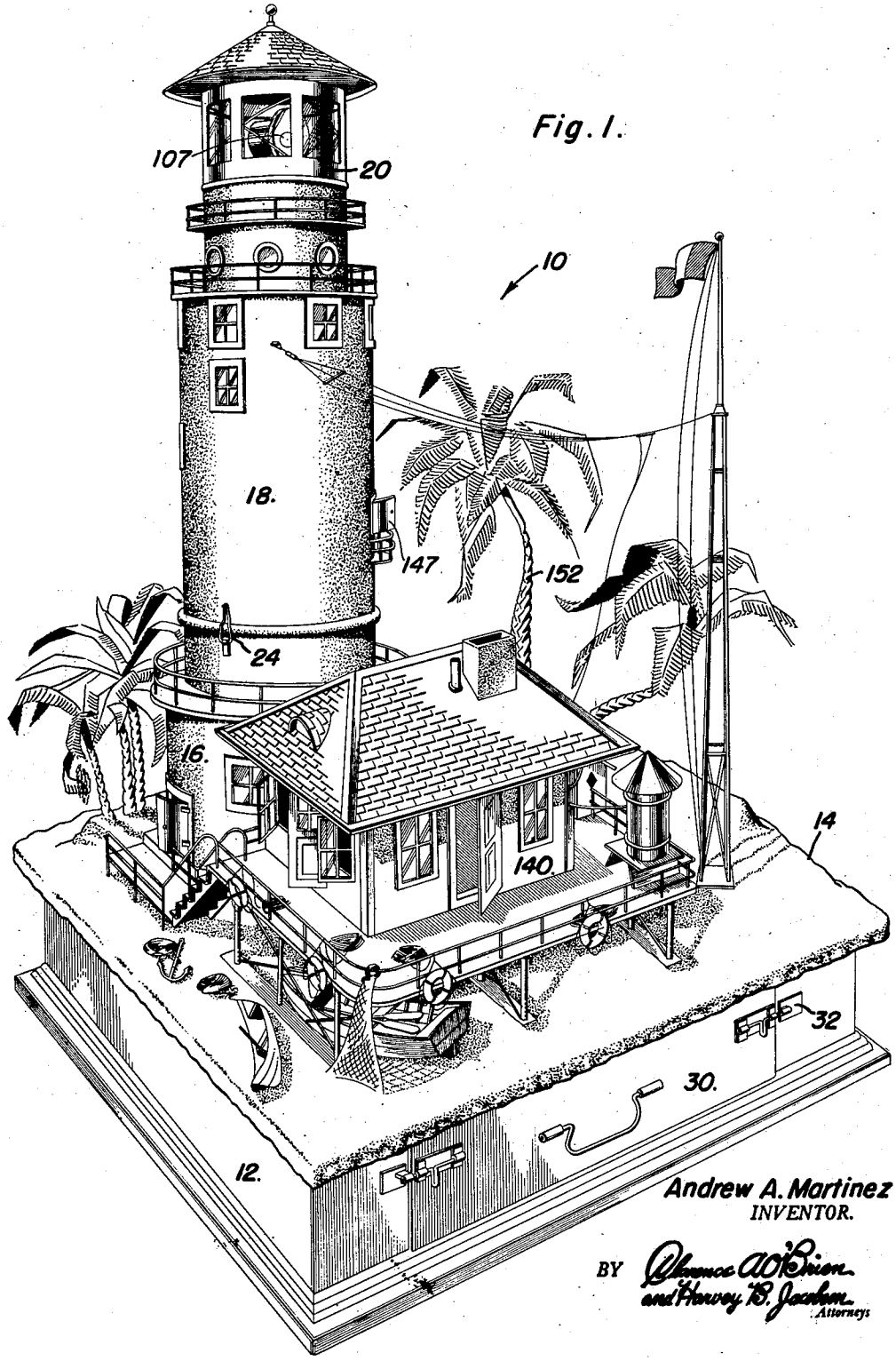
April 28, 1953 A. A. MARTINEZ 2,636,314

TOY LIGHTHOUSE

Filed Jan. 18, 1950 4 Sheets-Sheet 1

Fig. 1.



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TOY LIGHTHOUSE

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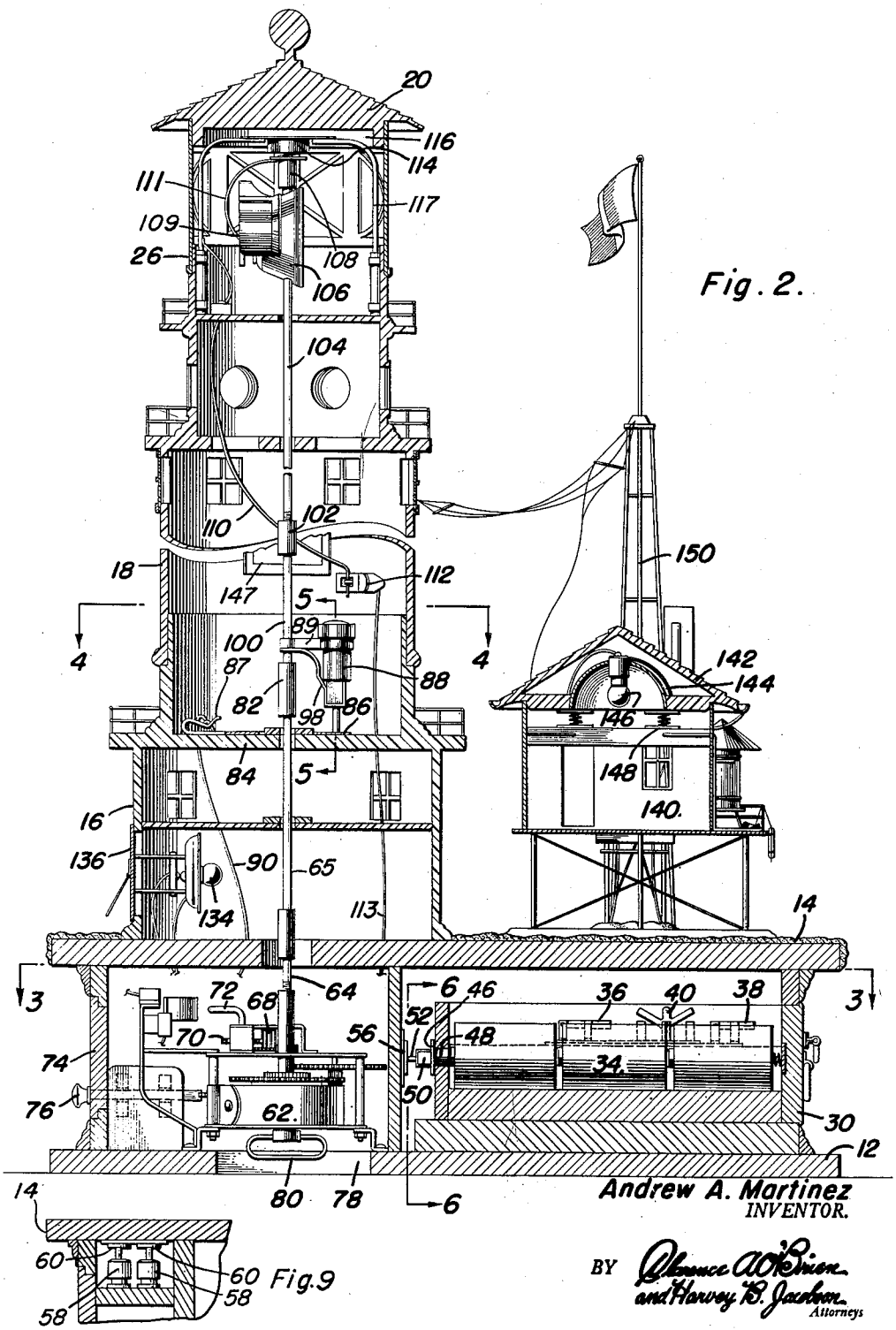


Fig. 2.

Fig. 9

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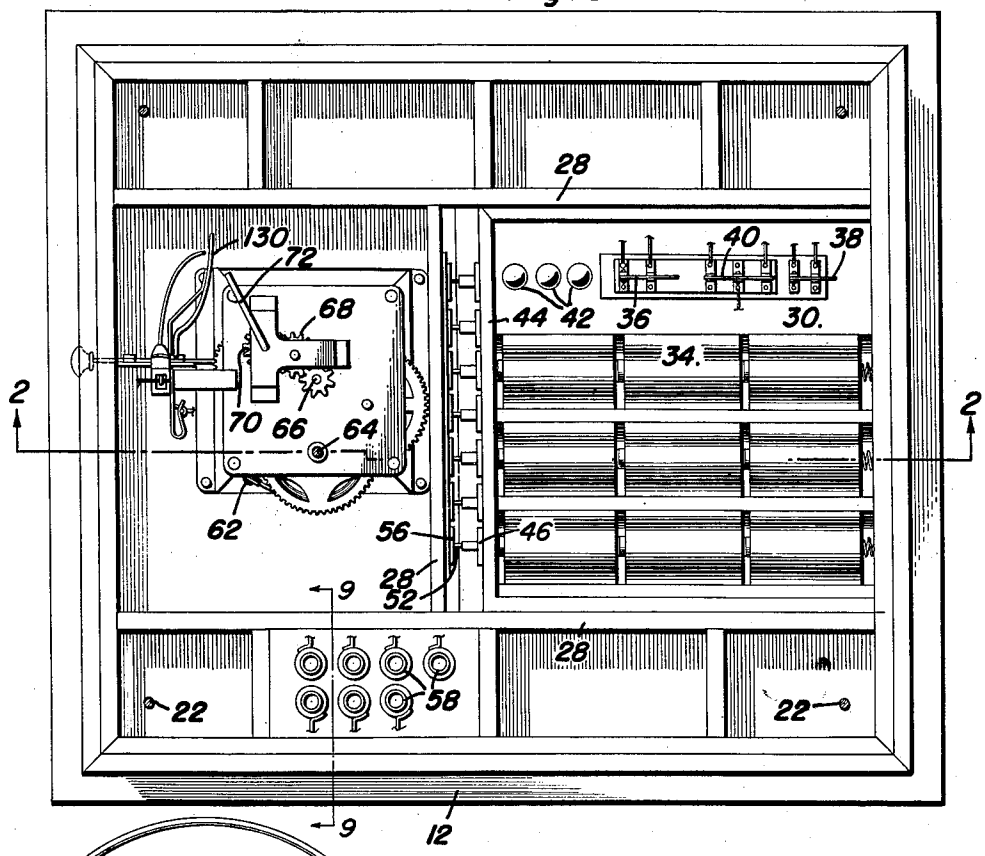
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April 28, 1953 A. A. MARTINEZ 2,636,314

TOY LIGHTHOUSE

Filed Jan. 18, 1950 4 Sheets-Sheet 3

Fig. 3.



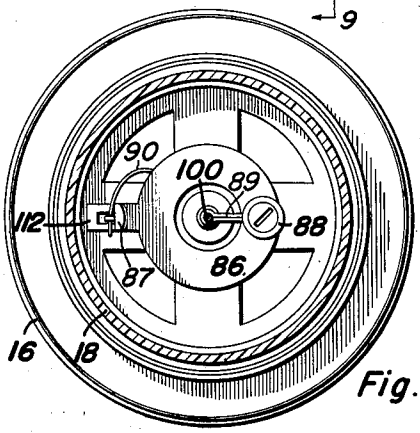


Fig. 4.

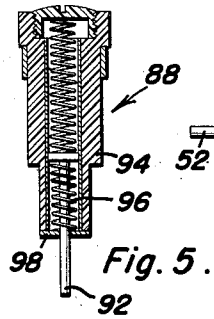


Fig. 5.

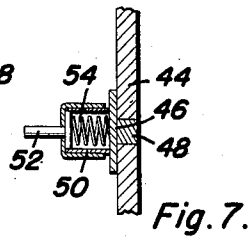


Fig. 7.

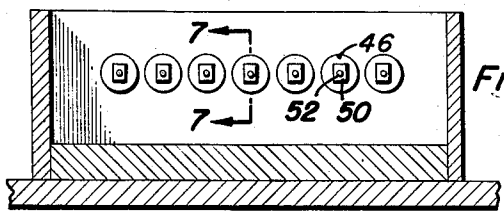


Fig. 6.

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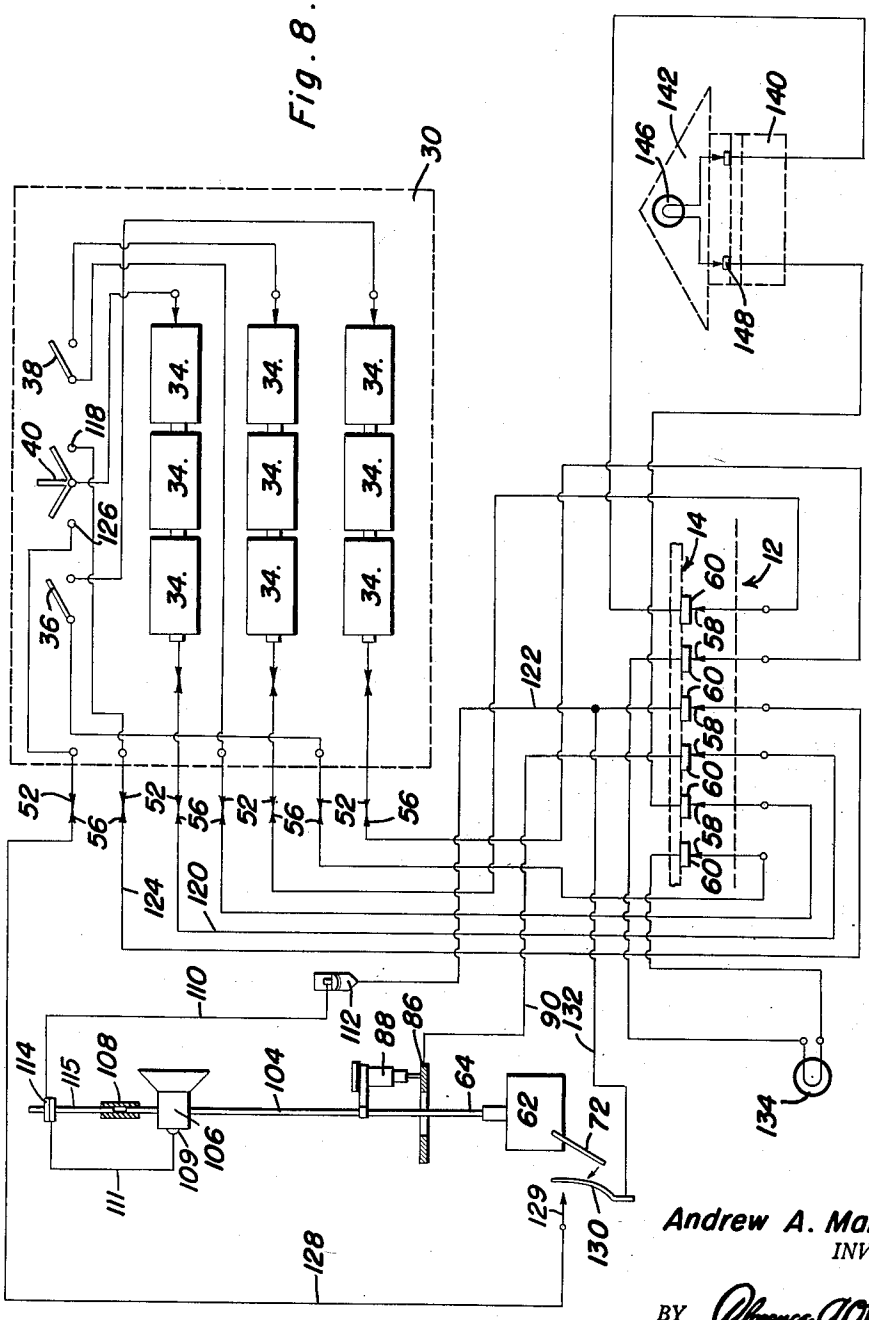
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Fig. 8.



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TOY LIGHTHOUSE

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Application January 18, 1950, Serial No. 139,185

7 Claims. (Cl. 46—12)

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This invention relates to the class of toys, and more particularly to a highly attractive toy lighthouse which is adapted to be selectively taken apart and rebuilt by a child of suitable age, thus providing an exceptionally amusing and entertaining device.

This toy lighthouse is a somewhat fanciful reproduction of an existing lighthouse found on an island in the South Pacific. The outward configuration of the device is therefore highly appealing. The toy may be readily constructed from suitable insulative plastic material for the major portions thereof, while suitable conductive metal is used for the operative electrical circuits.

It is an object of this invention to provide a highly amusing device for use as a toy by children of any age.

A further object of this invention is to provide a toy which may be readily disassembled and reassembled to continuously maintain the interest of those playing with the toy.

Yet another object of the invention is to provide a battery powered illuminating source which may be rotated in the tower of the lighthouse to simulate the flashing light of an actual lighthouse.

Yet another object of the invention is to provide means for selectively retaining the portions of the lighthouse together in an operative position, the means additionally providing the function of transmitting current through an operative electrical circuit.

Yet another object of the invention is to provide a prime mover for rotating a shaft on which the illuminating source is mounted, the shaft being used as one of the conductors for transmitting current to the light source.

A further object of the invention is to provide switch means actuated by the motor for selectively flashing the rotating illuminating source mounted on the shaft.

Still further objects of the invention reside in the provision of a toy lighthouse that is strong, durable, highly attractive in appearance, highly romantic in its appeal to children, and otherwise capable of being used as an ornamental display.

These, together with the various ancillary objects of the invention which will become apparent as the following description proceeds, are attained by this toy lighthouse, a preferred embodiment of which has been illustrated in the accompanying drawings, by way of example only, wherein:

Figure 1 is a perspective view of the toy lighthouse showing most clearly its outward ornamental appearance;

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Figure 2 is a vertical sectional view as taken along line 2—2 of Figure 3;

Figure 3 is a horizontal sectional view as taken along line 3—3 in Figure 2;

Figure 4 is a horizontal sectional view as taken along line 4—4 in Figure 2;

Figure 5 is a sectional detail of the commutator member as taken along line 5—5 in Figure 2;

Figure 6 is a vertical sectional view as taken along line 6—6 in Figure 2;

Figure 7 is an enlarged vertical sectional detail as taken along line 7—7 in Figure 6;

Figure 8 is a wiring diagram of the electrical circuits used in the present invention; and

Figure 9 is a vertical section through the contact plates taken substantially on the plane indicated by the line 9—9 of Figure 3.

With continuing reference to the accompanying drawings wherein like reference numerals designate similar parts throughout the various views, reference numeral 10 generally designates the toy lighthouse comprising the present invention. The toy lighthouse 10 comprises a plurality of sections which are mounted on the base 12. The platform 14 is detachably secured to the base and includes a lower section 16 of the lighthouse tower proper. Detachably secured to the lower section 16 of the lighthouse is an upper section 18 to which is secured the capping section 20. Bolts 22 are used to secure the platform 14 to the base 12. In addition to other means, latches 24 are used to secure the upper section 18 of the lighthouse to the lower section 16. The top 20 of the lighthouse is held in place by the interlock 26 between the various members engaging the top.

Referring now more particularly to Figures 2 and 3, it will be seen that the base 12 is formed with a plurality of partition walls 28 which are used to divide the base into a series of separate compartments. Furthermore, these partition walls 28 strengthen the base and rigidify it. In the side walls of the base 12, a substantially large aperture is formed through which drawer 30 is adapted to be selectively emplaced. Latch means 32 are provided for holding the drawer in proper position. The drawer 30 is adapted to contain a plurality of flashlight batteries 34 which are preferably positioned in three rows of three batteries each so as to provide the desired current and voltage for actuating the illuminating sources of the invention. Also mounted in the drawer 30 are a pair of single pole, single throw switches

36 and 38, together with a single pole, double throw switch 40. The function of the switches will be readily understood with reference to the circuit diagram shown in Figure 8 and in view of the structure of the device, to be further explained. A plurality of flashlight bulbs are used as signal means for indicating the operative position of the switches and these signal means are designated by reference numeral 42. The inner wall 44 of the drawer 30 has mounted thereon a plurality of circular conductors 46 which have attached thereto electrical conductors 48 which may be the contacts of the flashlight batteries 34 or other conductors. A plurality of cylindrical casings 50 are connected to the contact plates 46 and a spring pressed piston pin 52 is continuously urged by springs 54 outwardly of the member 46. The spring 54 also acts as an electrical conductor closing the circuit between the contact plate 46 and the contact pin 52. When the drawer 30 is emplaced within the base 12, the pins 52 will contact contact plates 56 mounted on a partition wall 28. Connected to the conductor plates 56 are a series of conductors which are adapted to transmit the electrical current to a series of spring contacts 58 mounted in the upper portions of the base and adapted to contact contact plates 60 mounted on the bottom surface of the platform 14. The contact plates 60 are similar to the contact plates 56 and are preferably made of a circular disk of copper or like substance.

A clock motor 62 is secured to the base 12 and is adapted to rotate a shaft 64 which is detachably secured thereto. Gear 66 is also driven by the motor 62 which, through idler gear 68, drives gear 70 to which is secured a switch actuating rod 72. In the side walls of the base 12 is hinged a suitable inspection drawer 74 and a stop member 76 is slidably emplaced in the side walls of the base 12 for selectively stopping the spring motor 62. An aperture 78 is formed in the bottom of the base 12 so that the key 80 of the spring motor may be readily wound.

Upwardly extending through the lower section 16 of the lighthouse tower is another section 65 of the shaft 64 which, adjacent the upper portion of the lower section 16 of the tower, terminates in an internally threaded coupling member 82. On the floor 84 formed adjacent the upper portion of the lower part 16 of the tower is an electrically conductive commutator ring 86 having a wiring clip 87 attached thereto. A commutator brush member, generally indicated by reference numeral 88, is secured by a bracket 89 to the shaft 100. The commutator ring 86 is connected through conductor 90 to one of the contact plates 60, whence it is connected to the power source 34. The commutator brush member 88 which consists of a brush 92 mounted in an insulative casing 94 and continuously urged by spring 96 into engagement with the ring 86 transfers the current received through ring 86 to an electrically conductive strip 98 which is secured to the electrically conductive rod 100 which is threadedly connected to the coupling member 82. Secured to the upper end of the rod 100 is an electrically conductive threaded coupling member 102 in which another electrically conductive shaft 104 is detachably secured. Mounted on the electrically conductive shaft 104 is an electrically conductive reflector 106 in which a flashlight bulb 107 is emplaced with the threaded side contacts in intimate engagement. The upper portion of the shaft 104 is secured to a coupling 108 of insulating material. A conductor 111 connects the base contact 109 of the flashlight bulb 107 with a slip ring 114 mounted on the shaft end 115 secured in the insulating coupling 108. The slip ring 114 is in contact with the conductor 110 which is detachably connected to conductor 122 by spring clip 112. The conductor 122 is secured to one of the contact plates 60. Access to spring clip 112 is provided through a hinged door 147 in the upper portion 18 of the tower.

The upper end of the shaft 115 carrying the slip ring 114 is journaled in a bracket 117 which is mounted in the top of the upper section 18 of the lighthouse tower and extends upwardly through the interlink 26 into a recess 116 in the top 20.

When the switch 40 is thrown into contact with contact 118, the circuit will be completed through the batteries 34, the conductor 120, the contact plate 60, the conductor 90, the ring 86, the brush member 88, the shaft 104, the reflector 106, the conductor 111, the slip ring 114, the conductor 110, the clip 112, the conductor 122, another contact plate 60 and through conductor 124, to the contact 118; and when the switch 40 is thrown to abut against contact 126, a circuit is completed through conductor 128 which is connected to a contact 129 in proximity to a strip 130 which is intermittently depressed by rod 72 to intermittently complete an electric circuit. The current between conductor 122 and contact strip 130 is transmitted by conductor 132.

The further electrical system of the device includes a search light 134 which is operatively connected to the batteries 34 by suitable conductors. The search light 134 is securely attached to a door 136 in the tower base 16 and the door 136 is capable of being pivoted outwardly of the tower. A house 140 is also formed and secured to the platform 14. The house is formed with a detachable roof 142 which has secured therein a reflector 144 in which a bulb 146 may be conveniently operatively mounted. Operatively connected to the batteries through switch 38 are a pair of spring contacts 148 which complete an operative electrical circuit to the bulb 146. In this manner, a suitable house light is provided for the house 140, which may be switched on and off as desired without affecting the other operation of the lighthouse. In like manner, the switch 36 controls the operation of the tower base lamp 134.

A radio antenna mast and flagpole 150 is provided to further pictorially represent a functional lighthouse. Palm trees, such as those designated by reference numeral 152 which may be made from suitable thermal setting plastics or may be readily made from tin foil which may be lacquered or enameled to represent the actual leaves, and foliage of a palm tree are detachably secured in recesses in the platform 14. Row boats, fishing nets, anchors, life preservers, and other picturesque items are secured to the house, lighthouse and platform in a haphazard and picturesque manner. Thus, there is provided a highly ornamental toy which may be readily taken apart and put together by any interested child.

Since, from the foregoing, the construction and advantages of this toy lighthouse are readily apparent, further description is believed to be unnecessary.

However, since numerous modifications will readily occur to those skilled in the art after a consideration of the foregoing specification and accompanying drawings, it is not intended to

limit the invention to the precise embodiment shown and described, but all suitable modifications and equivalents may be resorted to which fall within the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A toy lighthouse comprising a base, a sectionalized tower mounted on said base, a power source, a motor secured in said base, a platform secured on said base, a first section of said tower secured on said platform, a first shaft section connected in driven relation to said motor to be rotated thereby, a floor in said first section of said tower, said floor and said platform having aligned apertures, said shaft extending through said apertures, a slip ring on said floor concentric with said shaft, a second tower section detachably secured on said first tower section, a second and third shaft section mounted in said second tower section, a coupling rigidly connecting said shaft sections together, a brush holder rigidly mounted on said second shaft section, a brush in said holder, resilient means urging said brush into contact with said slip ring, said second and third shaft sections being electrically conductive, a light source secured on said third shaft section, electric circuit means including said brush, said brush holder, said electrically conductive shaft sections, and said slip ring connecting said power source to said light source.

2. A toy lighthouse comprising a base, a sectionalized tower mounted on said base, a power source, a motor secured in said base, a platform secured on said base, a first section of said tower secured on said platform, a first shaft section connected in driven relation to said motor to be rotated thereby, a floor in said first section of said tower, said floor and said platform having aligned apertures, said shaft extending through said apertures, a slip ring on said floor concentric with said shaft, a second tower section detachably secured on said first tower section, a second shaft section mounted in said second tower section, a coupling rigidly connecting said shaft sections together, a brush holder rigidly mounted on said second shaft section, a brush in said holder, resilient means urging said brush into contact with said slip ring, said second shaft section being electrically conductive, a further conductive shaft section conductively coupled to said second shaft section, a light source secured on said further shaft section, electric circuit means including said brush, said brush holder, said electrically conductive shaft sections, and said slip ring, connecting said power source to said light source, said circuit means including a switch mounted adjacent said motor, a motor driven switch actuator rod, said actuator rod intermittently actuating said switch to energize said light source.

3. A toy lighthouse comprising a base, a sectionalized tower mounted on said base, a power source, a motor secured in said base, a platform secured on said base, a first section of said tower secured on said platform, a first shaft section connected in driven relation to said motor to be rotated thereby, a floor in said first section of said tower, said floor and said platform having aligned apertures, said shaft extending through said apertures, a slip ring on said floor concentric with said shaft, a second tower section detachably secured on said first tower section, a second and third shaft section mounted in said second tower section, a coupling rigidly connecting said shaft sections together, a brush holder rigidly mounted in conducting relation on said second shaft section, a brush in said holder, resilient means urging said brush into contact with said slip ring, said second and third shaft sections being electrically conductive, a light source secured on said third shaft section, electric circuit means, including said brush, said brush holder, said electrically conducting shaft sections, and said slip ring, connecting said power source to said light source.

4. A toy lighthouse comprising a base, a sectionalized tower mounted on said base, a power source, a motor secured in said base, a platform secured on said base, a first section of said tower secured on said platform, a first shaft section connected in driven relation to said motor to be rotated thereby, a floor in said first section of said tower, said floor and said platform having aligned apertures, said shaft extending through said apertures, a slip ring on said floor concentric with said shaft, a second tower section detachably secured on said first tower section, a second and third shaft section mounted in said second tower section, a coupling rigidly connecting said shaft sections together, a brush holder rigidly mounted in conducting relation on said second shaft section, a brush in said holder, resilient means urging said brush into contact with said slip ring, said second and third shaft sections being electrically conductive, a light source secured on said third shaft section, electric circuit means, including said brush, said brush holder, said electrically conducting shaft sections, and said slip ring, connecting said power source to said light source, a conductor independent of said shaft, said conductor including a section in said first tower section and a section in said second tower section and a clip detachably securing said sections together adjacent the junction between said tower sections.

5. A toy lighthouse comprising a base, a sectionalized tower mounted on said base, a power source, a motor secured in said base, a platform secured on said base, a first section of said tower secured on said platform, a first shaft section connected in driven relation to said motor to be rotated thereby, a floor in said first section of said tower, said floor and said platform having aligned apertures, said shaft extending through said apertures, a slip ring on said floor concentric with said shaft, a second tower section detachably secured on said first tower section, a second shaft section mounted in said second tower section, a coupling rigidly connecting said shaft sections together, a brush holder rigidly mounted on said second shaft section, a brush in said holder, resilient means urging said brush into contact with said slip ring, said second shaft section being electrically conductive, a further conductive shaft section coupled to said second shaft section, a light source secured on said further shaft section, electric circuit means including in series circuit relation said second and said further sections of said shaft, said brush, said slip ring, and said brush holder, connecting said power source to said light source, said circuit means including a contact, a strip in proximity to said contact, an actuating rod, said motor being operatively connected to said rod for intermittently urging said strip into engagement with said contact.

6. A toy lighthouse comprising a base, a platform mounted on said base, partitions in said base dividing said base into a plurality of separate compartments, a drawer slidably received in

one of said compartments, a plurality of batteries received in said drawer, a motor mounted in another of said compartments, a sectionalized lighthouse tower mounted on said platform, a first tower section including a floor, said floor and said platform having aligned apertures therein, a shaft including a first shaft section mounted in said apertures, a driving connection between said motor and said shaft, a second tower section detachably mounted on said first tower section, a second shaft section in said second tower section, said second shaft section being coupled to said first shaft section, said second shaft section being of electrically conducting material, a light source mounted on said shaft and rotated thereby, circuit means including said second shaft section supplying energy from said batteries to said light source.

7. A toy lighthouse comprising a base, a platform mounted on said base, partitions in said base dividing said base into a plurality of separate compartments, a drawer slidably received in one of said compartments, a plurality of batteries received in said drawer, a motor mounted in another of said compartments, a sectionalized lighthouse tower mounted on said platform, a first tower section including a floor, said floor and said platform having aligned apertures therein, a shaft including a first shaft section mounted in said apertures, a driving connection between said motor and said shaft, a second tower

section detachably mounted on said first tower section, a second shaft section in said second tower section, said second shaft section being coupled to said first shaft section, said second shaft section being of electrically conducting material, a light source mounted on said shaft and rotated thereby, circuit means including said second shaft section supplying energy from said batteries to said light source, a separable connection between said batteries and said circuit means including a contact plate mounted on one of said partitions, a fixed contact secured on the end of said drawer said batteries making contact with said fixed contact, a cylindrical casing mounted on said fixed contact, a piston pin in said cylinder, spring means urging said pin into contact with said plate, said spring forming the electrical contact between said fixed contact and said pin.

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References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
423,654	Amet	Mar. 18, 1890
749,657	Beemer	Jan. 12, 1904
1,514,602	Charland	Nov. 11, 1924
1,616,384	Mallard	Feb. 1, 1927
1,700,673	Eckhardt et al.	Jan. 29, 1929
1,718,982	Rodeck	July 2, 1929