

PATENT SPECIFICATION



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PROVISIONAL SPECIFICATION

Improvements in and relating to Pyrophoric Lighters

We, THE PARKER PIPE COMPANY LIMITED, a British Company, of Beacon House, High Street, Notting Hill Gate, London, W.11, and DESMOND BERESFORD KINAHAN, a British Subject, of the same address, do hereby declare the nature of this invention to be as follows:—

This invention relates to pyrophoric lighters.

10 In a known type of lighter a fuel casing carries a wick holder, a holder for a flint or other pyrophoric material, abrasive means such as a friction wheel mounted in contact with the pyrophoric material and usually an extinguisher for the wick carried on a hinged arm. Various means have been suggested for operating the friction wheel and the object of the present invention is to provide a lighter of the above general type with improved means for operating the friction wheel.

25 According to the invention the friction wheel is operated by rotary means carried on the fuel container and which extend down over a considerable portion of the container so that when the lighter is held in the hand more than one finger can be applied to the said rotary means as opposed to known arrangements wherein a small milled wheel is attached to the spindle of the friction wheel or the friction wheel itself is adapted to be turned by the finger.

35 In a preferred arrangement the rotary means consists of a roller or bar rotatably mounted on the outside of the container and preferably extending the full length

of the container, one end of the roller carrying the friction wheel or being 40 geared thereto in a suitable manner.

The roller may be mounted in a recess formed in one corner of the fuel container between the top and bottom plates thereof, one end of the roller being 45 pivoted on the bottom plate, while the other end extends through the top plate and carries the friction wheel and is pivoted to the usual flint holder on the top of the fuel container. 50

It will be understood that the roller and recess may extend the full length of the fuel container or not as desired, and further the recess may be omitted and the roller or the like mounted between the 55 top and bottom plates of the container (which may be extended if necessary) so that it forms a flush fitting with an end of the container and completes the contour of the container, for example. Or 60 the roller may be mounted to project slightly from the container. Or one end of the roller may be pivoted on an offset, bracket or the like formed at a suitable point in the side of the casing, its other 65 end being connected directly with the friction wheel or geared thereto.

The roller or the like is preferably of metal and may be milled or serrated or machined in desired manner to enable it 70 to be rotated easily by the fingers.

Dated this 3rd day of November, 1936.

ABEL & IMRAY,

30, Southampton Buildings, London.

W.C.2,

Agents for the Applicants.

COMPLETE SPECIFICATION

Improvements in and relating to Pyrophoric Lighters

We, THE PARKER PIPE COMPANY LIMITED, a British Company, of Beacon House, High Street, Notting Hill Gate, London, W.11, and DESMOND BERESFORD KINAHAN, a British Subject, of the same address, 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 pyrophoric lighters.

In a known type of lighter a fuel container carries on the top a wick holder, 85 a holder for a flint or other pyrophoric material, a friction wheel mounted in contact with the pyrophoric material and usually an extinguisher for the wick carried on a hinged arm. It has been 90 proposed to provide a lighter of this type with the axis of the friction wheel in the vertical plane and to attach an operating wheel to the lower side thereof, the two wheels being journalled in an extension 95

of the holder for the pyrophoric material while the wheel is sunk into a recess made in the top of the container. Further in another known construction of this type
 5 the friction wheel is mounted with its axis horizontal on a serrated cylindrical body which extends along the top of the container body and is rotatably mounted between upstanding brackets on the top
 10 of the container.

The object of the present invention is to provide a lighter of the above general type with improved means for operating the friction wheel.

15 According to the invention the friction wheel mounted on the top of the fuel container is operated by means comprising a roller or spindle which carries the friction wheel at one end or is geared
 20 thereto and which is rotatably mounted on the outside of the fuel container and extends down over the outside thereof from the top towards the bottom, the roller or spindle being journalled at both
 25 its ends and being of such considerable length that more than one finger can be applied thereto simultaneously when it is to be rotated to operate the friction wheel.

30 In a preferred arrangement the roller or spindle extends over the full length of the container, that is to say practically from top to bottom thereof, but it may extend over a less but still substantial
 35 portion of the said length as will be understood.

To enable the invention to be fully understood it will now be described by reference to the accompanying drawing
 40 in which:—

Fig. 1 is an elevation of a pyrophoric lighter having one form of the invention applied thereto, the extinguisher cap being raised to expose the friction wheel
 45 and the wick, and

Fig. 2 is a cross sectional view thereof.

Fig. 3 is a plan view of the lighter with the extinguisher cap lowered to cover the wick and the friction wheel.

50 As shewn, the lighter is of the well known type comprising a fuel container 4, wick tube 5, flint tube 6, friction wheel 7 and hinged extinguisher arm 8 carrying a cap 9. The friction wheel 7 is
 55 mounted on a spindle 11 one end of which is journalled in the part 12 of the flint tube, the other end being journalled in the base plate 13 as shewn. The part of the spindle 11 between the top plate 14 and the bottom plate 13 of the lighter is formed as a roller 15 of larger diameter and the fuel casing is recessed at 16
 60 (Fig. 2) to accommodate this roller.

The roller 15 is ribbed or grooved longitudinally as shewn or otherwise

roughened or milled so that it can easily be rotated by the fingers and the recess 16 is of such a size that the surface of the roller is substantially flush with the adjacent sides of the fuel casing. The
 70 roller is preferably of metal, but may be made of any other suitable material. With the above described arrangement, if the lighter is held in the hand at least two fingers can be placed simultaneously
 75 over the length of the roller 15 so that operation thereof is easy and certain.

It will be understood that the roller 15 and recess 16 may extend the full length of the fuel container or not as desired, and further the recess may be omitted and the roller or the like mounted
 80 between the top and bottom plates of the fuel container 4 (which may be extended if necessary) so that the roller is closely adjacent to an end of the container and completes the contour of the container. Or the roller 15 may be mounted to project slightly from the container. Or one
 85 end of the roller 15 may be pivoted on an offset, bracket or the like formed at a suitable point in a side of the casing; its other end being connected directly with the friction wheel or geared thereto. If
 90 desired the roller or the like may be arranged to drive the friction wheel through a ratchet or like device whereby the friction wheel is rotated only when the roller or the like is turned in one
 95 direction.

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
 100 claim is:—

1. In a pyrophoric lighter of the type referred to wherein the friction wheel is mounted on the top of the fuel container, the provision of means for operating the friction wheel comprising a roller or
 110 spindle carrying the friction wheel at one end or being geared thereto and rotatably mounted on the outside of the fuel container and extending down over the outside of said container from the top
 115 towards the bottom thereof, the roller or spindle being journalled at both ends and being of such considerable length that more than one finger of the hand can be applied thereto simultaneously when the
 120 roller or spindle is turned to operate the friction wheel.

2. In a pyrophoric lighter according to claim 1 an arrangement wherein the roller or spindle extends down over the
 125 full length or substantially the full length of the fuel container.

3. In a pyrophoric lighter according to claim 1 or 2 an arrangement wherein the roller or spindle is rotatably mounted in 130

a recess formed in one corner of the fuel container between the top and bottom plates thereof.

4. In a pyrophoric lighter according to any one of the preceding claims an arrangement wherein the roller or spindle drives the friction wheel through a one-way ratchet device or the like.

5. Pyrophoric lighters having means

for operating the friction wheels thereof constructed, arranged and operating substantially as hereinbefore described with reference to the accompanying drawing.

Dated this 4th day of January, 1937.

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Agents for the Applicants.

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

