

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

An Improved Cigar or like Lighter.

I, NICOLAAS WILLEM VAN TIENE, of Dutch Nationality, of 18, Willemstraat, Heerlen, Holland, 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 an electric cigar or like lighter, by preference of pocket size, though it may also be constructed as a table apparatus.

It has already been proposed to provide a lighter for smokers having a hand-operated dynamo for producing current for a platinum lighting wire, the dynamo having a rotating permanent magnet or armature driven by speed multiplying gear wheels operated by a push lever or like hand device. As a result of experiment, I have found that, with such an arrangement, there are difficulties in the current supply, the current produced being insufficient for the purpose of causing the wire satisfactorily to glow, and it is the object of the present invention to overcome these difficulties.

According to the invention, I provide an electric cigar or like lighter having a hand-operated dynamo for producing current for a heating element, characterised by the fact that a transformer is arranged between the dynamo and the heating element for stepping up the current intensity.

A cigar lighter embodying the invention will now be described, by way of example, with reference to the annexed drawing, which is a diagrammatic view of such lighter with one side of its outer housing removed.

The housing 1 of the apparatus, which may be made of ebonite or the like, comprises two interconnected portions, enclosing a small dynamo machine 2, which may be of any type and has been illustrated diagrammatically. On the rotor-shaft 3, a pinion 4 is arranged which engages a cog-wheel 5 secured on a shaft 6.

The said shaft is provided with a drum 7 around which lies a band 8 terminating outside the housing 1 in a handle 9. The drum 7 contains a spring (not illustrated) which acts on the said drum in such a

manner that, in the normal position, the band 8 is always entirely rolled up. Further, a free-wheel device (not illustrated) is arranged between the drum 7 and the shaft 6 so that said shaft 6 does not rotate when the drum 7 is being wound up by the spring. The rotor of the dynamo 2 is constructed as a heavy fly-wheel, or a separate fly-wheel may be arranged on the shaft 3 which may be supported e.g. by ball-bearings. The transmission between the toothed wheels 5 and 4 is such that, if the band 8 is pulled outwardly, the rotor of the dynamo receives a large number of revolutions, whilst, as soon as the tractive force is no longer exerted, the drum 7 freely rotates back under the influence of the spring arranged in its interior and rolls up the band again, the rotor of the dynamo slowing freely down.

The heating element 10 which e.g. may consist of a flat band is countersunk and may, for example, be protected from damage by a cover.

Such heating elements require a rather large current intensity which cannot be obtained directly from dynamos suiting the purpose. To this end, according to the invention, the current of the dynamo 2 is first led through a transformer of very small dimensions, stepping down the voltage. Thus, for example, the dynamo may be designed for a voltage of 7 Volts, whereas the transformer transforms it down to 0.5 Volt, whereby the current-intensity may be easily increased to 4 Amperes. With the aid of such a current intensity, a heating filament of a sufficient mechanical strength may be caused to glow.

The transformer 11 may be arranged under the dynamo 2, with the heating element connected to the secondary terminals.

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. An electric cigar or like lighter, having a hand-operated dynamo for producing current for a heating-element, characterised by the fact that between the

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dynamo and the heating element a transformer is arranged for stepping up the current intensity.

- 5 2. An electric cigar or like lighter constructed and adapted to be used substantially as described with reference to the annexed drawing.

Dated this 23rd day of January, 1933.

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

