

Jan. 14, 1930.

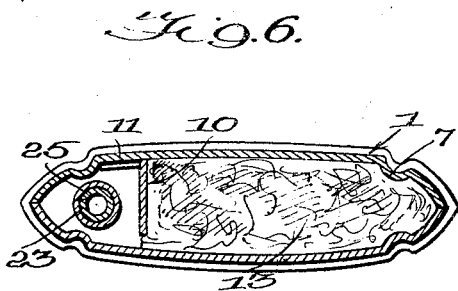
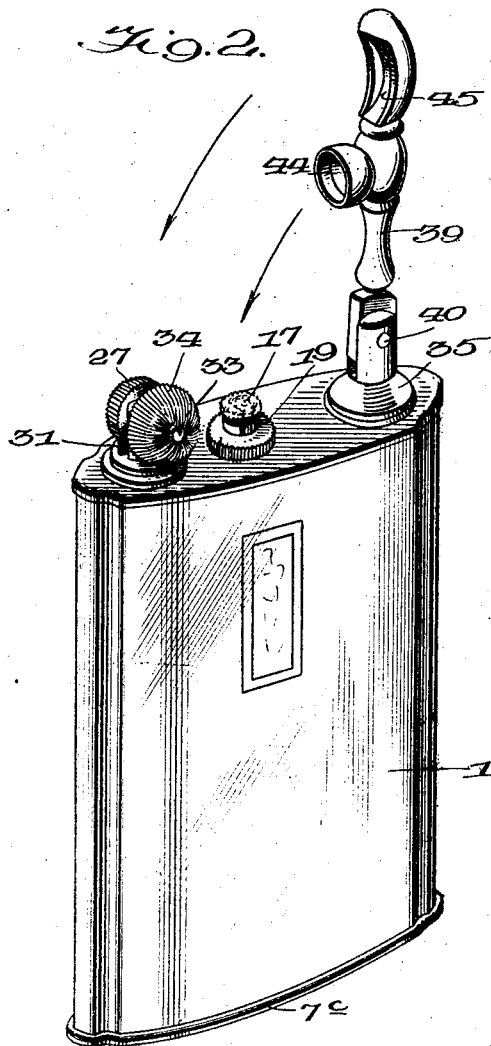
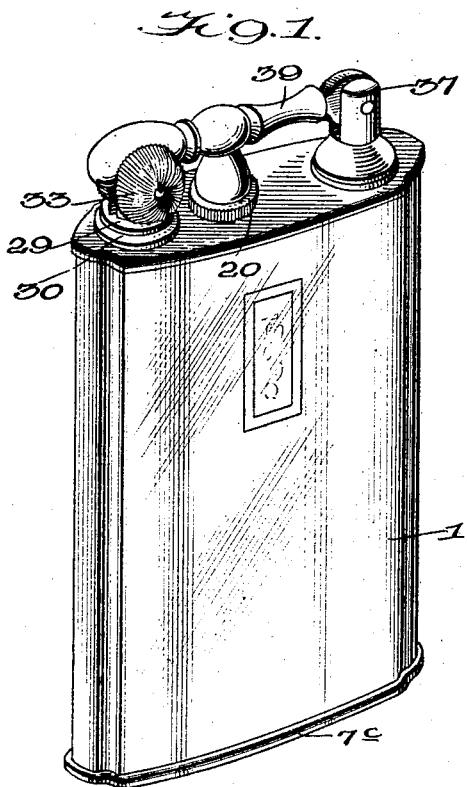
C. J. LAGERHOLM

1,743,610

POCKET LIGHTER

Filed March 9, 1927

2 Sheets-Sheet 1



Inventor
C. Julius Lagerholm,

By *Robt. E. Barry*

Attorney

Jan. 14, 1930.

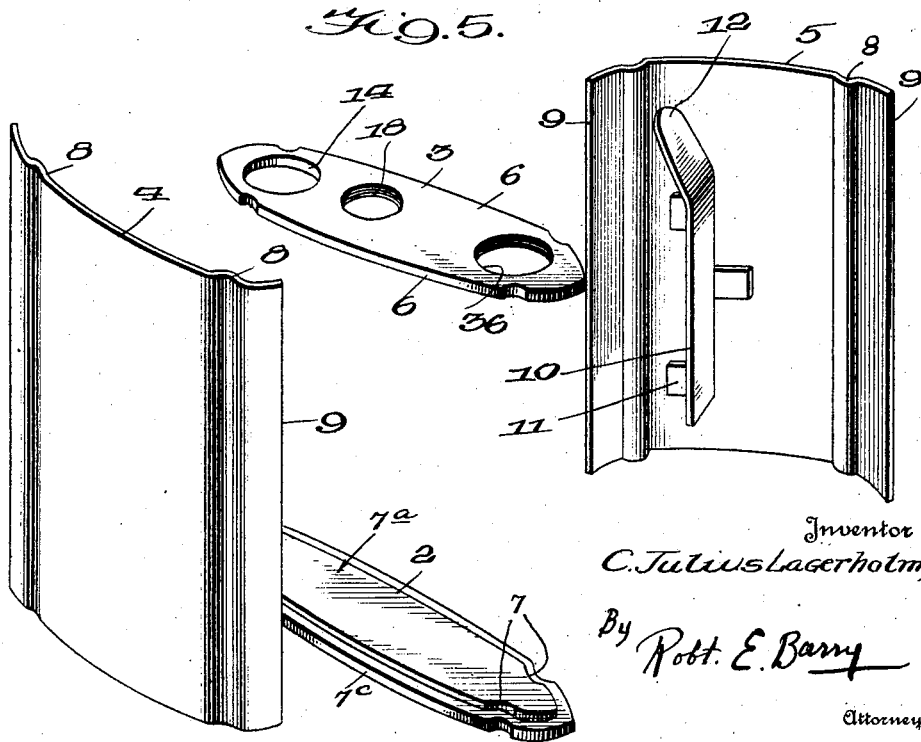
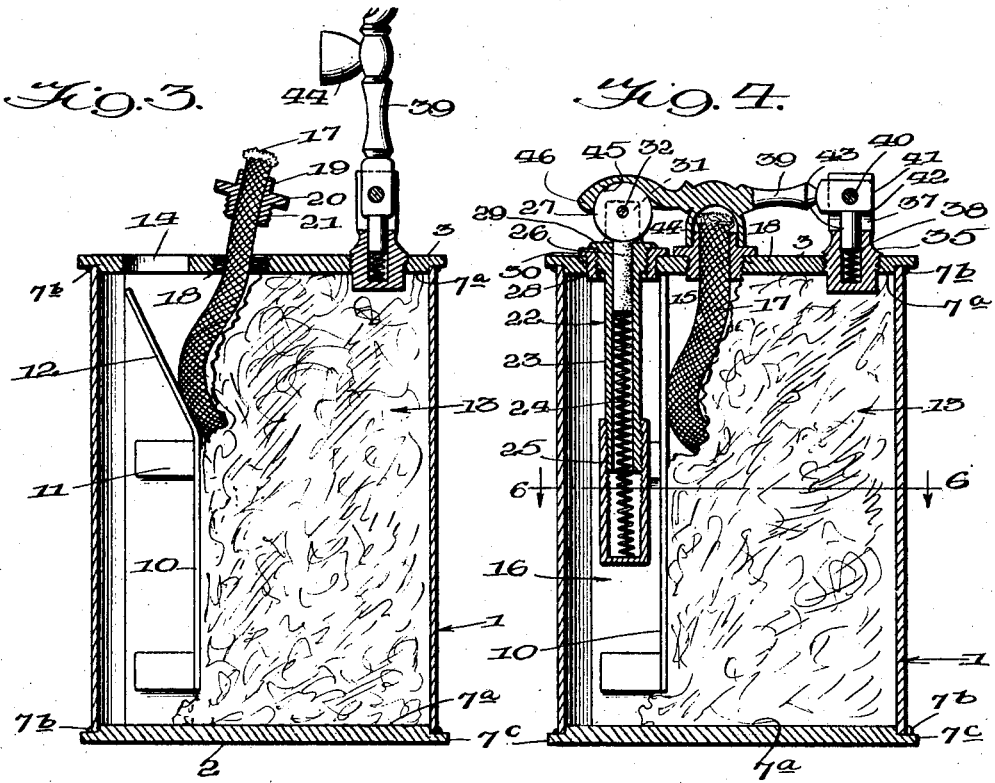
C. J. LAGERHOLM

1,743,610

POCKET LIGHTER

Filed March 9, 1927

2 Sheets-Sheet 2



Inventor
C. Julius Lagerholm,
By Rott. E. Barry
Attorney

UNITED STATES PATENT OFFICE

CARL JULIUS LAGERHOLM, OF ATTLEBORO, MASSACHUSETTS, ASSIGNOR TO EVANS CASE COMPANY, OF NORTH ATTLEBORO, MASSACHUSETTS, A CORPORATION OF MASSACHUSETTS

POCKET LIGHTER

Application filed March 9, 1927. Serial No. 173,869.

This invention relates to improvements in pocket lighters or igniters for cigarettes, cigars and the like, and the primary object is to provide a device of this character, of simple inexpensive construction, and one which will be reliable in operation and durable in use.

A further object of the invention is to furnish a pocket lighter case formed of sheet metal sections to facilitate the inexpensive manufacture of the device.

A still further object is to provide a pocket lighter casing with an internal baffle designed to separate the absorbent containing chamber from the pyrophoric stick chamber, whereby the absorbent will be prevented from interfering with the housing of the pyrophoric stick while the latter is being inserted or removed. The baffle is made of readily bendable material, so that its upper end may function as a guide for the absorbent material while the latter is being fed into the casing. Said upper end of the baffle may subsequently be straightened out, from the exterior of the casing, so that it will not interfere with the insertion or removal of the pyrophoric stick housing.

Another object is to provide improved means for attaching the pyrophoric stick housing to the top of the casing, so that the abrasion wheel in each lighter made in accordance with my invention, will be properly aligned with the wick to produce lighting of the latter.

A further object is to furnish an improved wick tube through which the wick may be threaded before inserting the wick in the casing, such wick tube being readily detachable from the casing, so that the wick may be threaded into the tube while the tube is detached from the casing.

Another and important object of this invention is to provide the abrasion wheel with a novel element for rotating the same, such element involving an auxiliary wheel having a tapered roughened edge to permit the operator to readily manipulate the tapered wheel by his thumb, while the casing rests in the palm of his hand.

Another object is to provide an improved

snuffer and abrasion wheel engaging lever.

With the foregoing objects outlined and with other objects in view which will appear as the description proceeds, the invention consists in the novel features hereinafter described in detail, illustrated in the accompanying drawings, and more particularly pointed out in the appended claims.

Referring to the drawings,

Fig. 1 is an enlarged perspective of my improved pocket lighter with the snuffer in closed position.

Fig. 2 is a similar view with the snuffer in raised position.

Fig. 3 is a vertical sectional view of the device showing the baffle in the position which it occupies when the device is first manufactured. In this view, the pyrophoric stick is absent, and the wick and its tube is partly removed.

Fig. 4 is a vertical sectional view of the device with all parts in the position they occupy when the device is ready for use.

Fig. 5 is a perspective view of the four sections which make up the casing; the view showing these sections before they have been fastened together.

Fig. 6 is a horizontal sectional view taken on line 6—6 of Fig. 4.

The drawings show the parts somewhat enlarged to facilitate illustration, but it may be stated that as the device must be light and neat, in actual practice, it is only about two inches in height and less than an inch and one-half in width.

As best shown in Fig. 5, the casing 1 of my device is preferably formed of an imperforate bottom 2, a perforated top 3, and two sides 4 and 5. It will be observed that the ends 2 and 3 are stepped and each step 7^a has substantially semi-elliptical edges 6 interrupted by notches 7, and this configuration is the same as a plan of the casing. Each side is formed of a sheet metal stamping and is of substantially semi-elliptical shape viewed from the end, and is provided near its edges with channel shaped parts or beads 8, which, when the parts are fitted together, enter the notches 7 of the steps 7^a, and thus interlock between the ends

and sides of the casing. The upper and lower edges of the sides 4 and 5 are preferably soldered as shown at 7^a to the upper face of the end 2, and the lower face of the end 3, and the side edges 9 of the two sides are soldered together to form the complete casing. The edges of the ends 2 and 3 project beyond the sides, as shown at 7^c.

This method of manufacture, I have found, not only simple and inexpensive, but a casing made in accordance therewith, readily fits in a small pocket of a garment without liability of wearing or tearing the latter during the use of the lighter.

Before the sections of the casing are assembled, a baffle 10 is fixed to the side section 5. This baffle is preferably of bendable sheet metal, and has tabs or tongues 11 which may be secured to the part 5 by solder or the like. The baffle 10 originally has its upper end bent to one side, as shown at 12, and after the casing is assembled, the baffle occupies the position shown in Fig. 3. At this time, a suitable mass of absorbent material 13 may be fed into the casing through a relatively large opening 14, and the inclined portion 12 of the baffle will function as a guideway to direct the absorbent mass into the compartment or chamber to the right of the baffle. After the absorbent has been placed in the container, any suitable slender instrument may be inserted in the hole 14 to engage the upper end of the baffle, and then by manipulating the instrument, the upper end of the baffle may be swung over to the right in the direction of the arrow 15 in Fig. 4. This brings the entire baffle into a vertical position so that the absorbent 13 is prevented from moving into the chamber 16, for a purpose hereinafter described.

Prior to this invention, it has been customary to thread the wick 17 of pocket lighters through a relatively small hole in the top of the casing, and as the wick is very minute, this is sometimes a difficult task. To overcome this objection, I provide the top of the casing with a relatively large screw threaded aperture 18 which is of considerably larger diameter than the wick. Consequently, the wick may be readily threaded through this hole into the casing. To close this hole and provide a guide for the wick, I provided a wick tube 19 having an annular flange 20 and a screw threaded part 21, the latter being adapted for screwing into the hole 18. The edge of the flange 20 is preferably roughened to facilitate screwing the tube into position.

I have also improved the pocket lighter by changing the pyrophoric element 22. The metal tube 23, spring 24, adjusting cap 25, pyrophoric stick 26 and abrasive wheel 27 of this element, are of the usual construction. Ordinarily, the tube 23 was threaded into the top of the container. For this pur-

pose, a threaded hole was provided in said top. As screw threads do not always start and stop at the same radii, it is obvious that the wheel 27 in the various lighters manufactured in accordance with any particular method, would not all align with the wicks with which they were associated. To overcome this disadvantage, I make the hole 14 of slightly larger diameter than heretofore, and I arrange a threaded sleeve 28 on the threaded portion of the tube 23. This sleeve has internal threads to engage the threads of the tube, and before assembly, the sleeve 28 is screwed up on the tube until the top of the sleeve abuts against an annular shoulder 29 on the tube. The sleeve has a smooth exterior surface, as shown, and after the sleeve has been screwed up tight on the tube, the tube and sleeve are inserted in the compartment 16 until the flange on the top of the sleeve engages the top 3 of the casing. Then the wheel 27 is aligned with the wick 17, that is, it is placed in the same vertical plane which passes through the center of the hole 18, and then the sleeve is secured to the top 3 by solder or the like. After this, whenever it is necessary to remove the pyrophoric element 22, the wheel 27 is used like a thumb screw, and this causes the threads of the tube 23 to unscrew from the sleeve 28. While the tube 23 is being screwed or unscrewed, the baffle 10 prevents the absorbent material from interfering. The tube 23 is provided at its upper end with the usual ears 31 which support the shaft 32 on which the abrasion wheel is mounted. In accordance with my invention, the wheel is fixed to the shaft 32, and one end of the shaft is provided with a thumb wheel 33 which is fast on the shaft. This thumb wheel is preferably of substantially semi-spherical shape, and its rounded face is roughened or milled as shown at 34. Owing to this construction the operator may hold the casing in the palm of his hand and manipulate the thumb wheel by engaging the rounded face of the same and moving his thumb in a curved arc. This causes the abrasion wheel 27 to grind off particles of the pyrophoric stick 26, which particles in incandescent condition, move toward the wick, to ignite the latter. Of course, the absorbent material is saturated with a suitable liquid fuel which may be poured into the casing through the opening 14.

A post 35 is fixed in an opening 36 in the top of the casing in any suitable manner, and it has a forked upper end 37 and a cavity 38. A lever 39 is pivotally mounted in the fork 37, on a shaft 40, and it has angular surfaces 41 and 42 which coact with a spring pressed plunger 43 to hold the lever in the horizontal position, shown in Fig. 4, or the vertical position shown in Fig. 3. The plunger 43 is mounted in the cavity 38.

A snuffer 44 for the wick is carried by the lever 39, and the upper end of the lever is recessed at 45 to receive the upper portion of the wheel 27. Due to this construction, the wheel tends to prevent the lever from moving laterally, and when the device is to be used, the operator places his thumb against the surface 46 of the lever to move the latter from horizontal to vertical position. Then, when the thumb wheel 33 is turned in the direction of the arrow, sparks will be thrown by the wheel 27 to ignite the wick 17.

From the foregoing, it is believed that the construction, operation and advantages of the invention may be readily understood, and I am aware that changes may be made in the details disclosed without departing from the spirit of the invention as expressed in the claims.

What I claim and desire to secure by Letters Patent is:

1. In a pocket lighter, a casing having an aperture in one of its ends, a substantially vertical baffle arranged in the casing and dividing the same into a plurality of compartments, said baffle being formed of pliable metal and having one of its end portions fixed to the casing, and its other end portion extending toward the apertured end of the casing, the last mentioned end portion of the baffle forming a pliable tongue which may be readily bent to facilitate the feeding of filling material through said aperture into the casing.

2. In a pocket lighter, a casing having an aperture in one of its ends, a sleeve fitted in the aperture, fixed to the end of the casing and having internal screw threads, a tube having external threads engaging the threads of the sleeve, means for limiting the turning movement of the tube into the sleeve, a fork permanently fixed to the tube, an abrasion wheel rotatably mounted on the fork exteriorly of the casing, a pyrophoric stick arranged in the tube and engaging said wheel, a wick projecting through the end of the casing having said aperture, the threads of the tube and sleeve arranged to cause the wheel to align with the wick when the tube has been turned to the limit of its movement within the sleeve.

3. In a pocket lighter, a casing having an apertured end, a sleeve in the aperture, fixed to the end of the casing and having internal screw threads, a tube extending into the casing through said sleeve and having external threads engaging the threads of the sleeve, means for preventing the tube from being turned into the sleeve beyond a certain point, a spring mounted in the tube, a pyrophoric stick in the tube and pressed outwardly by the spring, a fork permanently fixed to the tube, an abrasion wheel rotatably mounted on the fork and engaging

said stick, and a wick extending through the end of the casing, the threads of the tube and sleeve being so arranged that the wheel must align with the wick when the tube has been turned to the limit of its movement within the sleeve.

C. JULIUS LAGERHOLM.