Oct. 21, 1930. V. S. ZAPANTA 1,779,110

LIGHTING DEVICE

Filed May 15, 1928

Fig. 1.

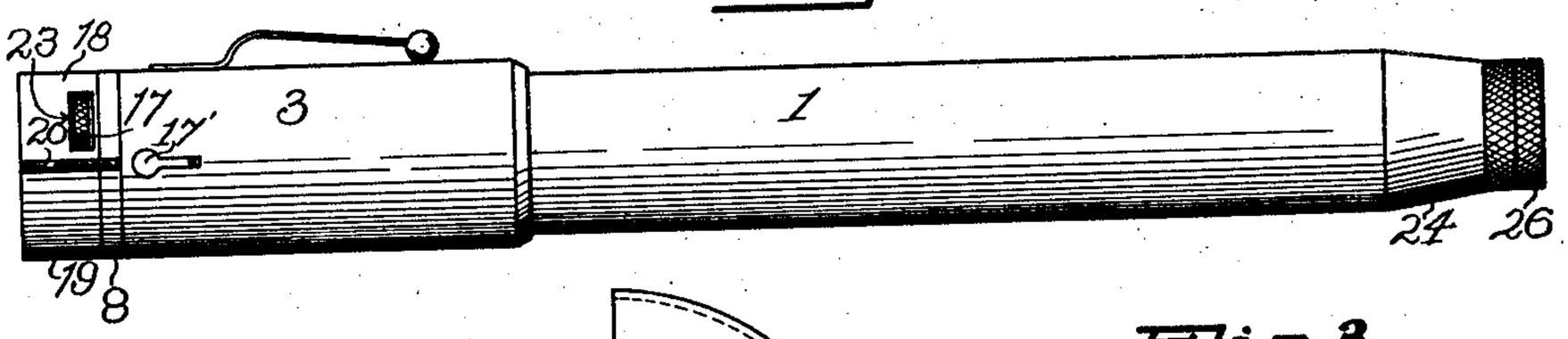


Fig. 2.

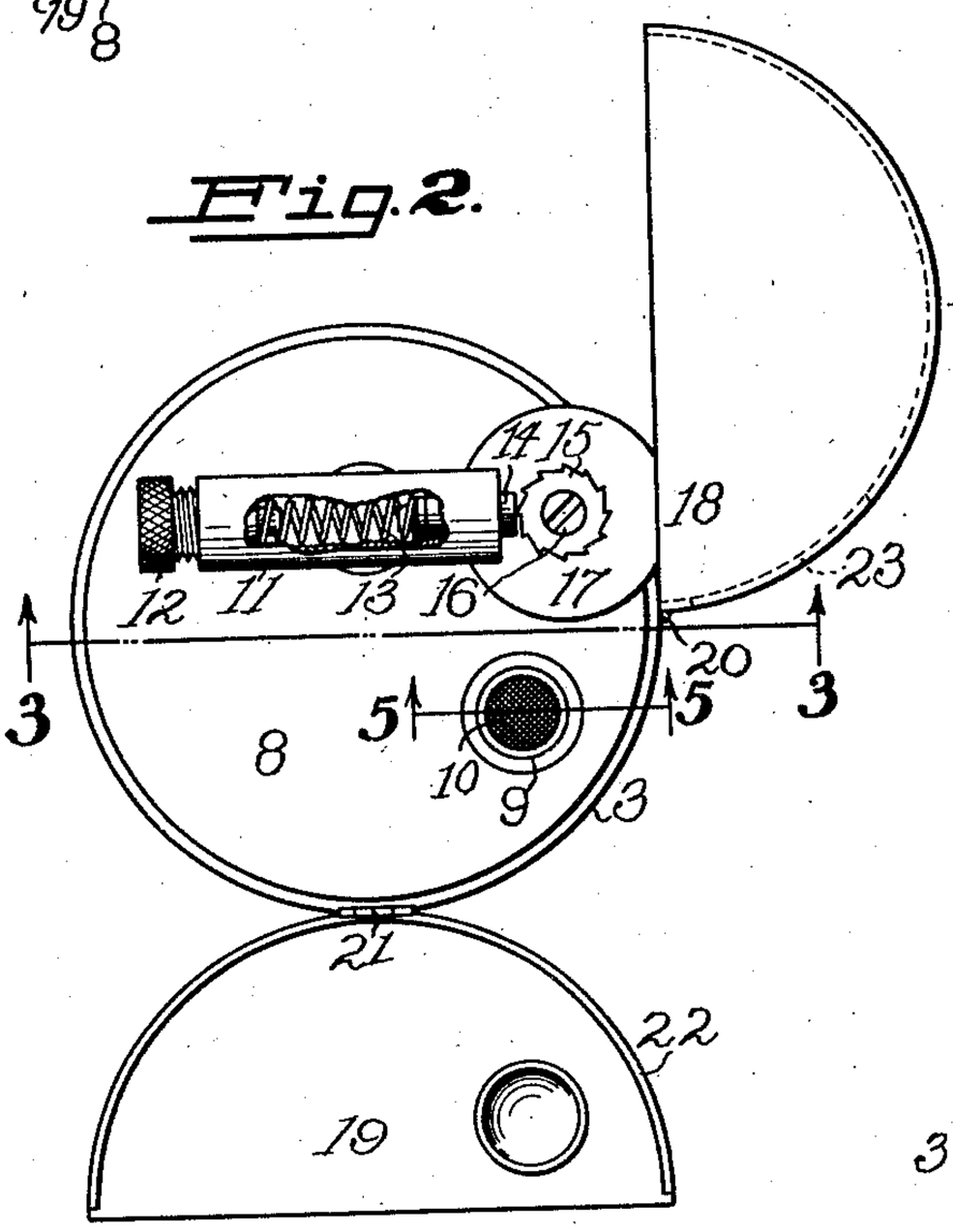


Fig. 3.

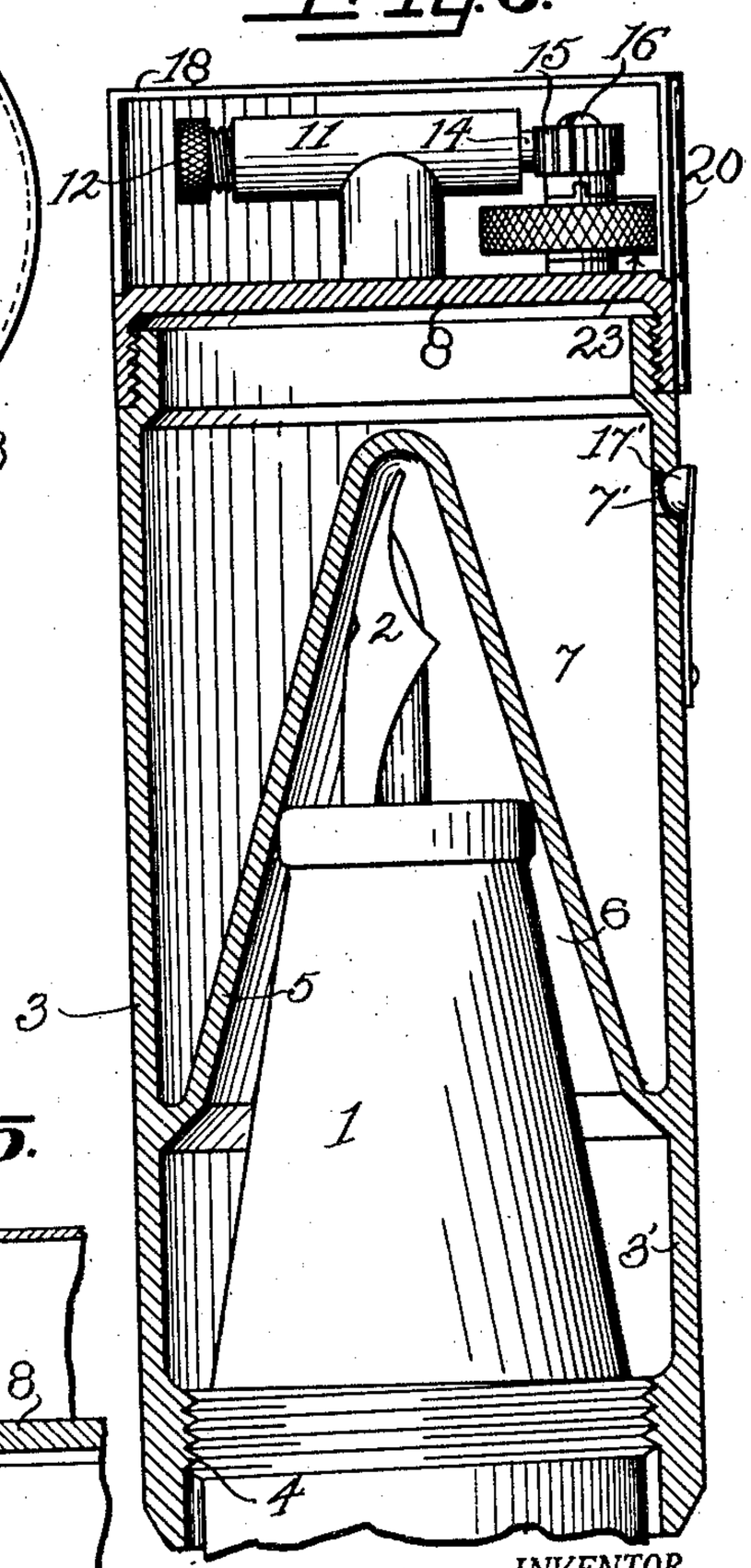


Fig. 4.

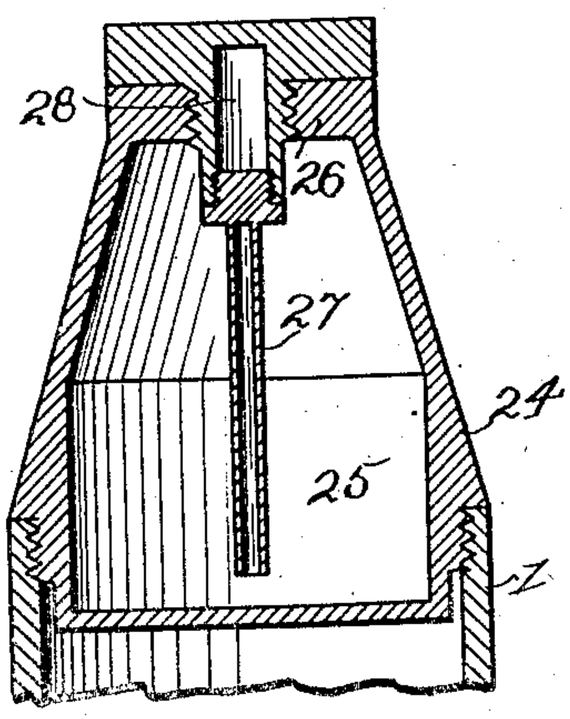
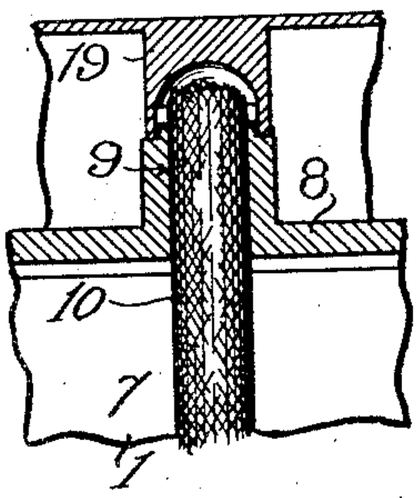


Fig. 5.



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UNITED STATES PATENT OFFICE

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LIGHTING DEVICE

Application filed May 15, 1928. Serial No. 277,932.

The present invention relates to improvements in pocket lighters designed particularly for smokers.

The principal object of the invention is to combine in a fountain pen or a magazine pencil a pocket lighter, so constructed and arranged that the efficiency of the pen or pencil is not impaired, its size is not increased, but at the same time a handy, convenient and efficient lighter is provided.

Another object is to provide a lighter particularly designed and adapted for construction in a fountain pen cap, enabling the equipping of fountain pens now in use with pocket lighting devices by simply changing the closure caps thereof.

Further objects are to provide a pocket lighter of the described type, with a novel form of fuel reservoir, affording an ample supply of fuel without enlarging the pen cap; to provide a novel form of divided cover for affording a flame extinguishing member, and a spark mechanism protector; and to provide a novel form of reservoir for extra fuel and an improved device for transferring the fuel from the reservoir to the cap reservoir.

With the above mentioned and other objects in view, the invention consists in the novel construction and combination of parts hereinafter described, illustrated in the accompanying drawings and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—

Figure 1 is a view in elevation of the preferred embodiment of my invention.

Figure 2 is a view in top plan with the divided cover members both in open position.

Figure 3 is a vertical sectional view taken on line 3—3 of Fig. 2, of the cap of a fountain pen, illustrating particularly the formation of the fuel reservoir.

Figure 4 is a longitudinal sectional view of a fountain pen base, illustrating the auxiliary fuel compartment and the chamber for a spare flint.

Figure 5 is a view in detail section on line 5—5 of Fig. 2, with the flame snuffing cover in closed position.

In the present embodiment illustrated in connection with a fountain pen, 1 indicates the pen barrel carrying the writing point 2. 3 is a cylindrical cap, its skirt 3′ adapted for threadably attaching to the barrel 1 for protecting the point 2.

The interior of the cap is provided with a dividing wall 5, forming a conical chamber 6 on its underside to receive the pen point 2—Fig. 3. The portion of the cap above the dividing wall 5 affords a chamber 7 containing fuel for the lighting element. A removable end 8 is threaded on the upper end of the cap 3 to close chamber 7, and the same is provided with a flanged opening 9 affording a guide for a wick 10 depending into the chamber 7. On the surface of the end 8 is mounted a tubular holder 11, substantially T-shaped in side elevation.

Threadably mounted in one end of the holder is a tension screw 12 for compressing the spring 13 bearing at its opposite end on a flint 14 within the holder with one end projecting beyond the end of the holder—Figs. 2 and 3. The projecting end of flint 14 bears against a peripherally serrated abrader 15 rotatable on a stud 16 and detachably engaging a thumb wheel 17 also rotatable on the stud 16. The periphery of the thumb wheel 17 overhangs or projects beyond the edge of end 8. The spark producing abrader on end 8 and the exposed end of wick 10 are protected by a suitable cover—Figs. 1 to 3 inclusive.

The cover consists of two cover sections 18 and 19, semi-circular in plan, the section 18 being hinged at one end to pivot on a fulcrum 20 extended from the cap at one edge of the end 8. The section 19 is hinged at 21 to the edge of end 8, enabling the operator, when it is desired to expose the wick or smother the flame, to impart an upward, and outward, or inward, as the case may be, swing to the section, preferably by a thumb action. The sections when in closed position form a circular cover with a peripheral edge 22 resting on the end 8, and through an open-

ing 23 in the portion of the edge associated with section 18 extends the periphery of thumb wheel 17, enabling the operation of the abrader mounted thereon without removing the cover section 18 from closed position. The reservoir 7 in its side wall is provided with a filling orifice 7′ adapted to be normally closed by a removable spring held closure 17′.

An auxiliary fuel supply may be provided in the member 24, threaded to close the lower end of barrel 1, and provided with a chamber 25. The opening in the member 24 is closed by a removable threaded cap 26, carrying a tubular dropper 27, detachably secured thereto and normally closing a chamber 28 in which may be carried spare or extra flints, not shown.

It will be apparent that a pocket lighter carried by the closure cap of a fountain pen has been provided and that the closure cap of the pen is so designed on its interior to afford a fuel chamber for the wick of the lighting device.

I claim:—

1. In combination with a tubular member provided with a transverse wall within its length forming a cavity at one end extending inwardly, said tubular member being closed at its other end by an end wall, the portion between the walls affording a container, an abrader carried by the end wall, a flint carried by and in parallelism with the end wall, said flint coacting with the abrader to make sparks, a wick extending through the end wall into the container with its exposed end lying in the path of the sparks from said abrader, and a cover for said sparking mechanism having an opening therein through which the sparking mechanism is operatable when the cover is in closed position.

2. In combination with a fuel containing chamber, a flint and an abrader carried by the chamber end wall, a wick extending through the end wall and into the fuel containing chamber, the exposed portion of the wick lying in the path of the sparks from the abrader, a cover for said sparking mechanism hinged on a naxis parallel to the side wall of the chamber and having an opening through its side wall through which said abrader is operatable when the cover is in closed position, and a hinged cover for said wick, said latter cover being operatable independently of the former, said covers in closed position affording an end closure for the abrader, flint and wick.

In testimony whereof I have signed my name to this specification.

VICENTE S. ZAPANTA.