July 8, 1930. J. R. AYOTTE 1,769,912

CIGAR LIGHTER

Filed Aug. 25, 1927

Fig. 1

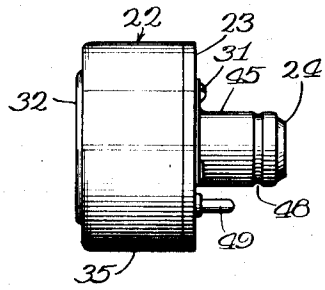


Fig. 2

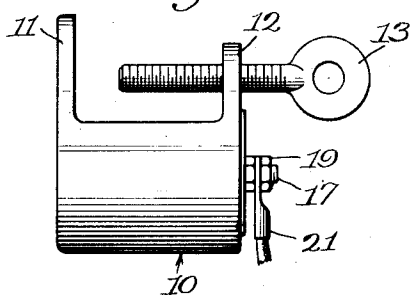


Fig. 3

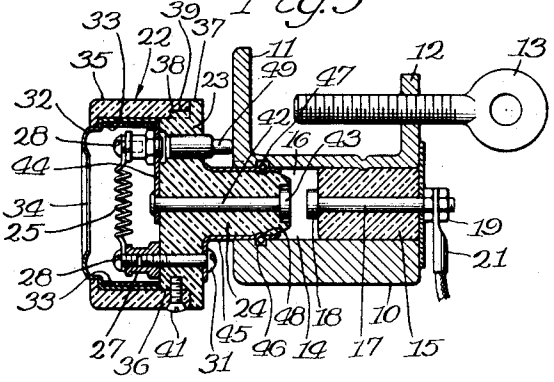


Fig. 4

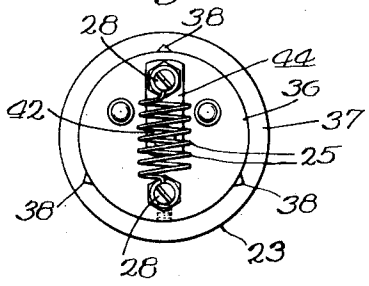


Fig. 6

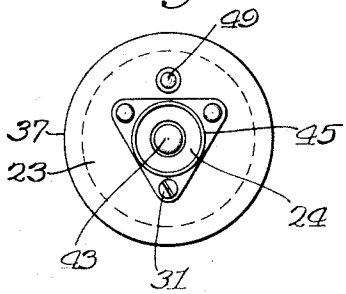


Fig. 7

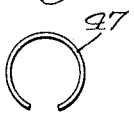
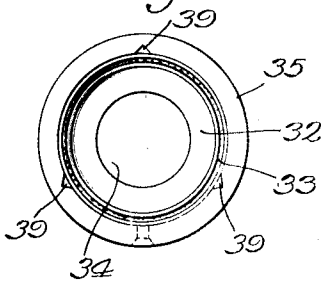


Fig. 5



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UNITED STATES PATENT OFFICE

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CIGAR LIGHTER

Application filed August 25, 1927. Serial No. 215,272.

This invention relates to lighting devices and more particularly to cigar lighters and the like.

One of the objects of the invention is the provision of a novel cigar lighter having new and improved means for attaching the removable head to the base member.

Another object of the invention is the provision of a new and improved means for connecting the protector member to the body portion of the head.

A further object of the invention is the provision of a new and improved cigar lighter that is simple in construction, easily assembled, cheap to manufacture, efficient in operation, and one that may be applied to an automobile with a minimum of labor and expense.

Other and further objects and advantages of the invention will appear from the following description taken in connection with the accompanying drawings, in which

Fig. 1 is a side view of the head member;

Fig. 2 is a side view of the base or socket member;

Fig. 3 is a vertical section of the head and socket member in assembled relation;

Fig. 4 is an end view of the head with the protector member removed;

Fig. 5 is an end view of the protector member toward the inside;

Fig. 6 is an elevation of the inner end of the head member; and

Fig. 7 is a detail view showing the resilient retaining ring.

Referring now to the drawings, in which similar reference characters designate the same parts throughout the description, the reference numeral 10 designates the base or socket member which is provided with parallel flanges 11 and 12. The flange 12 is provided with the clamping screw 13 for attaching the member to a dash or other parts of the car. The socket member 10 is provided with an opening 14 extending longitudinally thereof, and a plug 15 of any suitable insulating material is secured in the outer end of the opening 14. The plug 15 extends only partially through said opening, whereby a socket 16 in the inner end of the base member 10 is provided.

A terminal 17 is secured in the plug 15 and has a contact member 18 at one end located in the bottom of the socket 16 and its opposite end may be provided with binding nuts 19 for attaching the terminal of a conductor 21 thereto.

A head member having a resistance element therein and provided with means for engaging the contact member 18 is provided for affording a lighter.

In the form of the device selected to illustrate one embodiment of the invention, a head 22 is employed for this purpose. The head 22 comprises a body portion 23 having a projection or reduced portion 24 which is adapted to engage in said socket 16. The head 22 is preferably of insulating material.

The body portion 23 is provided with a suitable resistance element 25 which is held in any suitable manner in spaced relation to said body portion. As shown, the resistance element 25 is attached at each end to supports 26 and 27 by suitable binding screws 28. The support 27 is secured to the head in any suitable manner as by means of the threaded bolt 31.

Suitable means are provided for enclosing the resistance element. As shown, a cylindrical metallic casing 32 may be employed for this purpose. In order to properly insulate the casing a band of insulating material such as asbestos 33 is secured to the inner periphery of said casing. The outer end of said casing is provided with an opening 34 through which the cigar or cigarette may be inserted for bringing the same in contact with the resistance element 25 for lighting the same. In order to protect the hand of the user a protector member 35, of suitable insulating material, such as bakelite, is provided. This protector member extends about the casing 32 and projects inwardly beyond the end of said casing.

Suitable means are provided for connecting the protector member to the body portion of the head. As shown, the body portion is reduced at its outer end, forming a cylindrical portion 36 and an annular flange 37.

The cylindrical portion 36 may be provided with radial projections 38 for engaging in corresponding recesses 39 in the inner periphery of the inner end of the protector member 35. The parts are adapted to be held in adjusted position by any appropriate means, such as the screws 41.

Suitable means are provided for conducting the current from said conductor 21 to the resistance element 25. As shown, the body portion 23 is provided with an axial opening in which is mounted a conductor element 42 having a contact member 43 on its inner end for engaging the contact member 18.

The inner end of the conductor element 42 engages a metallic plate 44 on which is rigidly secured the support 26. A metallic sleeve 45 is mounted on the projection 24 and is held in position by the bolts 31 which engage a flange on said sleeve. By means of this arrangement the circuit is completed when the reduced portion is inserted in the socket and pushed inwardly until the contacts 18 and 43 engage. The current will pass from the conductor 21 through the conductor elements 17 and 42, plate 44, support 26 to the resistance element 25 and back through the bolt 31, the sleeve 45 and grounding on the vehicle through the socket 10.

Means are provided for holding the projection 24 in the socket 16 in what will be termed neutral position. That is, a position in which the contact member 43 will be spaced from the contact member 18. Any suitable mechanism may be employed for this purpose. As shown, the socket member 10 is provided with a groove 46 in its inner periphery for receiving a resilient split ring 47, see Figs. 3 and 7, which is of slightly less diameter than the projection 24. The sleeve 45 is provided with a corresponding annular recess 48 into which said ring will snap when the projection is inserted in the socket 16 for holding the head in neutral position. The inner end of the projection 24 and sleeve 45 is tapered to facilitate their entrance into said socket.

In the operation of the device, when it is desired to light a cigar or cigarette the user grasps the head and forces the same inwardly to close the circuit and heat the resistance element to incandescence. The head is then removed by pulling outwardly on the same, the resilient ring 47 automatically releasing the projection as it is pulled outwardly.

In order to prevent unnecessary movement of the head in the travel of the vehicle, and to insure the circuit being kept open, the head may, if desired, be provided with one or more spring plungers 49 which are adapted to engage the flange 11 for yieldingly resisting the inward movement of the head beyond its neutral position.

While I have shown the retaining ring as being permanently attached to the socket, it is understood it may be attached to the projection, if desired.

It is thought from the foregoing taken in connection with the accompanying drawings that the construction and operation of my device will be apparent to those skilled in the art, and that various changes in size, shape, proportion and details of construction may be made without departing from the spirit and scope of the appended claims.

I claim as my invention:

1. In a cigar lighter, a base member having a socket provided with an annular recess in its inner periphery, a head having a body portion and a reduced portion for engaging in said socket, said reduced portion being provided with an annular recess extending about the same, a resistance element mounted in the body portion of said head, a split ring of resilient material permanently seated in one of said recesses and adapted to snap into the other recess when said projection is inserted in said socket for holding said head in a predetermined position, and means for completing an electric circuit through said element and grounding the same on said base member when said head is pressed inwardly beyond said predetermined position.

2. In a cigar lighter, a head having a body portion and a reduced portion affording a plug, a resistance element mounted in the body portion of said head, a base member, clamping means for attaching said member to a support, said member being provided with an axial bore having rigid defined walls for engaging said plug, a plug of insulating material in one end of said bore, a terminal extending through said plug, means on said terminal for attaching a conductor thereto, the peripheral wall of the opposite end of said bore being provided with an annular groove, and a resilient split retaining ring in said groove spaced outwardly from the inner ends of said terminal and plug.

3. In a cigar lighter, a base having a socket therein, a contact member within said socket, insulated from said base, a head of insulating material having a projection for engaging said socket, an electrical resistance element mounted on said head, a metallic casing about said element and having an opening opposite said element, insulating material about the inner periphery of said casing, a protector member of insulating material secured to said head and extending about said casing, a contact member on the end of said projection, electrical conductor means between said element and said last named contact member, a metallic sleeve about said reduced portion and having an annular groove about the same, means for electrically connecting said sleeve to said element, the cylindrical wall of said socket being provided with a groove, a split ring of resilient material permanently mounted in one groove and adapted to snap into

the other for holding said projection within said socket with said contact members disengaged but permitting said contact members to be engaged or said projection removed by applying force to said head.

4. In a cigar lighter, a base member provided with a socket, a head member having a projection tapered at its free end for engaging said socket, yielding means for automatically gripping said projection when the same is inserted into said socket a predetermined distance, and spring pressed pins carried by said head for engaging said base member when said projection is inserted within said socket for yieldingly resisting the insertion of said projection in said socket beyond a predetermined distance.

5. A cigar or cigarette lighter comprising; a base member provided with a contact terminal; a lighting element; an element-carrying member removably supported on said base member, and provided with a contact terminal for connecting with said terminal on the base, said carrying member being grounded on the base; one of said members being provided with a reduced portion affording a plug, and the other member being provided with a cavity affording a socket for slidably engaging said plug; and enclosed yielding means for normally holding said element-carrying member in open circuit position on the base member, said yielding means being operable to close a circuit through the lighting element.

6. A cigar or cigarette lighter comprising; a base member provided with a contact terminal; a lighting element; an element-carrying member removably supported on said base member, and provided with a contact terminal for connecting with said terminal on the base, said carrying member being grounded on the base; one of said members being provided with a reduced portion affording a plug and the other member being provided with a cavity affording a socket for slidably engaging said plug; and a separate friction member interposed between said plug and socket for holding the plug and socket in normal assembled relation.

7. A cigar or cigarette lighter comprising; a base member provided with a contact terminal; a lighting element; an element-carrying member removably supported on said base member, and provided with a contact terminal for connecting with said terminal on the base, said carrying member being grounded on the base; one of said members being provided with a reduced portion affording a plug, and the other member being provided with a bore affording a socket for slidably engaging said plug; and yielding means comprising a split ring interposed between said plug and socket for normally holding said element-carrying member in open circuit position on the base member, said ring being expansible to allow further movement of the plug into the socket to close a circuit through the lighting element.

In testimony whereof I affix my signature.

JOSEPH RENÉ AYOTTE.