Sept. 21, 1926. 1,600,209

E. G. APPLETON ET AL

SWITCH FOR EXTENSION LAMPS

Filed Oct. 25, 1924 2 Sheets-Sheet 1

Fig. 1.

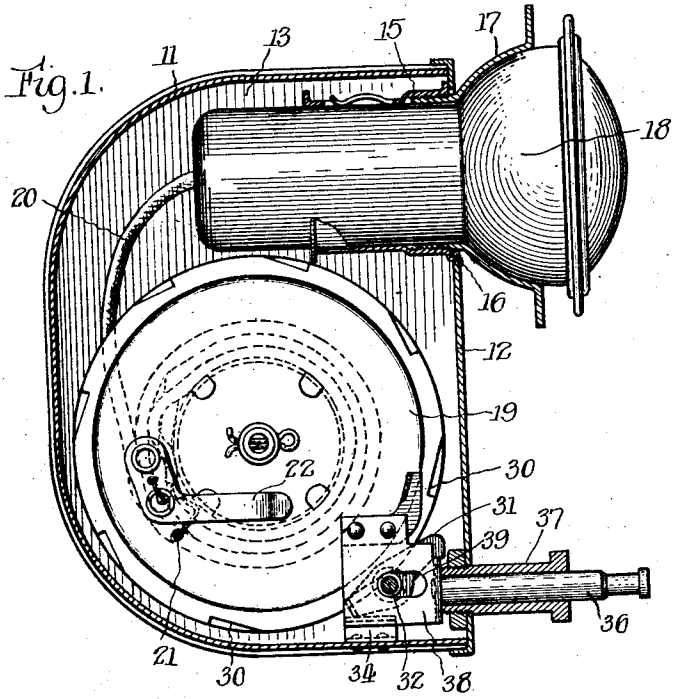


Fig. 4.

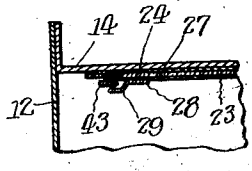


Fig. 3.

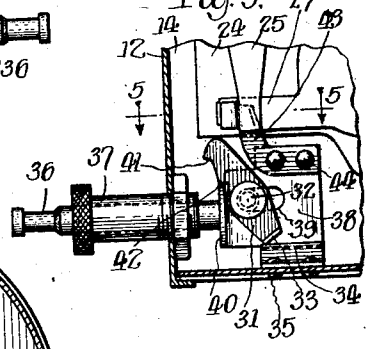


Fig. 2.

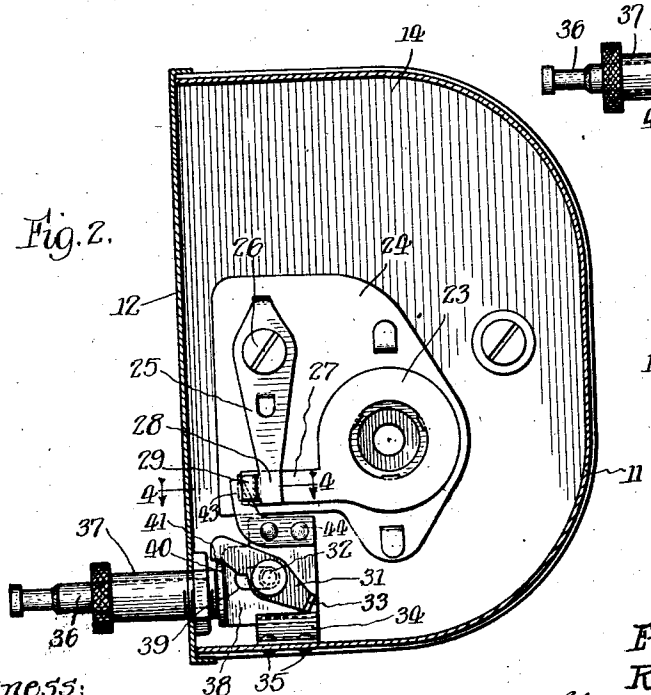
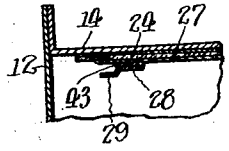


Fig. 5.



Witness:
A. J. Sauser.

Inventors:
Ernest G. Appleton,
Raymond Mooney,
By Wilkinson, Huxley, Byron & Knight
Attys.

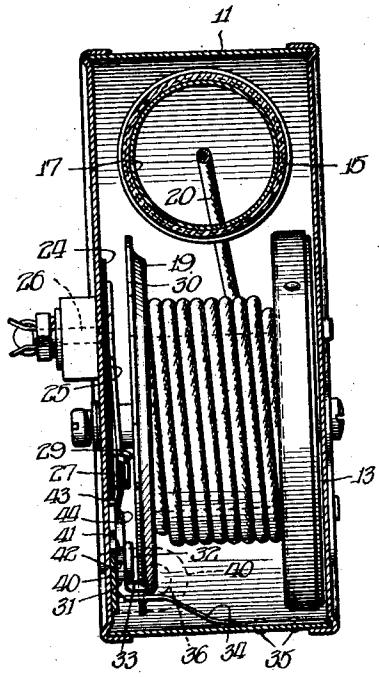
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Fig. 6.



Inventors:
Ernest G. Appleton,
Raymond Mooney,
By Wilkinson Huxley Byron & Knight
Attys

Witness:
R. Burkhardt.

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UNITED STATES PATENT OFFICE.

ERNST G. APPLETON AND RAYMOND MOONEY, OF CHICAGO, ILLINOIS, ASSIGNORS TO ROACH-APPLETON MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SWITCH FOR EXTENSION LAMPS.

Application filed October 25, 1924. Serial No. 745,803.

This invention relates to a new improved switch for extension lamps and more particularly to a switch of this character which is incorporated in the lamp structure and forms a part thereof.

This invention is particularly applicable to extension lamps of the type now in general use as trouble lamps on automobiles. These lamps comprise reels for handling the extension wire, these reels being rotated by means of springs to wind up the wire. In certain types of these lamps ratchets are provided to hold the reel against operation of the winding spring during the use of the light. Means are provided for putting the ratchet out of operation when it is desired to reel up the extension cord. It has been generally customary heretofore to provide separate switches for controlling the lamp circuit, these switches being located adjacent to the light, but requiring extra wiring.

It is an object of the present invention to provide a new and improved switch assembly for lamps of this character and more particularly a switch which is operated by the ratchet control means of the lamp.

It is a further object to provide switches of this character in which the switch is normally closed and is opened when the ratchet is put out of operation.

It is also an object to provide a switch of this character which is simple in design and construction and which may be readily incorporated in existing types of lamps without material alteration of their design and construction.

Other and further objects will appear as the description proceeds.

In the drawings we have shown a preferred form of construction by way of example. In the drawings—

Figure 1 is a vertical section of the lamp construction taken adjacent the side of the lamp.

Figure 2 is a vertical section showing the portions removed in the section of Figure 1.

Figure 3 is a fragmentary section similar to Figure 2 but showing the ratchet in the off position.

Figure 4 is a fragmentary section taken on line 4—4 of Figure 2.

Figure 5 is a fragmentary section taken on line 5—5 of Figure 3.

Figure 6 is a front vertical section taken back of the cover with the lamp removed.

The form of lamp shown comprises the casing 11, the front plate 12 and the sides 13 and 14. The lamp supporting member 15 is secured to the front plate 12 by lugs 16, and the cup 17 is threaded into the member 15. The lamp 18 is removably fitted into the members 15 and 17. The lamp is connected to the reel 19 by the double conducting cord 20. One end of one conductor of the double cord is grounded to the reel 21. The end of the other conductor is secured to the spring contact 22 which latter is mounted upon the reel by a non-conducting support.

Referring now to Figures 1 and 2, the spring contact 22 is adapted to engage the contact ring 23, which latter is secured to the insulating support 24. This insulating support 24 is secured to the side 14 of the lamp casing. The spring contact 25 is supported upon the insulating member 24 and is insulated from the lamp casing. This spring contact is electrically connected through the lamp casing by screw 26 and suitable means upon the outer side of the casing. These means form no part of the present invention and need not be described herein. The ring contact 23 is provided with the extension 27, which under-lies the end 28 of the spring contact 25. The end 28 is provided with the off-set portion 29, the purpose of which will be described hereafter.

The reel 19 is provided upon one edge with the series of serrations 30. The dog 31 is pivoted upon the pin 32 secured to the side 14 of the lamp housing. This dog 31 is provided with an inturned end 33 adapted to engage the serrations 30 of the reel. The spring 34, which is secured by rivets 35 to the casing member 11, engages the end 33 of the dog and normally urges it into engagement with the reel. The ratchet control lever or plunger 36 passes through the guide 37 secured to the front of the lamp casing and carries the member 38, which latter is provided with the slot 39 enclosing the pin 32.

With the plunger 36 in its outer position as shown in Figure 2, the portion 40 of the member 38 engages the portion 41 of the dog 31. As clearly shown in Figure 3 when

the plunger 36 is moved inwardly, the portion 40 engages the cam 42 on the dog and swings the latter downwardly against the spring 34 and out of the engagement with the reel.

The finger 43 formed of nonconducting material is secured to the member 38 by rivets 44. This member is moved in and out by movement of the ratchet control lever 36. When the lever is out as shown in Figure 2 and consequently when the ratchet is in operation, the finger 43 is located as shown in Figure 4. In this case, the members 28 and 27 are in contact thus closing the lamp circuit. When the plunger 36 is pressed inwardly to the position shown in Figure 3, the ratchet is thrown out of operation and the reel spring will operate to wind up the extension cord 20. With the parts in this position member 43 has passed between the members 27 and 28 and since it is of nonconductive material, the lamp circuit is broken. The off-set portion 29 of the member 28 serves to guide the finger 43 as it passes between the members 27 and 28.

It will be apparent from the construction shown and described that when the ratchet is placed in operation by pulling out the plunger 36, the lamp will be lighted. This movement of the plunger would normally take place before drawing out the lamp regardless of whether the plunger controls the circuit, consequently the lighting of the lamp at the time when it is desired lighted is accomplished in the normal operation of the lamp. When it is desired to reel up the lamp and return it to its housing the plunger will be pushed to throw the ratchet out of operation. This movement automatically puts out the light which is then no longer needed. It will be obvious that if the lamp is desired for use while in its socket, the plunger 36 may be simply operated as a switch without regard to its operation upon the ratchet.

We have shown one prefered form of construction by way of example but it is to be understood that we contemplate such changes and modifications as come within the scope of the appended claims.

We claim—

1. In an extension light, a wire reel, a spring for said reel, a ratchet for the reel comprising a spring pressed dog adapted to engage serrations formed on the reel, a lever adapted to move the dog out of engagement with the serrations, and a switch for the light circuit operated by said lever.

2. In an extension light, a wire reel, a spring for said reel, a ratchet for the reel comprising a spring pressed dog adapted to engage serrations formed on the reel, a lever adapted to move the dog out of engagement with the serrations, a switch for the light circuit comprising a pair of members normally in contact and means carried by the rachet lever adapted to separate said members when the ratchet is in its out position.

3. In an extension light, a wire reel, a spring for said reel, a ratchet for the reel comprising a spring pressed dog adapted to engage serrations formed on the wheel, a lever adapted to move the dog out of engagement with the serrations, a switch for the light circuit comprising a pair of members normally in contact, and a nonconducting member carried by the ratchet lever and adapted to engage and pass between said members to break the circuit when the ratchet lever is in position throwing out of operation the ratchet.

Signed at Chicago, Illinois, this 16th day of September, 1924.

ERNST G. APPLETON.
RAYMOND MOONEY.