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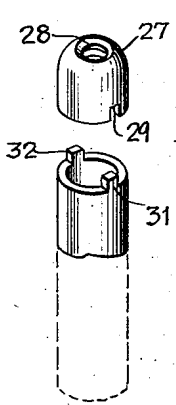
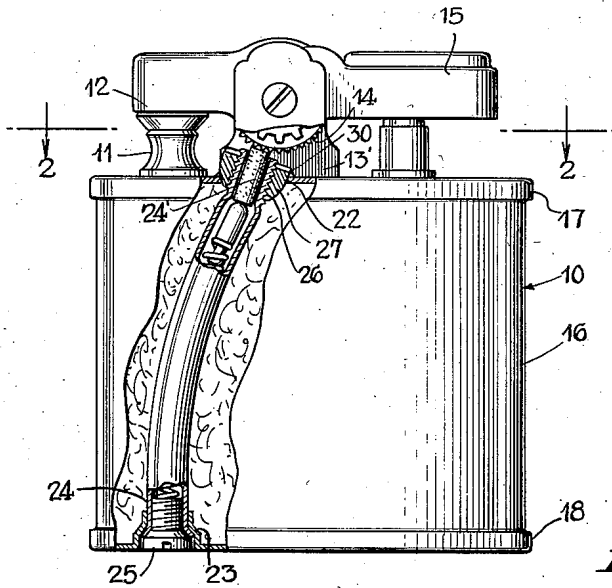
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2,508,882

CIGAR LIGHTER CASING CONSTRUCTION

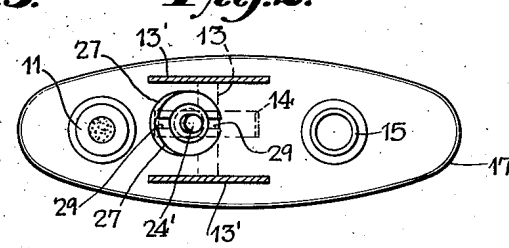
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*Fig. 1.*

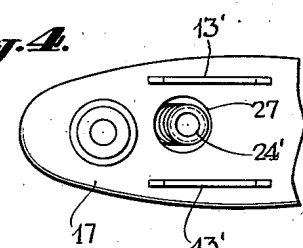


*Fig. 3.*

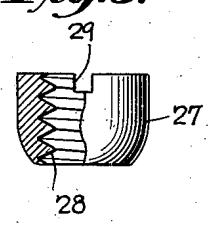
*Fig. 2.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE

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## CIGAR LIGHTER CASING CONSTRUCTION

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3 Claims. (Cl. 67-7.1)

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Cigar lighters are well known wherein a casing is employed comprising side walls which surround a fuel chamber, and walls at the opposite ends of the side wall structure which close the fuel chamber, a sparking wheel being mounted on one of the end walls and a flint tube extending through the fuel chamber which has its opposite ends penetrating through the end walls so that a flint may be inserted into one end of the flint tube and passed through the tube to the opposite end thereof which is positioned near the periphery of the sparking wheel. In lighters of the above character, at least one and usually both end walls of the casing are constructed separately from the side wall structure and soldered or brazed to the latter to form a fluid tight seal, and the primary object of the present invention is to provide a lighter casing structure of the above character wherein the flint tube will act as a reinforcing bolt, so to speak, which positively and securely clamps and holds the walls of the casing between which it extends and particularly the joints adjacent the flame of the lighter, in proper relation to each other to prevent the parts at the soldered or brazed joints from loosening, as might otherwise occur in service, and which also insures that the flint tube will be positioned accurately with respect to the sparking wheel.

Further objects, features and advantages of the invention will be in part obvious and in part specifically referred to in the description hereinafter contained, which, taken in conjunction with the accompanying drawing, discloses a preferred form of a lighter constructed in accordance with the invention, the disclosure, however, should be considered merely illustrative of the principles of the invention in its broader aspects.

In the drawing:

Fig. 1 is a side elevation, with certain parts cut away, of a cigar lighter having a casing constructed in accordance with the preferred form of the invention;

Fig. 2 is a view partly in section taken along the line 2-2 of Fig. 1 and looking in the direction of the arrows;

Fig. 3 is a perspective view showing the constructional detail of one element of the casing structure;

Fig. 4 is a fragmentary top view of the cigar lighter casing; and

Fig. 5 is a side elevation partly in section of the element shown in Fig. 3.

In the drawing, the preferred form of the invention is illustrated as applied to a lighter of

a well known general construction having a fuel casing generally indicated at 10 from which protrudes a wick tube 11 which also serves as a seat for a snuffer 12 rotatably mounted on an axle 13 supported on ears 13', the axle also carrying thereon a sparking wheel 14. A reciprocable fingerpiece 15 is provided and operates upon the depression thereof to rotate the sparking wheel 14 by mechanism well known in the art and therefore not shown or described in detail) to project sparks onto a wick carried within the wick tube 11 and simultaneously therewith; the snuffer 12 is caused to swing upwardly to expose the wick to the projected sparks. Since various forms of the lighter of the general construction and mode of operation as thus far described are well known in the art to which the invention pertains, same will not be described in greater detail herein.

In the form of the invention illustrated, the fuel casing 10 comprises a side wall structure 16 which defines and surrounds the fuel chamber, and top and bottom end walls 17 and 18 respectively, each of the end walls serving to close the fuel chamber. The top and bottom end walls are provided with openings 22 and 23 respectively which receive the opposite ends of a bent flint tube 24 extending through the fuel chamber, so that a flint 24' may be inserted into one end of the flint tube and passed through the tube to the upper end thereof which penetrates the top end wall 17 by way of opening 22 therein, adjacent the sparking wheel 14. The flint tube 24 is fixedly secured to the bottom end wall 18, and a screw 25 fits into the lower end of the flint tube for the usual purposes. The upper end of the flint tube is threaded as at 26 to receive a substantially cup shaped nut member 27 threaded along the interior thereof as at 28, Fig. 5. As the nut 27 is tightened on the threaded upper end of the flint tube, it operates to impose tension on the flint tube, thereby causing the flint tube to serve as a reinforcing bolt which securely clamps the separately constructed end walls of the fuel casing to the side wall structure. After the nut member 27 is tightened on the flint tube, the nut preferably is sealed to the top end wall 17 as by soldering indicated at 30, Fig. 1, to provide a fluid tight seal therebetween. The joints of the casing structure, after assembly, may be soldered in the usual manner to provide a fluid tight seal.

It may happen in service that cigar lighters of the type herein described are overcharged with fuel so that the fuel may spread along the exterior surface of the fuel casing and upon the ig-

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dition of the lighter, the wick flame may spread to the fuel on the casing surface with the result that the soldered joints of the casing structure may be loosened. With the construction of the present invention, however, there is no danger that the separately constructed end walls will become loosened or separated from the side wall structure since the nut 27 acts between the threaded upper portion of the flint tube and the top end of the casing to hold the separately constructed wall structures in their assembled relation, and prevent them from loosening up even though the soldered joints are weakened.

It should be noted that the opening 22 provided in the top end wall 17 adjacent the sparking wheel 14 is greater in diameter than the flint tube. The nut 27 is so formed with a spherically curved outer surface, as shown, that upon threaded engagement with the flint tube, it will accurately position the upper end of the flint tube with respect to the opening 22, and also with respect to the sparking wheel 14, thereby insuring that the flint 24' will be positioned in proper tangential relation to the sparking wheel, to project the sparks accurately onto the wick. This accurate positioning of the flint also minimizes jamming of the latter against the sparking wheel when the flint has been worn thin.

For convenience in threading the nut 27 to the upper end of the flint tube, I have formed a pair of oppositely disposed slots, such as 29, Figs. 3 and 5, in the outer periphery thereof, which slots may conveniently be engaged by a tool 31 having detents 32 engageable within the slots 29 of the nut.

While the invention has been disclosed as embodied in a lighter of the above-described specific construction, it should be understood that changes may be made therein without departing from the invention in its broader aspects, within the scope of the appended claims.

I claim:

1. A cigar lighter casing structure of the character described, having a side wall structure surrounding a fuel chamber, an end wall closing one end of the side wall structure, a sparking wheel journaled exteriorly of said end wall, said end wall having an opening therethrough adjacent said sparking wheel, said end wall being separately constructed from the side wall structure, a second end wall at the opposite end of said side wall structure also having an opening therethrough, a flint tube extending through said fuel chamber between said openings, said opening adjacent said sparking wheel being larger in cross section than the flint tube, one end portion of said flint tube being fixedly connected with the second end wall and the opposite end portion of the flint tube being threaded, and a nut member acting between the threaded portion of said flint tube and said end wall having the larger opening, to fix the position of the adjacent end of the flint tube with respect to the sparking wheel.

2. A cigar lighter casing structure of the character described, having a side wall structure sur-

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rounding a fuel chamber, an end wall closing one end of said side wall structure, a sparking wheel journaled exteriorly of said end wall, said end wall having an opening therethrough adjacent said sparking wheel, another wall of the said casing structure also having an opening therethrough, a flint tube extending through said fuel chamber between said openings, one end portion of said flint tube projecting through said above mentioned end wall opening to a point adjacent said sparking wheel, and a flint tube clamping member surrounding the aforesaid projecting portion of the flint tube, said clamping member having locking engagement with said projecting portion of the flint tube to hold said clamping member against outward movement along said flint tube, said clamping member also overlying said end wall to hold said end wall against outward movement along said flint tube.

3. A cigar lighter casing structure of the character described, having a side wall structure surrounding a fuel chamber, an end wall closing one end of said side wall structure, said side wall and end wall being separately constructed, a sparking wheel journaled exteriorly of said end wall, said end wall having an opening therethrough adjacent said sparking wheel, another wall of the said casing structure also having an opening therethrough, a flint tube extending through said fuel chamber between said openings, one end portion of said flint tube projecting through said above mentioned end wall opening to a point adjacent said sparking wheel, means for sealing the joint between the side wall structure and said end wall and also the joint between the projecting end portion of the flint tube and the end wall, and a flint tube clamping member surrounding the aforesaid projecting portion of the flint tube, said clamping member having locking engagement with said projecting portion of the flint tube to hold said clamping member against outward movement along said flint tube, said clamping member also overlying said end wall to hold said end wall against outward movement along said flint tube.

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