

# PATENT SPECIFICATION

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## COMPLETE SPECIFICATION.

### Improvements in Portable Pyrophoric Cigar and like Lighters.

We, M. E. BERNHARDT COMPANY, INC., a corporation organised under the laws of the State of New York, United States of America, and having a place of business at 127, West 30th Street, in the City of New York (Borough of Manhattan), County and State of New York, United States of America, 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 portable pyrophoric lighters and has particularly to do with cigars and cigarette lighters which are designed to be carried in the pocket of the user and operated when it is desired to light a cigarette, cigar or the like.

An object of the invention is to provide improved means for latching the movable arm which controls the sparking and hence the ignition of the wick, and with this object in view the present invention consists in a portable lighter comprising a spark-controlling, pivoted, spring controlled arm on one end of the casing, a spring-pressed latch member normally projecting from the free end of the arm, and a keeper on the casing, said keeper being so constructed as to permit holding engagement of the latch member therewith when the keeper is in one position and permit release of the latch member from the keeper when the said keeper is moved to another position.

A further feature of the invention consists in that the working face of the keeper is moved laterally relatively to the pivoted arm and presents to the latch member a receiving recess therefor when the keeper is in one position and a releasing recess when the keeper is in another position.

This improved device therefore comes within that class of lighters which are operated by one hand and embodies certain novel features of construction and combinations and arrangements of part, all of which will be more fully herein-after described and pointed out in the claims.

In the accompanying drawings:—

Figure 1 is a view in side elevation  
[Price 1/-]

showing the arm in normal set position;

Figure 2 is a view, partly in side elevation but mainly in longitudinal section, with the parts in the same position shown in Figure 1;

Figure 3 is a top plan view of the lighter with the parts shown in the same position as in Figures 1 and 2;

Figure 4 is a top plan view of the lighter with the arm sprung upwardly;

Figure 5 is a view similar to Figure 1 but showing the arm of the lighter sprung upwardly and the wick ignited;

Figure 6 is an enlarged view in section on the line 6—6 of Figure 5 to illustrate the working face of the improved keeper.

As this invention primarily has to do with the means for latching or holding the arm and permitting the release thereof it is not necessary to describe in detail the construction of the lighter as a whole. However, in order that the invention may be clearly understood, general reference will be made to the parts of the lighter as follows:

1 represents a casing having at its top and at one end thereof a bifurcated bracket 2 in which one end of an arm 3 is pivotally mounted. This arm 3 carries an extinguisher or snuffer 4 which is adapted to be positioned over a wick 5.

A toothed or serrated wheel 6 is movable with the arm 3 and positioned on the pivot of said arm and engages a spring-pressed block 7 of pyrophoric alloy or other sparking material 7. A spring 8 tends to throw the arm from horizontal position to vertical position, and during this movement the wheel 6 projects sparks from the block 7 to the wick 5 to ignite the latter.

The arm 3 is of hollow or tubular form and carries at its free end a spring-pressed latch member 9. This latch member 9 may take various forms but in the form illustrated it constitutes a pin movable in a barrel 11 in the arm, and is pressed outwardly by a coiled spring 12 in the barrel, and its outward movement is limited by a shoulder 13 on the pin engaging a shoulder 14 in the barrel.

The only essential feature of construction is that the latch member 9 is spring-

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pressed and projects normally beyond the end of the arm and can be forced inwardly and will spring outwardly when permitted.

5 On the top of the casing 1 and at one end thereof we locate our improved keeper 15. This keeper is in the form of a post having pivotal or partially rotary mounting in a spring housing 16 projecting into the casing 1, and a coiled spring 17 in the housing 16 exerts spring pressure on the post tending to turn the same within certain limits.

10 The limit of movement is defined by a pin 18, fixed to the housing 16, and a slot 19 in the base 25 of post 15 accommodates this pin, and the movement of the post is limited by the ends of the groove.

15 Other means may, of course, be employed for limiting the turning movement of the post and it is essential that some means be provided which will act as a stop to hold the post at the desired position.

20 The upper end of the post is preferably beveled or rounded, as shown at 20, and in the face of the post or keeper 15 a transverse groove or recess 21 is provided which at one end registers with a groove or recess 22 which extends to the top or upper end of the post or keeper.

25 The post or keeper 15 is normally in position with its recess 22 out of register with the latch member 9, so that when the free end of the arm 3 is moved downwardly the latch member 9 will be forced inwardly by its engagement with the rounded or beveled end of the post or keeper until the latch member is in alignment with the recess 21 when it will spring into said recess and hold the arm in horizontal position.

30 To release the arm, the post or keeper 15 is given a partial turning movement which causes the working face of said latch member to be moved transversely or laterally to align the recess 22 with the latch member and permit the spring 8 to throw the arm 3 upwardly, as thus positioned the keeper operates to release the latch member from holding engagement with the keeper.

35 The turning movement of the post or latch member is facilitated by milling the edge of the base 25 of the post or latch member 15, as clearly illustrated, but it is to be distinctly understood that we do not wish to limit ourselves to specific details of construction but desire to cover broadly the idea of an arm of the character stated carrying a spring-pressed latch member which rides into holding or latching engagement with a keeper and is released by a movement of the working face of the keeper laterally or trans-

versely as distinguished from a movement longitudinally or away from the end of the arm. In other words, the invention includes the provision of a spring-pressed latch member carried by the free end of the arm and a turning or transversely movable latch member which is so constructed as to compel the latch member to lock therewith when the keeper is in one position, and release the latch member from such locking or holding engagement when the keeper is moved transversely to another position.

70 While we have illustrated what we believe to be a preferred embodiment of our invention, it is obvious that various changes and alterations might be made in the general form of parts described without departing from our invention, and hence we do not limit ourselves to the precise details set forth but consider ourselves at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

75 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:—

80 1. A portable pyrophoric cigar and like lighter, including a fuel casing, a wick supported by the casing a spark-controlling, pivoted, spring-controlled arm on one end of the casing, a spring-pressed latch member normally projecting from the free end of the arm, and a keeper on the casing, said keeper being so constructed as to permit holding engagement of the latch member therewith when the keeper is in one position and permit release of the latch member from the keeper when the said keeper is moved to another position.

85 2. A portable pyrophoric cigar and like lighter, as claimed in Claim 1 in which the keeper is movable laterally relative to the arm and presents to the latch member a receiving recess therefor when the keeper is in one position and a releasing recess when the keeper is in another position.

90 3. A portable pyrophoric cigar and like lighter as claimed in Claim 1 or 2, in which the keeper has a spring-controlled rotary mounting whereby a turning movement of the keeper is adapted to impart a lateral movement to the working face thereof.

95 4. A portable pyrophoric cigar and like lighter as claimed in Claim 1 or 2, in which the keeper comprises a post having a spring-controlled rotary mounting in the casing, and has a transverse recess, and a longitudinal recess communicating with one end of the transverse recess, the transverse recess functioning to receive

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the latch member and hold the arm against movement and the longitudinal recess functioning to permit the release of said arm when said keeper is operated to move its working face transversely of the arm.

5 5. A portable pyrophoric cigar and like lighter as claimed in Claim 4, in which the post or keeper has a beveled or rounded end whereby the movement of the free end of the arm in a downward direction causes the latch member to be forcibly

withdrawn by reason of its engagement with the end and face of the post until said member registers with the transverse recess when said latch member will spring into the recess and hold the arm in said position. 15

6. A portable pyrophoric cigar and like lighter substantially as described and as illustrated in and by the accompanying drawings. 20

Dated this 2nd day of April, 1928.

MARKS & CLERK.

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

