

Dec. 6, 1949

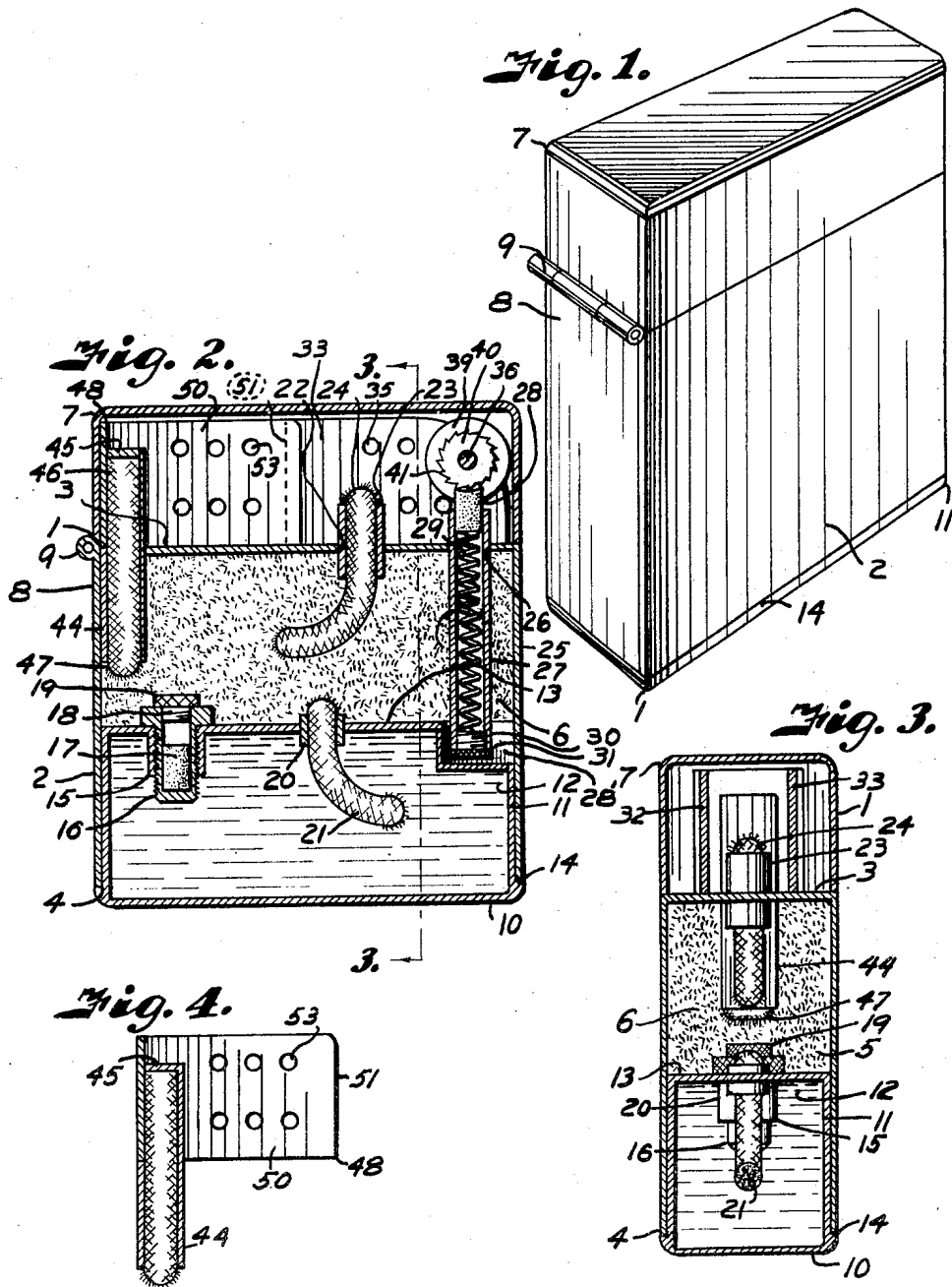
F. K. HETTINGER ET AL

2,490,300

LIGHTER

Filed Aug. 22, 1947

2 Sheets-Sheet 1



INVENTOR  
Francis K. Hettinger  
BY Wardwell Jones  
Fishburn & Mullendore  
ATTORNEYS

Dec. 6, 1949

F. K. HETTINGER ET AL

2,490,300

LIGHTER

Filed Aug. 22, 1947

2 Sheets-Sheet 2

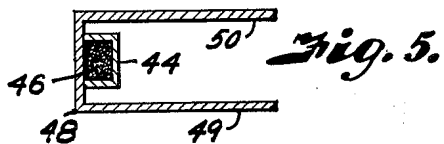


Fig. 5.

Fig. 6.

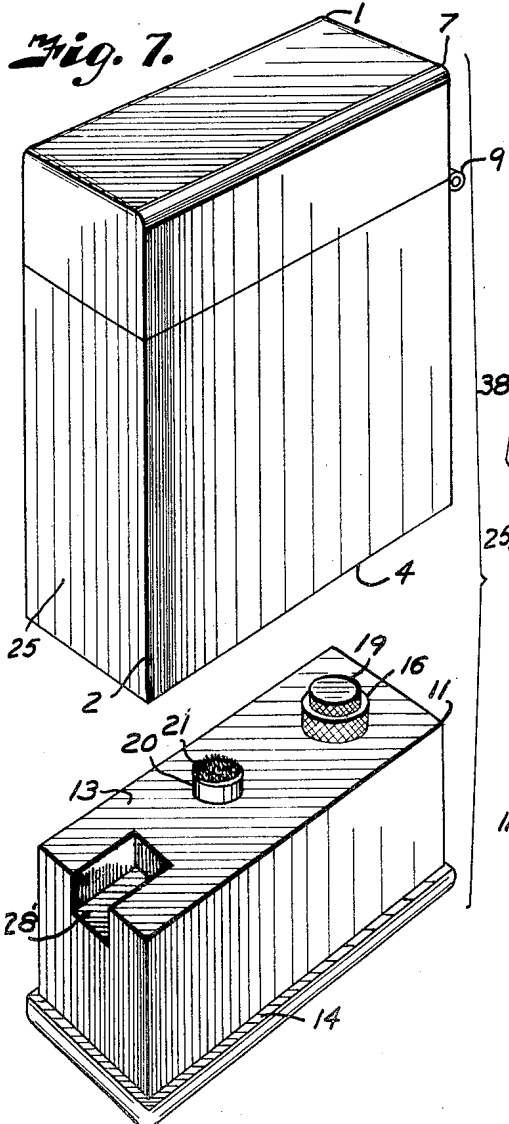
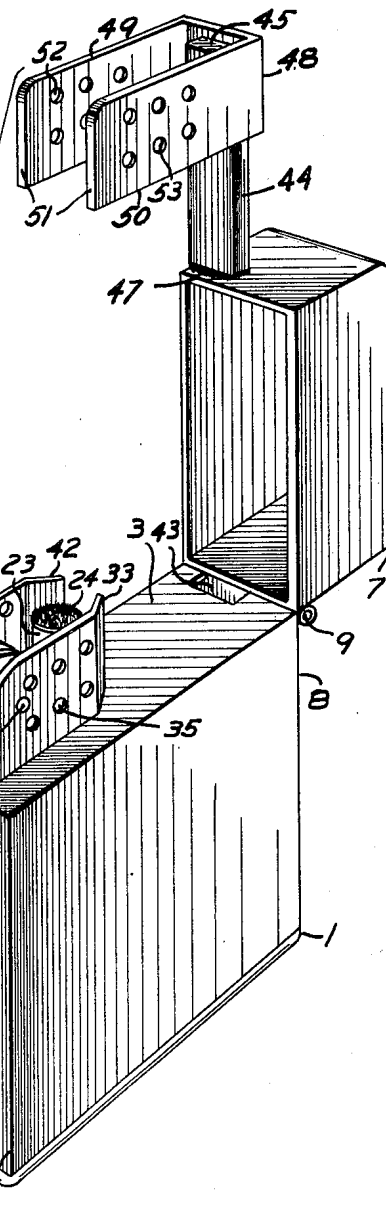


Fig. 7.

INVENTOR  
Francis K. Hettinger  
BY Wardwell Jones  
Fishburn & Mullendore,  
ATTORNEYS.

# UNITED STATES PATENT OFFICE

2,490,300

LIGHTER

Francis K. Hettinger and Wardwell Jones,  
Tucson, Ariz.

Application August 22, 1947, Serial No. 770,022

1 Claim. (Cl. 67-7.1)

1

This invention relates to a lighter, and more particularly to a combination cigarette and pipe lighter.

The lighters commonly in use are principally adapted for lighting cigarettes, and it is difficult to light a pipe with them due to the tendency of the flame to extend upwardly from the lighter instead of downwardly to the bowl of the pipe.

It is, therefore, the principal objects of the present invention to provide a lighter adapted for lighting cigarettes, cigars and pipes; to provide a lighter having a main wick mechanism and a separate removable wick adapted to be lighted from the main wick for lighting a pipe; to provide a windshield guard for the main lighter mechanism; to provide the auxiliary lighting wick with a windshield which extends to the main wick windshield; to provide a removable fluid container or compartment in the base of the container; to provide a compartment for an absorbing material for the lighter fluid; to provide a wick leading from the fluid container or compartment to the absorbent containing compartment; and to provide a device of this character simple, economical to manufacture and efficient in operation.

In accomplishing these and other objects of the present invention, we have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of our lighter.

Fig. 2 is a vertical section through the lighter.

Fig. 3 is a transverse vertical section taken on a line 3-3, Fig. 2.

Fig. 4 is a vertical section showing the auxiliary wick element.

Fig. 5 is a transverse cross-section through the auxiliary wick element.

Fig. 6 is a perspective view of the lighter showing the auxiliary wick element in disassembled relation.

Fig. 7 is a perspective view of the lighter showing the fluid container in disassembled relation from the remainder of the lighter.

Referring more in detail to the drawings:

1 generally designates a lighter which is of relatively flat, rectangular shape, comprising a main case or body 2 having a closed upper end 3 and an open end 4 forming a compartment 5 adapted to receive an absorbent material 6, such as cotton or the like. A top 7 is provided for the main body portion 2 and is hingedly connected to an end 8 of the body member as indicated at 9 (Fig. 1).

2

The bottom 10 of the lighter consists of a container 11 adapted to contain a lighting fluid 12. The container 11 is provided with a top 13, and the container is adapted to removably engage in the open lower end of the body portion 2. The lower portion of the container 11 is provided with an annular offset portion at its lower edge as indicated at 14 (Fig. 3) so that the lower edge of the main body portion will engage the shoulder portion when the lighter is in assembled condition.

The top 13 of the fluid container 11 is provided with an opening for filling the container with fuel, such as lighter fluid. The opening is made by forming a downwardly extending internally threaded boss 15 in the top 13 of the container 11 adapted to receive a threaded elongated container 16 for carrying of an extra flint or pyrophoric element 17. The top of the threaded container 16 is flanged and internally threaded so as to receive a threaded shank 18 of a closure member 19 for preventing the lighter fluid from entering the container, thus keeping the flint dry.

The top 13 of the container 11 is provided with a second opening as best illustrated in Fig. 2, provided with a sleeve 20. A wick or the like 21 is provided to extend through the sleeve 20 into the fluid container 11, and its other end extends into the absorbing material or cotton 6 of the main body 2 of the lighter, also as best illustrated in Fig. 2.

A top 3 of the main body portion 2 is provided with an opening 22 for receiving a sleeve 23. Extending through the sleeve 23 is a wick 24, the wick 24 extending a substantial distance above the top 3 of the body portion 2.

The top 3 of the body 2 is also provided with an opening near the end 25 of the body portion 2 and adjacent the opening 22 as indicated at 26. Adapted to engage in the opening 26 is a tube 27 for containing a flint or pyrophoric element 28. The top of the container 11 is recessed as at 28' to accommodate the lower end of the tube 27 which extends through the absorbent material 6 so that the flint 28 may be removed and replaced without disturbing the absorbent material. A coil spring 29 is adapted to engage the lower end of the flint 28, and its lower end engages the end of a threaded shank 30 of a closure member 31 engaging in the lower end of the tube 27.

Rigidly secured to the top 3 of the body portion and in parallel relation to each other near the end 25 of the container of the lighter are windshield elements 32 and 33 which extend forwardly past the main lighting wick 24. The wind

3

breaker elements are provided with a plurality of openings 35 rearwardly of the wick 24 as best illustrated in Fig. 6. The wind breaking elements 32 and 33 afford a support for a shaft 36. Mounted on the shaft 36 are knurled wheels 38 and 39, and mounted on the shaft 36 between the wheels 38 and 39 is a wheel 40 having teeth 41 adapted to engage the upper end of the flint 28. The knurled wheels 38 and 39 are larger in diameter than the wheel 40 and in turning wheel 40 the operator's finger contacts wheels 38 and 39, but does not contact wheel 40. This arrangement facilitates turning the wheel 40 and prevents soiling of the finger with particles of flint and the like. It will be noted that the forward ends of the wind breaking elements 32 and 33 are curved slightly inwardly around the wick 24 as indicated at 42 (Fig. 6).

The top 3 of the main-body portion 2 is provided with an opening 43 to receive a tube 44 adapted to extend into the cotton absorbing compartment of the body portion 2 as best illustrated in Fig. 2. The tube has a closed upper end 45. Contained in the tube is a wick 46 having its lower end extending outwardly of the tube a slight distance as indicated at 47 and contacting the absorbent cotton 6 in the body portion 2, the tube being removably mounted in the opening in the top of the body portion. Rigidly secured to the upper portion of the tube 44 in any suitable manner is a substantially U-shaped wind guard 48, the arms 49 and 50 of which extend toward the windshield elements 32 and 33 and have their ends 51 engaging the sides of the curved ends 42 of the wind breakers 32 and 33, thus forming a wind breaker extending substantially across the top 3 of the body portion 2. The arms 49 and 50 are provided with a plurality of perforations 52 and 53.

To fill the container 11 with fuel, the container is disengaged from the body portion 2. The container tube 16 is then removed so that fluid may be inserted through the opening into the compartment and the threaded tube replaced in the opening. The fluid will be absorbed by the wick 21 and carried to the absorbing cotton 6 in the main body container. The fluid will then be absorbed by the lighting wick 24 extending above the top 3 of the body 2. Turning of the knurled wheels 38 and 39 will cause the teeth 41 engaging the end of the flint 28 to emit sparks to contact the top of the wick 24 for lighting a cigarette or the like, the elements 32 and 33 and arms 49 and 50 of the U-shaped member 48 preventing wind from putting out the blaze of the wick 24. When it is desired to light a pipe or the like, the tube 44 is removed from the cotton absorbing container by upward pull on the U-

4

shaped member 48 and the end of the wick extending from the tube lighted from the blaze of the wick 24 for transporting of the blaze of the wick 46 to the pipe or for other use.

It will be obvious from the foregoing that we have provided an improved lighter having a main and auxiliary lighting mechanism, the various parts of which are easily accessible for replacement of materials.

It will be obvious that changes may be made in the device without departing from the spirit of our invention.

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

15. A lighter comprising, a casing having one end closed and the other end open, a fluid container adapted to engage in said open end of the body member, a cover hingedly connected to one end of the body member, a compartment in said body member adapted to contain an absorbent material, a liquid in said liquid container, means for conducting the liquid from said container to said absorbent material, a wick extending from said absorbent material through the top of said body member, wind breaking elements carried by said top, a shaft mounted in said wind breaking elements, a friction device secured on said shaft, means for mounting a flint material adjacent said friction device, means for resiliently urging said flint against said friction device, an auxiliary wick extending into said absorbent material and removably carried by said body member, a wind breaking element carried by said auxiliary wick having its ends engaging the first named wind breaking element to form a continuous element substantially across the top of said body member, means in the container for filling the same with igniting fluid, said means including an elongated container for flint material.

FRANCIS K. HETTINGER.  
WARDWELL JONES.

#### REFERENCES CITED

45 The following references are of record in the file of this patent:

#### UNITED STATES PATENTS

Number	Name	Date
50 1,941,873	Aronson	Jan. 2, 1934
2,262,806	Kempf et al.	Nov. 18, 1941

#### FOREIGN PATENTS

Number	Country	Date
55 139,254	Switzerland	June 16, 1930
411,786	Great Britain	June 14, 1934
519,716	Germany	Feb. 11, 1932
622,094	Germany	Nov. 19, 1935