

RESERVE COPY

PATENT SPECIFICATION



Application Date: Nov. 27, 1941. No. 15281/41.

550.165

Complete Specification Left: July 9, 1942.

Complete Specification Accepted: Dec. 24, 1942.

PROVISIONAL SPECIFICATION

Improvements relating to Lighters for the use of Smokers and other Purposes

We, JAMES ERNEST OUGHTON, a British Subject, of 26, Eversleigh Road, Coventry, Warwickshire; HERBERT MALLINSON, a British Subject, of 33, Christchurch Road, Coventry, Warwickshire, EDWARD THOMAS LEE, a British Subject, of 61, Newtown Road, Bedworth, Warwickshire, and NORMAN JOHN WALL, a British Subject, of Denby House, Manor Park Road, Nuneaton, Warwickshire, do hereby declare the nature of this invention to be as follows:

This invention relates to a lighter for use by a smoker, or for other purposes, of the kind in which there is an artificial match strikeable upon a flint, the match consisting of a holder for a hardened steel pin which is surrounded by a wick. The holder usually has a tapered surface adapted to make a seal when the wick end of the match is placed through a correspondingly-tapered hole into the interior of a receptacle containing cotton wool or the like saturated with petrol or other inflammable liquid. The term flint is used herein in a generic sense to cover a built-up strip or the like incorporating flint particles or adapted in other ways to co-operate with a steel pin (when frictionally engaged thereby) to produce sparks in a known manner.

Our main object is to provide an improved artificial match which, when struck across a flint, will give a very satisfactory volume of sparks, thus facilitating the lighting of the inflammable liquid absorbed by the wick.

To this end the invention broadly consists in making the operative end of the pin to be of non-circular section, providing a plurality of sharp edges. Preferably the operative end of the pin is longitudinally serrated, the serrations having sharp edges. The serrations can, of course, be of helical or wavy contour if desired, instead of straight. In a preferred form each serration—and there may be, say, six—forms an angle of about 60°.

One advantage of such a pin is that if wear should occur it is only necessary to re-grind the end at right-angles to the pin in order to provide a plurality of sharp

[Price 1/-]

edges.

A preferred form of match has a holder made of a mouldable material—for example, that known under the registered Trade Mark "Bakelite". At its outer extremity the holder has a knurled or like non-circular surface and next to that the tapered surface. At its inner extremity it is reduced slightly in section, and the inner end has an axial hole to receive the hardened steel pin, which may be a drive fit therein. The wick is placed round the pin and is held in position by a thin metal sleeve which is a push fit upon the reduced portion of the holder, the sleeve having longitudinal slots and the tongues between the slots being pressed in to retain the wick in position.

A very simple form of such lighter consists of a hollow tubular casing, of a moulded material, having a tapered opening at one end, the other end being closed, to receive the tapered portion of the holder of the match, the interior of the casing containing cotton wool or the like for absorbing an inflammable liquid. The casing may be formed in a single part, or of two or more parts screwed or otherwise secured together. Let into one side—for example, towards the closed end—is a flint as above-mentioned. Charging the interior with the liquid can be effected through the opening for the match when the latter is withdrawn.

In another simple arrangement the casing is oval in plan view and stepped once at one end in an elevational view, the lower portion of the step having the tapered hole in it to be sealed by the corresponding part of the match, whilst disposed upon the upper portion of the step, to one side of the match, is the flint.

With a pocket lighter according to the invention there are no springs, wheels or the like, to get out of order, and, in consequence, the life of the lighter, provided it be kept charged with inflammable liquid, is a long one. The parts can be inexpensively constructed to be very compact, and a flame can be produced on the end of the match with little effort and great certainty. Consequently the

Price 75p

lighter is well adapted for use by a smoker, even for lighting a pipe, or, for example, it will serve for lighting a fire.

It should be understood that the improved artificial match of the invention may be used with the type of lighter which is not intended to be carried in a user's pocket or bag.

Dated this 26th day of November, 1941.

WALFORD & HARDMAN BROWN,
Chartered Patent Agents,
Roslyn Chambers,
47, Warwick Road, Coventry,
Warwickshire.

COMPLETE SPECIFICATION

Improvements relating to Lighters for the use of Smokers and other Purposes

We, JAMES ERNEST OUGHTON, a British Subject, of 26, Eversleigh Road, Coventry, Warwickshire, HERBERT MALLINSON, a British Subject, of 33, Christchurch Road, Coventry, Warwickshire, EDWARD THOMAS LEE, a British Subject, of 61, Newtown Road, Bedworth, Warwickshire, and NORMAN JOHN WALL, a British Subject, of Denby House, Manor Park Road, Nuneaton, Warwickshire, 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 a lighter for use by a smoker, or for other purposes, of the kind in which there is an artificial match strikeable upon a flint, the match consisting of a holder for a hardened steel pin which is surrounded by a wick or the like. The holder usually has a tapered surface adapted to make a seal when the wick end of the match is placed through a correspondingly-tapered hole into the interior of a receptacle containing cotton wool or the like saturated with petrol or other inflammable liquid. The term flint is used herein in a generic sense to cover a built-up strip or the like incorporating flint particles or adapted in other ways to co-operate with a steel pin (when frictionally engaged thereby) to produce sparks in a known manner.

Our main object is to provide an improved artificial match which, when struck across a flint, will give a very satisfactory volume of sparks, thus facilitating the lighting of the inflammable liquid absorbed by the wick.

To this end the invention broadly consists in that the operative end of the pin is longitudinally serrated round its circumference, the serrations having sharp acute-angled edges. The serrations can, of course, be of helical or wavy contour if desired, instead of straight. In a preferred form each serration—and there may be, say, six—forms an angle of about 60°.

One advantage of such a pin is that if

wear should occur it is only necessary to re-grind the end at right-angles to the pin in order again to provide a plurality of sharp edges.

In the accompanying drawings:—

Figure 1 is a plan of one form of portable lighter with a match according to the invention;

Figure 2 is a sectional elevation thereof, taken on the line II—II of Figure 1; and

Figure 3 an underside plan of the pin of the match to a larger scale.

In the arrangement shown the casing 11 is formed of a plastic material, the opening 12 for the match 13 being provided at one side of the top and having a slightly tapered bore to receive a corresponding taper 14 near the outer end of the match, whereby the latter will serve for plugging the opening in the casing in a manner known *per se*. As will be well understood, the interior of the casing may contain cotton wool or the like absorbent material, and inflammable spirit can be poured in through the match opening when it is necessary to charge the container.

The flint 15 may be provided at the other end of the casing or in one of the sides, but it is preferably at the top as shown. It may consist of flint particles actually embodied in the material of the casing, particularly when this is a plastic material, or it may consist of a compound flint or the equivalent moulded into or otherwise secured in position. In the present instance it is protected by the side flanges 16. At 17 the casing is stepped below the upper surface of the flint, to facilitate striking the match thereon.

In like manner the match 13 may consist of a "plastic" or like holder into one end of which a hard cast steel pin 18 is secured, the hollow wick or asbestos packing 19 around the pin being held in position by a thin metal clip 20 secured to the holder. The latter has a knurled head 21 to facilitate insertion or withdrawal.

It should be understood that the im-

proved artificial match of the invention may be used with the type of lighter which is not intended to be carried in a user's pocket or bag. Owing to the sharp edges 23 at the operative end of the pin 18 a flame can be produced with little effort and great certainty.

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. An artificial match of the kind incorporating a holder for a hardened steel pin, to be struck on a flint, surrounded by

a wick or the like, characterized in that the operative end of the pin is longitudinally serrated round its circumference, the serrations having sharp acute-angled edges.

2. The complete artificial match substantially as shown in the accompanying drawings.

Dated this 8th day of July, 1942.
WALFORD & HARDMAN BROWN,
Chartered Patent Agents,
Roslyn Chambers,
47, Warwick Road, Coventry,
Warwickshire.

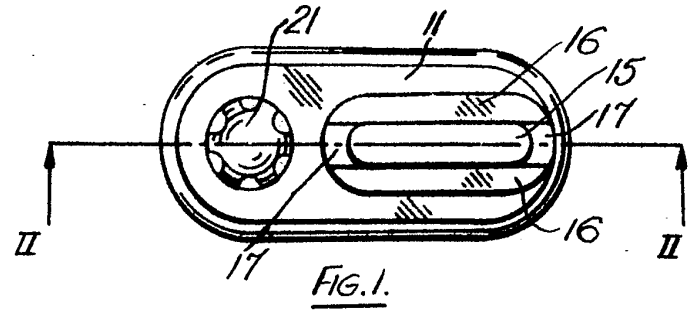


FIG. 1.

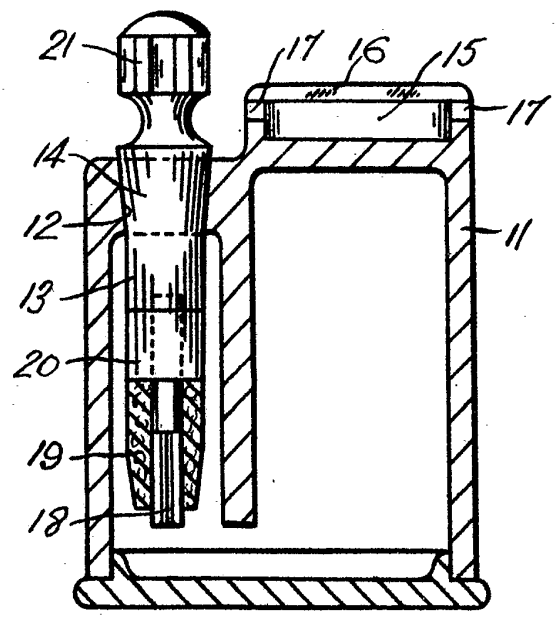


FIG. 2.

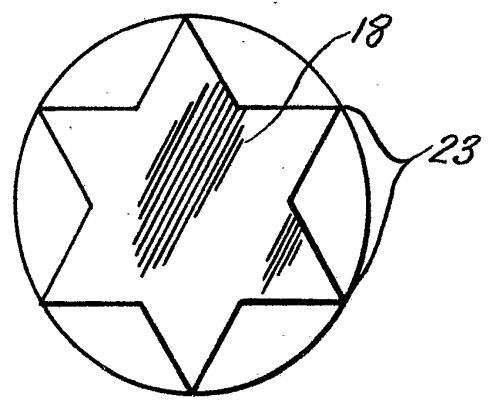


FIG. 3.

[This Drawing is a full-size reproduction of the Original.]