No. 754,631. PATENTED MAR. 15, 1904.

J. W. ALLEN.

# LAMP FOR CANES, UMBRELLA STICKS, OR THE LIKE.

APPLICATION FILED NOV. 2, 1903.

NO MODEL.

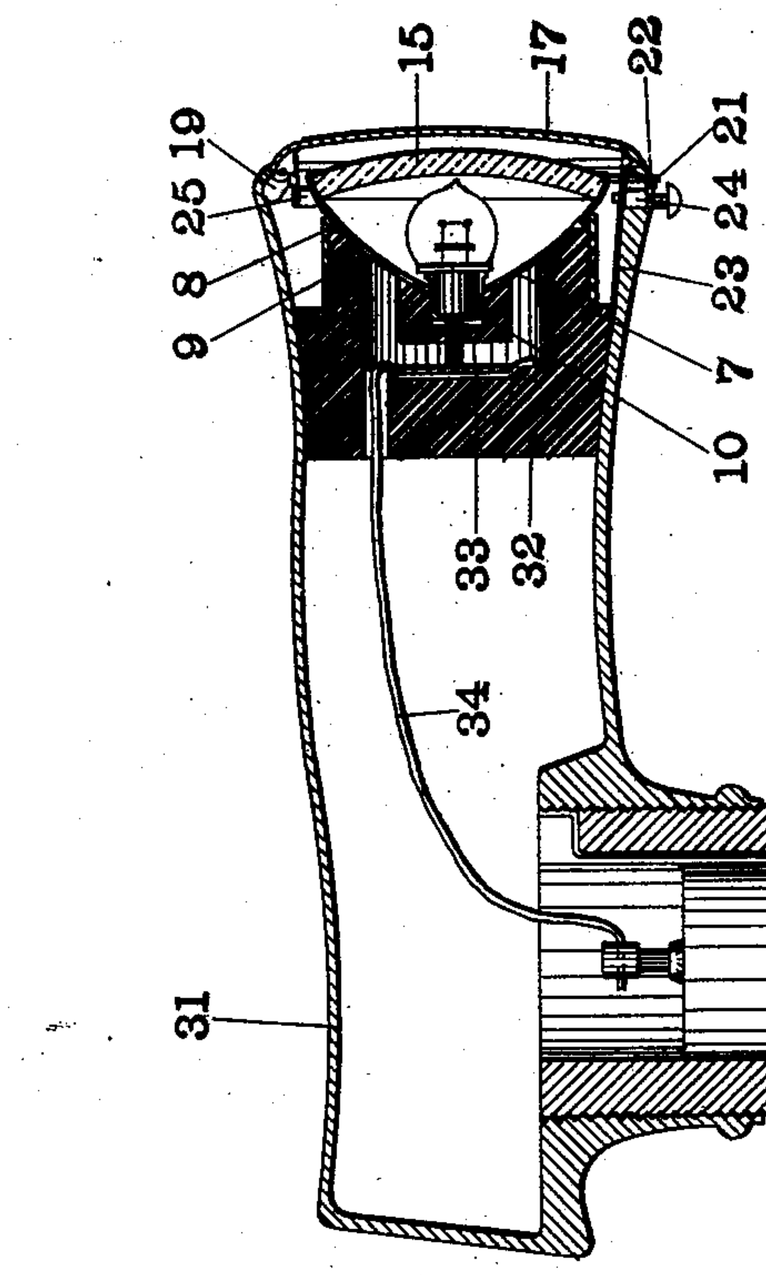


Fig. 3.

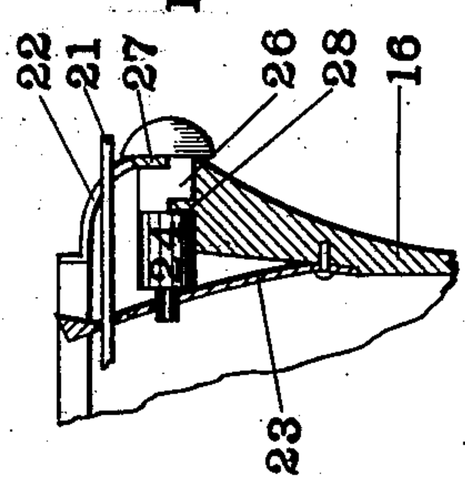


Fig. 7.

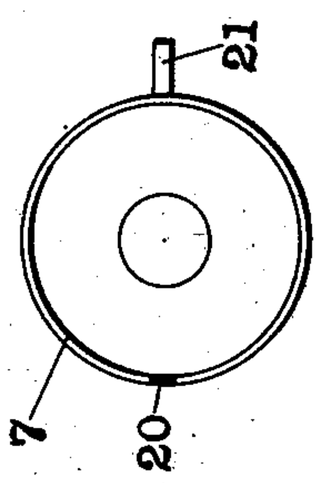


Fig. 4.

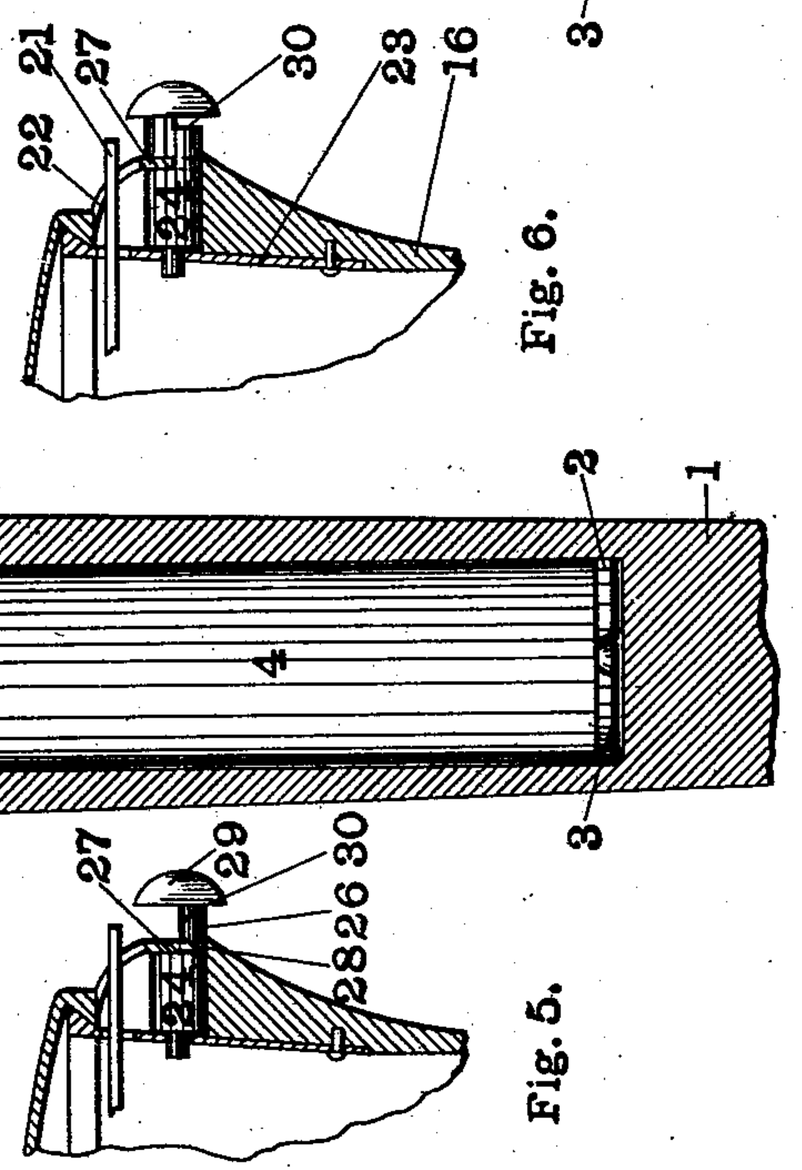


Fig. 6.




Fig. 2.

Fig. 1.




Fig. 5.

Witnesses.
G. Browne
Fred F. Reinert.

Inventor.
James W. Allen,
By Cameron & Cameron,
Attorneys.

No. 754,631. Patented March 15, 1904.

# UNITED STATES PATENT OFFICE.

JAMES W. ALLEN, OF ST. LOUIS, MISSOURI.

## LAMP FOR CANES, UMBRELLA-STICKS, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 754,631, dated March 15, 1904.

Application filed November 2, 1903. Serial No. 179,546. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES W. ALLEN, a citizen of the United States, and a resident of the city of St. Louis and State of Missouri, have invented a new and useful Lamp for Canes, Umbrella-Sticks, or the Like, of which the following is a specification.

My invention relates to portable lamps, and particularly electric lamps for sticks—such as canes, umbrella-sticks, and the like—and has for its principal objects to provide a lamp which may be included as part of a cane; to provide for a combined cover, reflector, and an automatic switch for a stick-lamp; to provide for throwing the automatic switch out of operation at will; to provide for control of the light by means of either an automatic or manually-operated switch, and other objects hereinafter more fully appearing.

My invention consists in the parts and the arrangements and combinations of parts hereinafter described and claimed.

In the accompanying drawings, forming part of this specification, and wherein like symbols refer to like parts wherever they occur, Figure 1 is a vertical sectional view of a straight cane or umbrella-stick, the cover being closed. Fig. 2 is a fragmentary view corresponding to Fig. 1, showing the cover open. Fig. 3 is a vertical sectional view of a cane or umbrella-stick with a bent handle. Fig. 4 is a detail plan view of the primary reflector, showing the construction whereby the automatic switch may be thrown out of operation. Figs. 5, 6, and 7 are fragmentary views illustrating the construction and operation of the manually-operated switch and cover-catch.

The invention is applicable to either a straight cane or umbrella-stick or one with a handle at an angle to the body of the stick, and its application to both forms is illustrated in the accompanying drawings.

In the case of a straight cane or umbrella-stick, such as illustrated in Fig. 1, the handle or upper end of the stick 1 is bored out to form a cylindrical cavity 2 to receive the incandescent lamp and the battery. In the bottom of the cavity 2 a contact-plate 3 is located. Upon the contact-plate rests a battery 4, which is preferably of that type in which the vessel forms one electrode. The extreme upper end of the stick is reduced in diameter, forming a shoulder 5. The reduced portion 6 is exteriorly screw-threaded and its inner edge is beveled. Upon the beveled inner edge rests the primary reflector 7 of the lamp. The primary reflector 7 is preferably metallic and is provided with an annular projection 8, by means of which it is secured in position. A collar 9 has its upper edge turned down over the annular projection 8 and is in screw-threaded engagement with the reduced portion 6. By this construction the reflector is secured in position and yet is free to rotate.

Upon the lower portion of the reflector 7 is a non-conducting lamp-socket 10. Into said lamp-socket an incandescent lamp 11 of any desired form fits. The metallic sleeve 12 forms one terminal of the lamp and is in electrical connection with the reflector. A stud 13 constitutes the other terminal and projects through the socket 10 and into engagement with the upper terminal 14 of the battery 4. The upper edge of the primary reflector is turned over the edge of a lens 15.

The ornamental head of the cane consists of a casing 16 and a cover 17, hinged thereto. The head is secured by means of a screw-threaded engagement with the upper end of the stick just below the shoulder 5. This casing 16 is connected with the contact-plate 3 by means of a conductor 18. The cover 17 has a projection 19 adjacent to its hinge in such position that when open it will contact the metallic primary reflector, as illustrated in Fig. 2. It will thus be seen that when the cover is up the circuit from the battery is completed through the lamp and the filament will become incandescent; but it is not always desirable to have the light turned on when the cover is up. For this reason the metallic reflector is made with a small non-conducting section 20, having an area of about the area of contact of the projection 19 with the reflector. Upon the opposite side of the reflector a handle 21 is provided, which projects through an opening 22 in the casing 16. By means of this handle the reflector may be rotated about its vertical axis, so as to bring the insulated section into position to

be engaged by the projection 19 or to move it out of the path of the said projection.

The cover 17 is held shut by a spring-catch 23, riveted to the casing. The rim of the cover is undercut on its inner side, and the upper end of the spring-catch is correspondingly shaped to engage said undercut rim. A switch-bolt 24, working in a hole in the casing 16, has a reduced end which enters an opening in the spring-catch. By pressure upon said bolt the spring-catch may be moved inwardly and the cover will be released from its engagement. A spring 25 of the usual watch-case form engages the cover 17 near its hinge and automatically throws it up when released from the spring-catch 23. The switch-bolt 24 is in contact with and hence in electrical connection with the casing 16. When pressed inwardly to release the cover, it contacts with the metallic primary reflector 7, and thus closes the circuit through the lamp. Thus the light may be manually turned on the moment the cover 17 is raised. This additional switch in parallel with the cover-switch is provided for use when it is not desired to use the latter. For example, at night it is desirable to have the stick by the bed with the cover up. It is not desirable to have the light turned on all the time, and so the reflector 7 will be turned by means of the handle 21 until the insulating-section 20 is brought in contact with the projection 19 and the circuit is broken. If, now, light is wanted at any time, it is only necessary to press the switch-bolt 24.

The switch-bolt 24 is constructed so as to lock the cover against accidental opening and to be locked in contact with the metallic reflector to prevent accidental turning off of the light or against tampering. Its shape and operation are illustrated in Figs. 5 to 7. The part 26, projecting through the casing 16, is substantially semicylindrical. The opening in the casing is the same shape, the wall 27 of the casing fitting closely, as shown in Fig. 5. Adjacent the cylindrical portion of the switch-bolt the semicylindrical portion has a groove 28. By rotation of the bolt the wall 27 of the casing enters the groove and the bolt is locked against inward movement. Upon the opposite side adjacent to the head 29 of the bolt is a second groove 30. When the bolt is pushed inwardly into engagement with the metallic reflector, it may be rotated so that the wall 27 of the casing will enter said second groove and lock the bolt in position. In order to move the bolt from its locked position, it is necessary to rotate it axially, and this is done by frictional contact of the thumb upon the head 29.

The inner surface of the cover 17 is preferably polished, so as to act as a reflector. When said cover is up, it serves to direct the rays transversely to the direction in which the primary reflector directs rays. When using the lamp in walking in the dark, the stick is usually held upside down, and thus the light would reach only a small area of the path; but the secondary reflector serves to direct the rays some distance ahead. Again, the cover serves as a screen. If it is desired to conceal the light from observation in front, it is only necessary to turn the stick so that the cover lies in front, when it will effectually screen the lamp. The exterior of the cover and the casing may be given any ornamental form or ornamented in any desired manner.

The form of the invention illustrated in Fig. 3 differs from that just described only in the shape of the head and minor features incident to such shape. The head 31 is angular in shape, but, as before, is screwed upon the stick and is in electrical connection with the battery. Near the end of the head a support-block 32 is secured, upon which the lamp is mounted. In a depression in the block 32 a contact-plate 33 is secured. The contact-plate is in electrical connection with the battery through a conductor 34. All other features are like those of the form of the invention previously described and are indicated in the figure by the same symbols.

Obviously the invention is capable of application to a walking-stick, umbrella-stick, a case capable of being carried in an overcoat-pocket, or the like, and in the claims hereinafter made the term "stick" is intended to include any such article.

The device is obviously capable of considerable modification within the scope of my invention, and I do not wish to be limited to the form of the invention chosen to illustrate the invention and hereinbefore specifically described.

What I claim is—

1. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a normally open electric circuit connecting said battery and lamp, a hinged cover arranged to automatically close said circuit when open, and means to prevent the closing of said circuit by said cover.

2. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a reflector for said lamp, a cover for said cavity, a normally open electric circuit connecting said battery and lamp and including said reflector and cover, and means on said cover arranged to make contact with said reflector when said cover is open and thereby close said circuit.

3. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a reflector for said lamp having a non-conducting section, a cover for said cavity, a normally open electric circuit connecting said battery and lamp and including said reflector and cover, and a projection on said cover arranged to make contact with said reflector when said cover is open, said reflector being adjustable

to bring said non-conducting section into position to be engaged by said projection.

4. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a primary reflector for said lamp, a cover for said cavity arranged to serve as a secondary reflector when open, a normally open electric circuit connecting said battery and lamp and including said primary reflector and cover, and means on said cover arranged to make contact with said primary reflector when said cover is open and thereby close said circuit.

5. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a normally open electric circuit connecting said battery and lamp, a cover for said cavity, a latch for said cover, and means arranged to release said latch and close said circuit.

6. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a normally open electric circuit connecting said battery and lamp, a cover for said cavity, a latch for said cover, and a switch-bolt arranged to release said latch and close said circuit.

7. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a normally open electric circuit connecting said battery and lamp, a cover for said cavity, a latch for said cover, and a switch-bolt arranged to release said latch and close said circuit, said switch-bolt being constructed to lock said cover shut.

8. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a reflector for said lamp, a head on said stick comprising a casing, and a cover, a normally open electric circuit connecting said battery and lamp and including said reflector and casing, a latch for said cover, and a switch-bolt in said casing arranged to release said latch and contact said reflector and thereby close said circuit.

9. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a reflector for said lamp, a head on said stick comprising a casing and a cover, a normally open electric circuit connecting said battery and lamp and including said reflector and casing, a latch for said cover and a switch-bolt arranged to release said latch and contact said reflector and thereby close said circuit, said switch-bolt having a semicylindrical section having transverse grooves arranged to engage a portion of said casing upon rotation of said switch-bolt; whereby said bolt may be locked against accidental movement when the circuit is either closed or open.

10. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, a normally open electric circuit connecting said battery and lamp, a cover for said cavity arranged to serve as a reflector, a latch for said cover, and a switch-bolt arranged to release said latch and close said circuit.

11. A stick-lamp comprising a stick having a cavity therein, a battery and a lamp in said cavity, an interrupted electric circuit connecting said battery and lamp, a hinged cover arranged to automatically close said circuit when open, means to prevent the closing of said circuit by said cover, a latch for said cover, and means arranged to release said latch and close said circuit.

12. A stick-lamp comprising a stick, having a cavity therein, a battery and a lamp in said cavity, an interrupted electric circuit connecting said battery and lamp, a hinged cover for a cavity, means on said cover to close said circuit when said cover is open, means to prevent the closing of said circuit by said means, a latch for said cover, and a switch-bolt arranged to release said latch and close said circuit.

13. A stick-lamp comprising a stick having a cavity therein, a battery therein, a head on said stick comprising a cavity and a cover hinged thereto, a reflector rotatably mounted in the mouth of said cavity having a non-conducting section and a lamp-socket, a lamp in said socket having one terminal in electrical connection with said reflector and the other in electrical connection with said battery, a conductor connecting the opposite terminal of said battery with said casing, a latch for said cover, a switch-bolt mounted in said casing to release said bolt and contact said reflector, a projection on said cover arranged to engage said reflector when said cover is open, and an arm on said reflector whereby said reflector may be rotated to bring said non-conducting section into position to be engaged by said projection.

Signed at Jefferson City, Cole county, Missouri, this 30th day of October, 1903.

JAS. W. ALLEN.

Witnesses:
E. A. GUYOT,
A. H. HATCH.