

[54] **GAS-FUELLED LIGHTER**

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[51] **Int. Cl.** **F23q 1/02**

[58] **Field of Search** 431/274-277, 431/149-152, 254

[56] **References Cited**

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[57] **ABSTRACT**

The lighter comprises a housing, a cover, which is detachably connected to said housing, a burner tube, which is mounted in said housing, and a pyrophoric igniting mechanism, which is mounted in said housing and comprises a friction wheel axle, a friction wheel rotatably mounted on said axle, flint guide terminating close to said friction wheel, a spring-retaining pin, and a helical torsion spring wound on said pin and having an extended end portion, which extends into said guide and tends to move toward said friction wheel. Said axle, guide, and pin extend transversely to said burner tube. Said axle and pin are integral with said cover.

3 Claims, 3 Drawing Figures

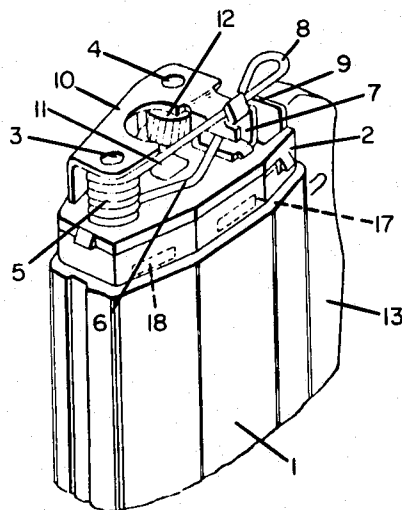


FIG. 2

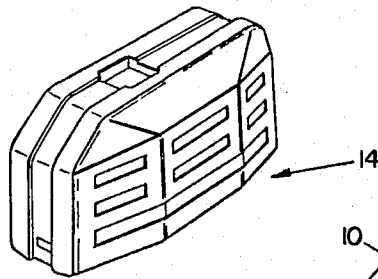


FIG. 3

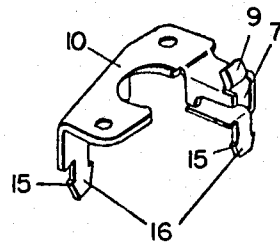
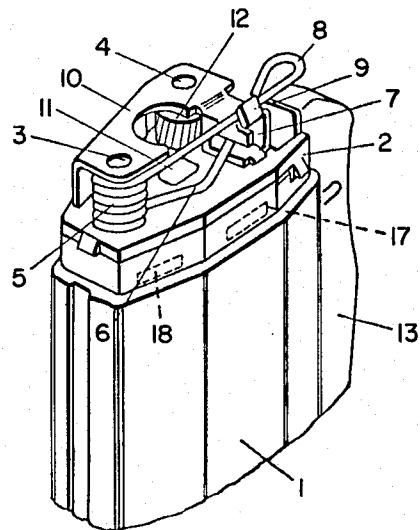


FIG. 1



GAS-FUELLED LIGHTER

This invention relates to a gas-fuelled lighter comprising a pyrophoric igniting mechanism which has a flint guide extending approximately transversely to a burner tube and a helical torsion spring which is wound around a retaining pin and serves to urge the flint against a friction wheel, said retaining pin as well as an axle for the friction wheel extending approximately transversely to the flint guide.

Such lighters have the advantage that the ignition mechanism can be accommodated within a small space adjacent to one end of the lighter housing so that the remaining part of the housing may be used to accommodate the liquefied gas. In a known lighter of this kind, the housing has a recess, which accommodates the igniting mechanism and which is closed by a holding cover. The latter is secured by a screw, which also provides the pin for retaining the helical torsion spring. The assembling of this known arrangement is relatively complicated for a mass-produced article and it is difficult or impossible to assemble that known lighter in a completely automatic process.

It is an object of the invention to provide a gas-fuelled lighter which is structurally simpler than the known gas-fuelled lighters. This object is accomplished in that the axle for the friction wheel and the retaining pin are integral with the cover, which is detachably connected to the lighter housing. The arrangement according to the invention enables an extremely simple assembling without need for any screwing operations.

An arrangement according to the invention will be particularly desirable if the cover consists of plastic material and a U-shaped member is provided, which consists of metal and connects the two ends of the pin and axle and which is integral with the flint guide. As a result of this feature, the pin and axle are stiffened so that their strength is much increased and these stiffening means serve also as a flint guide. When the helical torsion spring and the friction wheel have been mounted on the pin and axle, respectively, it is sufficient to mount the stiffening means and suitably to rivet the ends of the pin and axle. The arrangement may be further simplified in that in accordance with a further feature of the invention, the flint guide is provided with an abutment lug for one end of the helical torsion spring.

The invention will now be described more fully with reference to an embodiment shown by way of example on the accompanying drawing although the invention is not restricted to said embodiment. In the drawing,

FIG. 1 is a perspective elevation showing the top portion of a gas-fuelled lighter according to the invention,

FIG. 2 is a similar view showing a cover cap and

FIG. 3 is also a similar view showing the U-shaped member of metal.

A cover 2 is joined, e.g., by welding, to a lighter housing 1, which in known manner consists of or contains a gas tank. The part 2 consists of plastic material and is integrally formed with an axle 4 for a friction wheel and with a retaining pin 3, around which a helical tor-

sion spring 5 is wound, which has at one end an extended end portion 6, which is guided in a flint guide 7 and bears on a flint. In the present embodiment, the other end portion 8 of the spring 5 forms a loop. This end portion 8 bears on an abutment lug 9, which has been struck out of the flint guide 7. A U-shaped member 10 of metal is integral with the flint guide 7 and connects the two ends of the pin 3 and axle 4 and stiffens the members 3 and 4.

According to FIG. 3, the U-shaped member 10 of metal has fixing lugs 16, which are provided with projections and are inserted and locked in slots of cover 2.

The cover 2 is formed with an opening 11.

The outlet orifice of the gas burner is disposed below an opening formed in the cover 2. The friction wheel 12 is operated by a push piece 13.

The igniting mechanism can be covered by a cap 14, which is shown in FIG. 2.

FIG. 1 indicates in dotted lines that the housing 1 has openings 17, which interlock with noses 18 formed on the cover 2. The housing 1 yields resiliently as the cover 2 is inserted. As experiments have shown, this promotes the establishment of a satisfactory connection between parts 1 and 2.

As is apparent from the drawing, the lighter according to the invention has only very few components and these are of relatively simple design. These few components can be assembled in a simple manner.

What is claimed is:

1. A gas-fuelled lighter, which comprises
 - a housing,
 - a cover, which is detachably connected to said housing,
 - an opening for the passage therethrough of a gas flame which is arranged in said cover,
 - a pyrophoric igniting mechanism which is mounted on said cover and includes
 - a friction wheel axle,
 - a friction wheel rotatably mounted on said axle,
 - a flint guide terminating close to said friction wheel,
 - said flint guide extending transversely to the axis of said opening
 - a spring-retaining pin,
 - a helical torsion spring wound on said pin and having an extended end portion, which extends into said guide and tends to move toward said friction wheel,
 - said axle and said pin extending transversely to said flint guide and
 - said axle and said pin being integral with said cover.
2. A lighter as set forth in claim 1, in which said cover consists of plastic material and a U-shaped member of metal is provided, which is integral with said flint guide and connects opposite ends of said axle and of said pin.
3. A lighter as set forth in claim 2, in which said flint guide comprises an abutment lug and said helical torsion spring has a second extended end portion bearing on said lug.

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