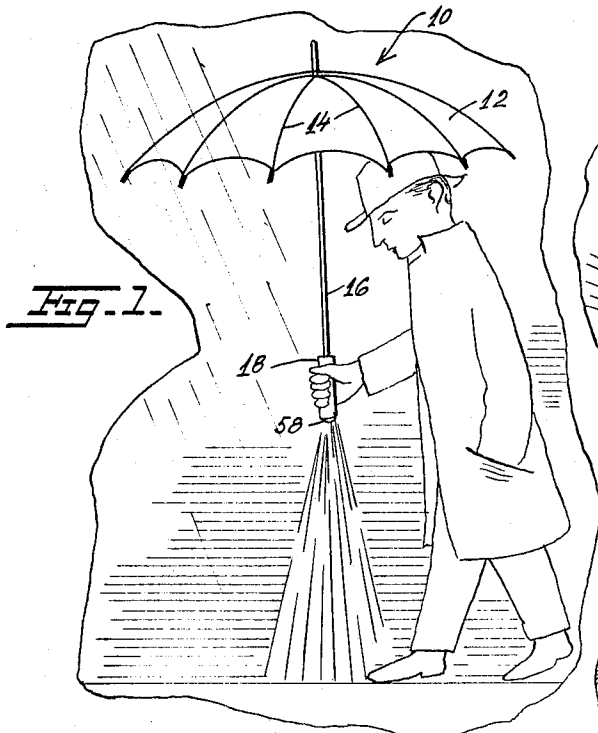
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3,281,586

UMBRELLA LIGHT

Filed May 25, 1964

2 Sheets-Sheet 1



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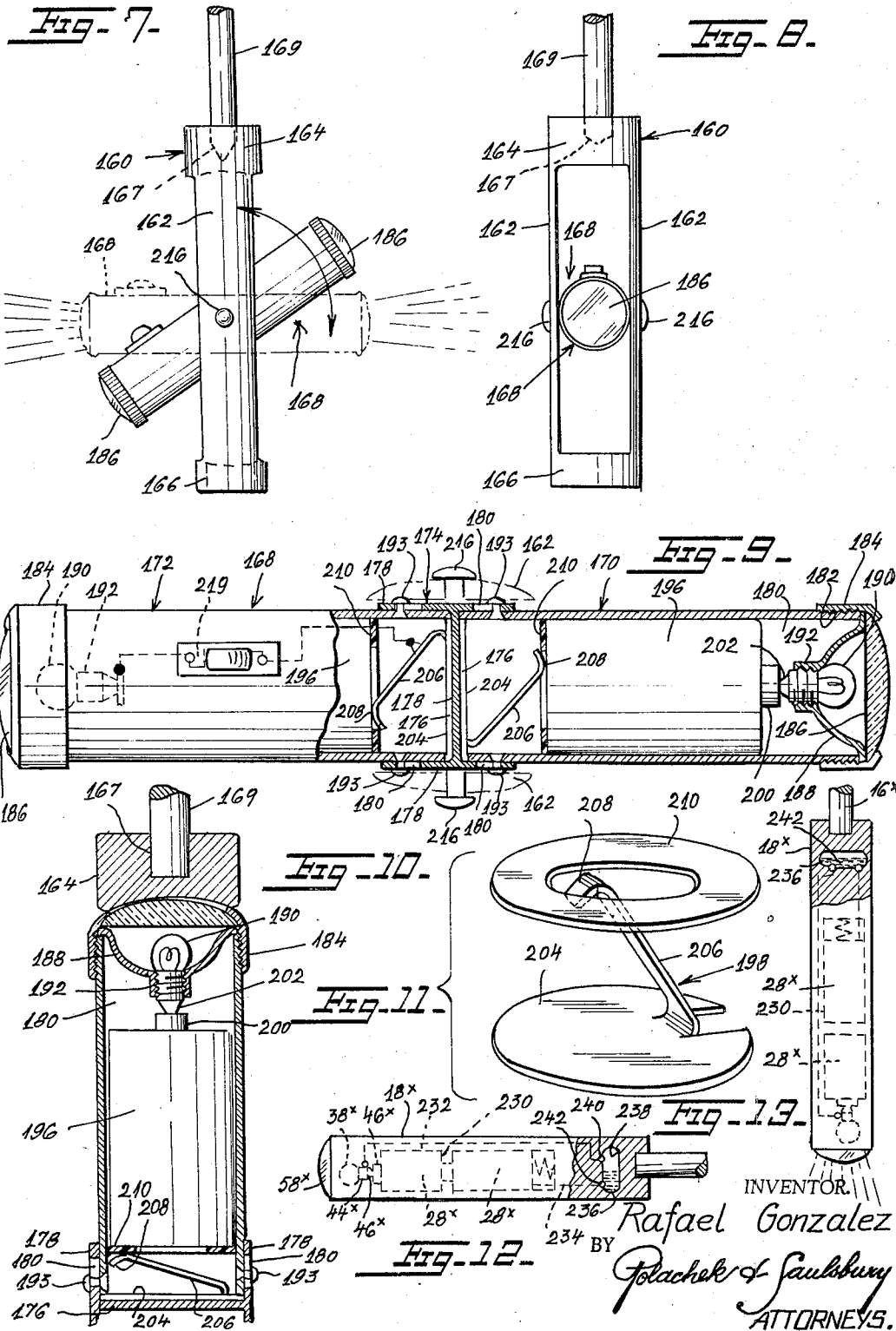
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UMBRELLA LIGHT

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2 Sheets-Sheet 2



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3,281,586

UMBRELLA LIGHT

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1 Claim. (Cl. 240-6.42)

This invention relates to new and useful improvements in umbrellas and more particularly to an umbrella carrying illuminating means.

An important object of the present invention is to provide an umbrella with a handle having a flashlight so arranged and positioned that a light is cast directly downwardly in a vertical plane when the umbrella is held in the hand in a natural open position in order to illuminate the path of the user.

Another object of the invention is to provide an umbrella with a flashlight in the handle thereof so positioned and arranged that a light may be cast in a horizontal plane for illuminating keyholes and the like.

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 claim 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 side elevational view of an umbrella embodying my invention shown in use, in illuminating the path of the user.

FIG. 2 is a fragmentary perspective view showing the umbrella in use in illuminating a keyhole.

FIG. 3 is an enlarged sectional view through the longitudinal center of the umbrella handle, taken on the line 3-3 of FIG. 2, parts being shown in elevation.

FIG. 4 is a side elevational view of an umbrella handle embodying a modified form of the invention, parts being shown in section, parts being shown broken away.

FIG. 5 is a side elevational view of an umbrella handle embodying a modified form of the invention, parts being shown in section.

FIG. 6 is a disassembled part side elevational and part perspective view of an umbrella handle embodying a still further modified form of the invention, parts being shown in section and parts being shown broken away.

FIG. 7 is a front elevational view of an umbrella handle embodying yet another modified form of the invention, the flashlight being shown in tilted position in full lines and in dash lines.

FIG. 8 is a similar view looking from the right of FIG. 7.

FIG. 9 is an enlarged part sectional and part elevational view of the flashlight assembly of FIG. 7.

FIG. 10 is a sectional view through the center of a flashlight unit.

FIG. 11 is an enlarged perspective view of the switch unit of FIG. 10.

FIG. 12 is a side elevational view of an umbrella handle embodying a still further modified form of the invention, parts being shown broken away to show the switch in open circuit position.

FIG. 13 is a similar view showing the switch in closed circuit position.

Referring now in detail to the various views of the drawings, in FIG. 1 an umbrella 10 embodying one form of the invention is shown being carried in open operative position by a person to illuminate his path. The umbrella has a fabric body 12 supported on ribs 14 and provided with the usual stick 16 extending through the center of the body and protruding through the top when the body is spread out for use as shown.

A handle 18 made in accordance with the present invention is fitted on the bottom end of the stick. The

handle is cylindrical and solid, preferably of wood or plastic, but may be made of any suitable material. The body of the handle is hollowed out forming a compartment 20 and one end is formed with a central socket 22 to fittingly receive the lower end of the stick as viewed in FIG. 1. The other end of the handle is open communicating with the compartment 20.

A flashlight unit 24 is removably mounted in the compartment 20. The unit comprises a metal cylindrical casing 26 housing an electrical battery 28. The casing 26 is yieldingly held in position in the compartment by means of a detent device including a spring 30 seated in a shallow socket 32 in the side of the casing 26 pressing a ball 34 outwardly into a hole 36 in the body of the handle 18.

An electric lamp bulb 38 is supported centrally of the compartment 20 by means of a metal bracket 40 secured by a metal plate 42 to the inner surface of the casing 26. The side terminal 44 of the bulb contacts the bracket 40 and the central terminal 46 of the bulb contacts the central terminal 48 of the battery 28, the battery terminal being urged into contact with the bulb terminal 46 by a compression spring 50 interposed between the inner end of the battery and the base 51 of the casing 26. A lens 52 closes the outer end of the casing 26 and is held in place by an internally threaded ring 54 threaded onto the externally threaded end of the casing. Another lens 58 with an internally screw-threaded flange 60 is threaded on the outer threaded end of the handle 18 and holds the flashlight unit in place. The battery and bulb are normally in closed circuit position.

A movable switch device 100 is provided for closing the circuit through the side terminal of the lamp bulb 38. This switch device includes a flat metal bar 102 slidably engaging the side of the battery 28 and insulated from the casing 26 by a layer of insulation 103. The bar is connected to an insulating plate 104 by means of an insulating lug 106 formed on the plate. The plate slides in a slot 108 formed in the handle and is actuated by an integral finger piece 110 projecting outwardly of the slot and is adapted to move the bar 102 into contact with a shoulder 111 formed on the casing 26 to close the circuit through the side terminal 44 of the lamp bulb.

In use, the umbrella is opened in the usual way when raining, with the stick 16 vertically disposed and the handle 18 held in the hand of the user. When in this natural open position, the lens 58 is pointed directly downwardly toward the ground in front of the feet of the user. By merely sliding the switch device 100 downwardly by the thumb of the hand of the user the circuit through the lamp bulb 38 will be closed and rays of light will illuminate the path in front of the user as shown in FIG. 1. The lamp bulb can just as readily be extinguished by sliding the device 100 in the opposite upward direction.

The improved umbrella handle 18 may also be used in illuminating keyholes such as the keyhole 131 shown in FIG. 2. When used for this purpose, the handle is disposed horizontally so that the rays of light shine horizontally upon the keyhole as shown in FIG. 2.

In FIG. 4, a modified form of the invention is shown wherein the umbrella handle 18' is solid and formed with a central socket 22' at one end to receive the end of the umbrella stick 16'. In accordance with this form of the invention, the opposite end of the handle is also formed with a central socket 120 formed with internal screw threads 122. A flashlight unit 24' is connected to the handle 18' by means of an adapter device 124 and forms an extension of the handle. The flashlight unit 24' is similar in construction and function to the flashlight unit 24 of FIG. 1.

The adapter device 124 comprises an insulating cup-shaped body 126 with an externally screw-threaded stem 128 projecting centrally from the base 130 of the body.

3

The stem is threaded into the threaded socket 120 in the handle 18'.

The bore of the cup-shaped device serves as a socket and the end of the flashlight unit 24' is slidably fitted therein and is held against displacement by a ball 34' and spring 30' detent positioned in a slot in the casing 26' of the unit and in a hole 36' in the side of the body of the cup-shaped device.

The handle 18' with flashlight unit 24' is used similarly to handle 18, with flashlight unit 24.

The modified form of invention shown in FIG. 5 differs only from the form of invention shown in FIG. 4 in the shape and construction of the adapted device 132 for connecting the handle 18' and flashlight unit 24'. The adapter device 132 consists of a cylindrical-shaped insulating body 134 with a socket 136 formed in one end thereof and a similar socket 138 formed in the other end thereof. The end of the handle, which needs no socket such as socket 120, is shown fitted in socket 136 and the flashlight unit 24' in the socket 138. A flexible string 140 is shown attached to the handle 18' for carrying the umbrella. The handle 18' of FIG. 5 functions similarly to handle 18' of FIG. 4.

In the modified form of the invention shown in FIG. 6, a sectional handle is shown, one section, the inner section 144, being similar in construction to the handle 18' of FIG. 4, the other section, the outer section 146, being hook-shaped. The hook-shaped section 146 is formed with a central externally screw-threaded stem 148 forming an extension thereof and adapted to be screwed into the internally threaded socket 120 in handle section 144.

In this form of the invention, a flashlight unit 150 is used with the sectional handle. The unit 150 is similar in construction and function to the flashlight unit 24' of FIG. 4 except that no ball and spring detent is used and instead an externally screw-threaded stem 152 is formed on the base 154 of the unit 150 for screwing into the socket 120 of the handle section 144. When it is desired to use the flashlight unit 150, the hooked section 146 is removed and the flashlight unit substituted therefor.

Referring now to the modification of the invention shown in FIGS. 7 to 11, inclusive, herein the handle 160 comprises an elongated body with slightly curved opposed thin sides 162, 162, continuing into a solid cylindrical end 164 and a cylindrical open end 166, the remainder of the body being hollow and open. A central socket 167 is formed in the solid end 164 to receive the end of stick 169. A flashlight assembly 168 is turnably mounted by and between the curved opposed sides 162, 162.

The flashlight assembly, as best shown in FIG. 9, consists of a pair of flashlight units 170 and 172 disposed end to end and connected at the adjacent ends by an adapter device 174. The adapter device 174 consists of a circular disc-shaped body 176 with opposed elongated integral curved plates 178, 178 extending on both sides of the disc-shaped body 176 and formed with elongated closed slots 180.

The units 170 and 172 are similarly constructed and a description of one will suffice for both. The unit 170 comprises a hollow cylindrical casing 180 open at both ends. One end of the casing, the outer end as viewed in FIG. 9, is formed with external screw threads 182 to receive an internally screw-threaded ring 184 for clamping a lens 186 over the outer open end of the casing. A dish-shaped metal reflective support 188 for an electric lamp bulb 190 has its flaring peripheral edge clamped between the lens and the end of the casing. The support 188 has a central hub portion 192 formed with a bore centrally thereof having internal screw threads.

The other or inner end of the casing 180 is provided with headed pins 193 projecting laterally of the casing and extending through elongated closed slots 180 in the plates 178 of the adapter device 174 and slidable therealong whereby the units 170 and 172 may be adjustably connected to each other.

4

An electric battery 196 is slidably mounted in the casing 180 and interposed between the bottom or inner end of the battery and the body 176 of the adapter there is a spring and switch device 198 whereby the circuit through the lamp bulb 190 may be opened or closed and whereby the central terminal 200 of the battery is urged into contact with the central terminal 202 of the lamp bulb. The device 198 consists of a metal disc 204 seated on the metal body 176 of the adapter 174, which adapter contacts the casing 180 of the unit 170 by means of the plates 178, which in turn contacts the side terminal of the battery 196. A spring arm 206 is outstruck from the material of the disc 204 and extends outwardly from the disc at an angle to the horizontal. The outer end of the arm is formed with a curved hook portion 208. A thin insulating washer 210 is secured flatwise by adhesive or the like to the bottom or inner end of the battery and is disposed in the path of sliding movement of the hook portion 208 of the arm 206.

The flashlight assembly 168 is turnably and tiltably mounted by means of opposed headed trunnions 216, 216 extending loosely through holes in the sides 162 of the handle 160 and secured at the inner ends to the adapter plates 178.

A manually actuated switch 218 is provided in one of the units, for example, unit 172, including a slidable switch member 219 actuated by a finger piece 220 connected by a conductor 222 with the central terminal 200 of the battery and connected by a conductor 224 with the arm 206 of the switch device 198 in the casing 180 of unit 172. When the switch member is slid in one direction, the circuit is closed through the central and side terminals of the lamp bulb 190 and battery 196 and when slid in the opposite direction, the circuit is opened.

When the flashlight assembly 168 is in the angular position shown in FIG. 7 in full lines, the hooked ends 208 of the arms 206 are in position over the insulating washers 210 and the circuits are open, but when the flashlight assembly 168 is swung to the horizontal position as shown in dash lines in FIG. 7, the hooked ends of the arms 206 are in contact with the bottom or inner ends of the batteries and the circuits are closed and the lamps flash.

The form of the invention illustrated in FIGS. 7 to 11, inclusive, can be used similarly to the form of FIG. 1 for illuminating the path of the user or for illuminating a keyhole.

In FIGS. 12 and 13, yet another modified form of the invention is illustrated consisting of a cylindrical umbrella handle 18x socketed at one end to fittingly receive the end of the umbrella stick 16x. The interior of the handle is hollowed out forming a compartment 230 to receive two electric batteries 28x, 28x in end-to-end operative position. The central terminal 46x of a lamp bulb 38x is in contact with the central terminal 46x of one of the batteries. The other end of the handle is closed by a lens 58x.

In this form of the invention, the side terminal 44x of the lamp bulb is electrically connected to the side terminal of the batteries by conductors 232 and 234 and interposed between the conductors there is a mercury switch 236 positioned in a recess 238 in the handle. The switch 236 includes a contact 240 at one end of the recess contacting the conductor 232 and another contact 242 at the other end of the recess contacting conductor 234 with a supply of mercury 242 capable of spanning the contacts. When the handle 18x is held upright as shown in FIG. 13, the mercury spans the contacts and the circuit through the lamp bulb 38x is closed illuminating the bulb. However, when the handle is held in a horizontal position as shown in FIG. 12, the mercury moves away from one of the contacts and the circuit through the lamp is broken. This form of the invention can be used similarly to the form of FIG. 1 for illuminating the path of the user.

While I have illustrated and described the preferred 75 embodiments of my invention, it is to be understood that

5

I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claim.

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

An umbrella comprising a collapsible ribbed fabric body, a supporting stick centrally of the body, an elongated handle secured at one end to the outer end of the stick, said handle having cylindrical end portions connected by a pair of opposed slightly curved side portions, one of said ends having a central socket receiving the outer end of the stick, the other of said ends having a central bore, a battery-operated electric flashlight assembly pivotally mounted between the sides of the body and supported thereby, said assembly including a pair of flashlight units disposed in end-to-end relation, an adapter slidably connecting the adjacent ends of the units, and automatic switch means carried by each unit for energizing the flashlight upon pivotal movement of the assembly,

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said automatic switch means including a metal disc supported in the adapter and electrically connected to the side terminal of the battery of the flashlight, and a metal arm extending radially from the disc and slidably engaging the center terminal of the battery upon a controlled pivotal movement of the assembly.

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