

## PATENT SPECIFICATION



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Complete Specification Accepted: Nov. 21, 1935.

### PROVISIONAL SPECIFICATION

#### Improvements in Pocket Friction Lighters for Use in Lighting Tobacco Pipes, Cigarettes, Cigars and the like

We, ERICH WIEDEN, a German citizen, and KARL WIEDEN, G.M.B.H., a German Company, both of Scheffelstrasse 26, Postfach 80, Solingen-Ohligs, Germany, do hereby declare the nature of this invention to be as follows:—

This invention relates to improvements in pocket friction lighters for use in lighting tobacco pipes, cigarettes, cigars and the like and has for its object more satisfactory operation of, the friction wheel by the operators thumb than is possible in lighters where the thumb directly contacts with the friction wheel, a further object being to avoid the soiling of the thumb by soot and ground-up particles of the flint which invariably adhere to the friction wheel. A further object is to achieve these advantages without the use of spring-loaded mechanisms for operating the friction wheel, such mechanisms being likely to get out of order and incurring increased cost in manufacture.

The invention consists broadly in fixedly mounting the friction wheel on a spindle which projects through a shield or casing and has affixed to its projecting portion or portions a serrated wheel or wheels for manipulation by the thumb of the operator. The shield or casing aforesaid is arranged to house or partially house the flint wheel proper and avoid soiling of the operators thumb.

In a preferred form of the invention there is provided a hollow body adapted to contain an absorbent material saturated with highly inflammable spirit, a wick which passes through a hole formed in the top of said body, and a tube containing a flint which projects above the body and a spring for urging said flint upwardly, this combination of features being well known.

Upon the top of the body and upstanding therefrom is a wind shield consisting

of a perforated wall which passes around the wick, said wall being shaped to form a contracted portion or neck which houses the friction wheel. Said contracted portion or neck having a closed arcuate or sloping outer surface extending from above the friction wheel, and approximately following the path of movement of the operator's thumb, to the top of the body.

A spindle on which the friction wheel is fixedly mounted projects from opposite sides of the contracted portion or neck aforesaid and has a serrated wheel fixed on each of its projecting ends, said wheels being accommodated in recesses produced by the forming of said contracted portion or neck.

The diameter of the external serrated wheels is such that same overlap the arcuate or sloping outer surface of the friction-wheel housing to ensure easy working by the operator's thumb, the said housing ensuring protection to avoid soiling of the thumb and the deposition of grease on the frictional wheel.

In the application of the invention to a lighter having a body which is of oval shaped in plan, the section of the wall which forms the perforated wind shield may follow the oval contour of the said body around a part thereof, (e.g. about one half situated wholly on the side of the minor axis) the contracted portion which houses the friction wheel being parallel sided and lying on the major axis. The combined wind shield and friction-wheel housing may be fixed in sleeve fashion over a contracted upper part of the body.

Dated this 10th day of May, 1934.  
KINGS PATENT AGENCY LIMITED,  
By BENJ. T. KING, C.I.Mech.E.,  
Director,  
146a, Queen Victoria St., London, E.C.4,  
Agents for Applicants.

### COMPLETE SPECIFICATION

#### Improvements in Pocket Friction Lighters for Use in Lighting Tobacco Pipes, Cigarettes, Cigars and the like

We, ERICH WIEDEN, a German citizen, and KARL WIEDEN, G.M.B.H., a German Company, both of Scheffelstrasse 26, Postfach 80, Solingen-Ohligs, Germany, [Price 1/-]

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do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to improvements in pocket friction lighters for use in lighting tobacco pipes, cigarettes, cigars and the like and has for its object to avoid, in a more satisfactory way than has been achieved hitherto, the soiling of the operating thumb wheels by the wick flame, and the soiling of the thumb by soot and ground-up particles of the flint which invariably adhere to the friction wheel. A further object is to achieve these advantages without the use of spring-loaded mechanism for operating the friction wheel, such mechanism being likely to get out of order and incurring increased cost in manufacture.

The invention concerns lighters of the known kind wherein the friction wheel is operated by a separate thumb-wheel or wheels fitted on the same spindle as itself the arrangement being such that the thumb does not come into contact with the friction wheel itself. In contradistinction to prior proposals however the present invention ensures more satisfactory isolation of the thumb wheels from the flame to avoid possibility of soot becoming deposited on the thumb wheels and achieves this in such a way that the thumb wheels are accommodated within the width dimension of a windshield provided for the flame resulting in a neat and compact article.

Accordingly the invention provides a pocket friction lighter wherein a windshield which surrounds the wick is formed with a contracted extension for housing a friction wheel, and the spindle of said friction wheel takes its bearings in side walls of the extension and has projecting end portions on which are fitted serrated operating wheels situated outside of the extension and accommodated within the width dimension of the windshield proper.

A pocket lighter of practical form in accordance with the invention will now be described with the aid of the accompanying drawings wherein:—

Figure 1 is a perspective view of the lighter, showing the cap open,

Figure 2 is a plan view, and

Figure 3 is a fragmentary section view.

Referring to the drawings the lighter incorporates a hollow body 4 adapted to contain an absorbent material saturated with highly inflammable spirit, a top cap 5, a wick 6 which passes through a hole formed in the top of said body, and a tube 7 containing a flint 8 which projects above

the body and a spring (not shown) for urging said flint upwardly, this combination of features being well known.

Upon the top of the body and upstanding therefrom is a wind shield 9 consisting of a perforated wall which passes around the wick, said wall being shaped to form a contracted portion or neck 10 which houses the friction wheel 11. Said contracted portion or neck has a closed arcuate (or sloping) outer portion 12 extending from above the friction wheel, and approximately following the path of movement of the operator's thumb, to the top of the body.

A spindle 13 on which the friction wheel 11 is fixedly mounted projects from opposite sides of the contracted portion or neck 10 aforesaid and has a serrated wheel 14 fixed on each of its projecting ends, said wheels being accommodated in recesses produced by the forming of said contracted portion or neck. Thus the wheels 14 are protected by the shield neck against soiling by the combustion flame and are accommodated within the width dimension of the shield portion 9, thereby allowing the cap 5 to be made of symmetrical shape.

The diameter of the external serrated wheels 14 is such that same overlap the arcuate (or sloping) outer portion 12 of the friction wheel housing to ensure easy working by the operator's thumb, the said housing ensuring protection to avoid soiling of the thumb and the deposition of grease on the friction wheel.

In the application of the invention to a lighter having a body which is of elongated shape in plan as shown, the wall which forms the perforated wind shield 9 may follow the contour of the said body around a part thereof, (e.g. about one half situated wholly on one side of the minor axis) the contracted portion 10 which houses the friction wheel being parallel sided and lying on the major axis.

The combined wind shield and friction wheel housing may be fixed in sleeve fashion over a contracted upper part of the lighter body although this detail is not shown in the drawings.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A pocket friction lighter of the kind set forth wherein a windshield which surrounds the wick is formed with a contracted extension for housing a friction wheel, and the spindle of said friction wheel takes its bearings in side walls of the extension and has projecting end por-

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tions on which are fitted serrated operating wheels situated outside of the extension and accommodated within the width dimension of the windshield proper.

- 5 2. A pocket friction lighter as claimed in Claim 1, wherein the windshield extension is closed at its upper and outer portions.
- 10 3. A pocket friction lighter construction substantially as herein described

with reference to the accompanying drawings.

Dated this 3rd day of June, 1935.  
KINGS PATENT AGENCY LIMITED,  
By BENJ. T. KING, C.I.M.E.,  
Director,  
Registered Patent Agent,  
146a, Queen Victoria St., London, E.C.4,  
Agents for Applicants.

[This Drawing is a reproduction of the Original on a reduced scale.]

FIG. 1.

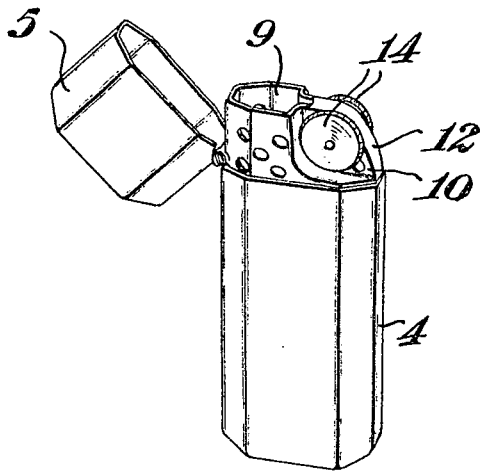


FIG. 2.

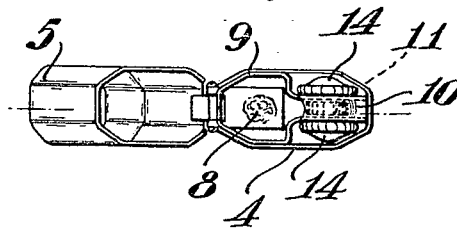


FIG. 3.

