

RESERVE COPY PATENT SPECIFICATION

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PROVISIONAL SPECIFICATION.

Improvements in Petrol and like Lighters.

I, HUBERT HENRY DAVIES, of Emildene, Orphanage Road, Erdington, Birmingham, a British Subject, do hereby declare the nature of this invention to be as follows:—

This invention comprises improvements in petrol and like lighters and has for its object to provide a simpler and more efficient lighter than those at present in use.

The present invention is characterized by a friction wheel which is mounted on a shaft located within a tubular part which is disposed parallel or substantially parallel with the lighter body and adapted to extend beyond the tubular part, said extension having attached thereto means for rotating the friction wheel.

In carrying the present invention into practice, a tubular body part is provided, on the top of which is mounted a suitable housing for a piece of pyrophoric material which is forced by a suitable spring into contact with a friction wheel.

The body part of the lighter has extending through its whole length a tube which is secured to the bottom and top of the body part so that cotton wool or the like can be packed into the body part around the tube which is adapted to absorb the petrol or the like.

A suitable opening for the wick is provided in the top of the body part.

Mounted in the tube extending through the body part is a shaft, on the upper end of which is mounted a friction wheel the axis of which is disposed at right angles or substantially at right angles to the body part of the lighter.

The body part of the lighter can be perforated with a series of holes, so that to charge the lighter the body part can be immersed in petrol or the like which will be soaked up by the cotton wool or the like, or other suitable means for filling may be provided if desired.

The extension of the shaft beyond the body part is provided with a helix or quick pitch thread for the purpose hereinafter explained.

The body part of the lighter is adapted to telescope within an outer sleeve.

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Mounted in said outer sleeve is a partition in which is provided a slot or the like into which passes the shaft extension having the helix or quick pitch thread thereon, so that upon the telescopic sleeve being moved up the body part of the lighter, the friction wheel will be rotated one way and on the return of the sleeve it will be rotated in the opposite direction. The body part of the lighter and the telescopic sleeve are held against relative rotation by any suitable means.

Disposed between the partition in the telescopic sleeve and the bottom of the body part of the lighter is a compression spring which is adapted to return the two parts to their normal positions and thereby rotate the friction wheel causing the lighter to be lighted in well known manner.

Hinged to the body part of the lighter is a spring lid, said lid may be provided with two projections on its side, the lower one of which is adapted to be engaged by a spring controlled catch mounted on the telescopic sleeve when the parts are in their normal positions. When it is required to light the lighter, the two telescopic parts are pressed together causing the body part to telescope into the sleeve, during which action the compression spring is compressed and the friction wheel rotated in the reverse direction. The spring controlled catch mounted on the telescopic sleeve now automatically engages the second projection on the lid or cover and retains the lighter in its set position.

Upon the spring catch being released from the lid, the lid automatically opens, the body part forced along the sleeve by the compression spring and the friction wheel rotated by the travel of the partition along the helix or quick pitch thread on the shaft extension against the spring loaded pyrophoric material causing a spark to ignite the wick of the lighter.

Dated this 23rd day of February, 1931.

NORMAN S. BARLOW,
Chartered Patent Agent,
16, Bennetts Hill, Birmingham,
Agent for Applicant.

COMPLETE SPECIFICATION.

Improvements in Petrol and like Lighters.

I, HUBERT HENRY DAVIES, of Emildene, Orphanage Road, Erdington, Birmingham, a British Subject, 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 comprises improvements in petrol and like lighters and has for its object to provide a simpler and more efficient lighter than those at present in use.

The present invention is characterized by a shaft on which is provided a helix or quick pitch thread, a friction wheel mounted on said shaft, a bearing in which said helix or quick pitch is mounted and means for automatically forcing the helix or quick pitch thread through its bearing to cause the rotation of said friction wheel on the lighter being opened.

In order that the present invention may be clearly understood and readily carried into practice, I have appended one sheet of drawings, wherein:—

Figure 1 is a vertical section of a petrol or like lighter according to this invention with the cover in its raised position.

Figure 2 is an end elevation of the lighter shown in Figure 1, whilst,

Figure 3 is a similar view to that shown in Figure 1, with the cover closed.

In carrying the present invention into practice as shown upon the accompanying drawings the body of the lighter 4 is provided with a tubular part 5 which is adapted to slide through an opening formed in the top of the body part 4.

The tubular part 5 has mounted therein the shaft 6 on which is provided a helix or quick pitch thread 7, said helix or quick pitch thread 7 being mounted in a plate 8, said plate 8 which is fixed within the tubular part 5 has provided therein a slot or the like which forms a bearing in which the helix or quick pitch thread 7 operates.

On the lower end of the shaft 6 is secured a plate 9, whilst the upper end of the tubular member 5 is closed with a cupped closure member 10. This closure member 10 forms a housing for the friction wheel 11 when the cover 12 of the lighter is closed as shown in Figure 3.

On the shaft 6 and at the top end of

the quick pitch thread or helix 7 is a plate 13 which is adapted to engage the underside of the closure member 10 and limit the vertical movement of the shaft 6.

Disposed between the plate 9 and the bottom of the lighter body 4 in the tubular part 5 is a compression spring 14.

In operation the cover 12 of the lighter is closed down as shown in Figure 3 when a projection 15 formed on said cover engages the top of the friction wheel 11 and forces down the shaft 6, which carries the friction wheel 11 into the cupped closure member 10 and compresses the compression spring 14.

On the cover 12 being released, said cover being preferably provided with a spring to cause it to fly back on the catch 16 being disengaged, the compression spring 14 forces up the shaft 6 which causes the helix or quick pitch thread to rotate within the slot in the plate 8, thereby rotating the friction wheel 6.

Mounted adjacent to the friction wheel 6 is the holder 17 for the pyrophoric material 18 which engages said friction wheel 11 and lights the wick 19.

On the cover 12 being closed down the shaft 6 is forced down compressing the compression spring 14 which is then ready for rotating the friction wheel 11 when the cover 12 is next released.

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

1. A petrol or like lighter, characterized by a shaft on which is provided a helix or quick pitch thread, a friction wheel mounted on said shaft, a bearing in which said helix or quick pitch thread is mounted and means for automatically forcing the helix or quick pitch thread through its bearing to cause the rotation of said friction wheel on the lighter being opened.

2. A petrol or like lighter as claimed in claim 1, in which a compression spring is so arranged as to force the helix or quick pitch thread through its bearing to cause the rotation of the friction wheel.

3. A petrol or like lighter, characterized by a body part, a tubular part mounted in said body part, a shaft having a helix or quick pitch thread mounted in said tubular part, a bearing in which

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said helix or quick pitch thread is
mounted, a closure member for the upper
end of said tubular part, a compression
spring disposed in said tubular part for
5 the purpose of forcing the helix or quick
pitch thread through its bearing to cause
the rotation of said friction wheel and
a cover which is adapted to compress
said compression spring when in its closed
10 position ready for rotating the friction
wheel to light the wick when the cover

is released.

4. An improved petrol or like lighter,
substantially as described and shown upon
the accompanying drawings.

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Dated this 23rd day of November, 1931.

NORMAN S. BARLOW,
Chartered Patent Agent,
16, Bennetts Hill, Birmingham,
Agent for Applicant.

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

