

# PATENT SPECIFICATION

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573,331

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## PROVISIONAL SPECIFICATION

### Cigarette and like Lighters

I, WILLIAM STANLEY BAUER, a British subject, of 81, The Ridgeway, London, N.W.11, do hereby declare the nature of this invention to be as follows:—

6 It has been quite a common practice to convert various articles capable of forming spirit reservoirs into souvenir lighters.

No doubt many articles no longer required for war purposes will be so used when the present war is over and the present invention is designed to provide a very simple arrangement by which lighting mechanism of the trigger operated or trigger released type can be applied to numerous articles in which there is a small hole available or in which one can readily be made. To facilitate this, the whole of the trigger operated or released mechanism including the flint holder is mounted on a tubular member adapted to be fitted to the hole and through which the wick will pass into the container through the hole. Where the article to be converted has a normal part which can be readily adapted to serve as the trigger (this term being used widely to include any suitable manually operated lever, knob, slide or the like) it can be so used. Alternatively the trigger can be mounted on the tubular member together with the mechanism actuated or released by its operation.

Other parts of the invention are embodied in a typical example shown upon the accompanying drawings.

In the drawings:—

Fig. 1 is a side elevation, partly cut away, showing the position of the parts after the mechanism has been released.

Fig. 2 is a fragmentary view from above.

As illustrated the invention has been applied to the conversion of a grenade case 1 with the standard plug 2 and the firing plate 3 at the bottom. The plug 2 will preferably be used for the filling hole and the luted plug at 4 left sealed. The hole at the top can be tapped to receive the tubular member 5 with a suitable permanent joint ring 6 between the brackets 7. On top of the member 5 is mounted a plate 8 with brackets 8a providing pivots at 9 for the serrated wheel

10 and a bracket 11. The bracket 11 carries a cup 12 with its rim 12a arranged to be engaged by the trigger when the cup 12 is down, enclosing the end of the wick 13 which passes through the tubular member 5 into the reservoir 1. Torsion springs 14 surround the axis 9 and engage the parts 8 and 11 so as to force the bracket 11 to open up sharply when released and (by its engagement with the wheel 10) to cause the latter to throw sparks from the flint 15 onto the wick. The flint guide 16 with the normal small compression spring behind the flint is also secured to the plate 8.

The striker lever 17 has its end cut back and is very slightly bent to enable it to move under the safety pin 18 and is pressed by a spring 19 towards its outer position against the pin. The tubular member 5 is formed to ensure that the lever 17 will remain captive and pivot in the brackets 7 when the member 5 is tight in the top of the reservoir 1, as will be clear from Figs. 1 and 2. The trigger catch 20 can then be secured on the lever 17. Alternatively and in other cases, a trigger might be simply suitably spring-pressed and pivoted on an extension of the plate 8. The operation of the lighter will be readily understood: when the bracket 11 is closed down against the springs 14 the cup 12 encloses the wick with its rim against the bracket 8. The trigger catch 20 springs out slightly and back to engage the rim 12a. A slight pressure on the lever 17 will withdraw the trigger catch and release the mechanism, automatically causing the wick to be exposed and lighted.

It will be apparent that a trigger operated type, in which the trigger operation rotates the wheel and uncovers the wick against spring pressure which restores the parts automatically when the trigger is released, can equally well be used. Indeed, for large reservoirs it may be preferable because possibly safer.

Dated the 28th day of February, 1944.

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## COMPLETE SPECIFICATION

## Cigarette and like Lighters

I, WILLIAM STANLEY BAUER, a British subject, of 81, The Ridgeway, London, N.W.11, 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:—

It has been quite a common practice to convert various articles capable of forming spirit reservoirs into souvenir lighters.

No doubt many articles no longer required for war purposes will be so used when the present war is over and the present invention is designed to provide a very simple arrangement by which lighting mechanism of the trigger operated or trigger released type can be applied to numerous articles in which there is a small hole available or in which one can readily be made. To facilitate this, the whole of the trigger operated or released mechanism including the flint holder is mounted on a tubular member adapted to be fitted to the hole and through which the wick will pass into the container through the hole. Where the article to be converted has a normal part which can be readily adapted to serve as the trigger (this term being used widely to include any suitable manually operated lever, knob, slide or the like) it can be so used. Alternatively the trigger can be mounted on the tubular member together with the mechanism actuated or released by its operation.

The use of the striker lever of a grenade to release or otherwise control the mechanism forms the subject of Specification No. 25217/44 (Serial No. 573,332).

Other parts of the invention are embodied in a typical example shown upon the drawings accompanying the provisional specification, and are delimited by the claims.

In the drawings:—

Fig. 1 is a side elevation, partly cut away, showing the position of the parts after the mechanism has been released.

Fig. 2 is a fragmentary view from above.

As illustrated the invention has been applied to the conversion of a grenade case 1 with the standard plug 2 and the firing plate 3 at the bottom. The plug 2 will preferably be used for the filling hole and the luted plug at 4 left sealed; but a plug at 4 may alternatively be used for filling. The hole at the top can be tapped to receive the tubular member 5 with a suitable permanent joint ring 6 between the brackets 7. On top of the member 5

is mounted a plate 8 with brackets 8a providing pivots at 9 for the serrated wheel 10 and a bracket 11. The bracket 11 carries a cup 12 with its rim 12a arranged to be engaged by the trigger when the cup 12 is down, enclosing the end of the wick 13 which passes through the tubular member 5 into the reservoir 1. Torsion springs 14 surround the axis 9 and engage the parts 8 and 11 so as to force the bracket 11 to open up sharply when released and (by its engagement with the wheel 10) to cause the latter to throw sparks from the flint 15 onto the wick. The flint guide 16 with the normal small compression spring behind the flint is also secured to the plate 8.

The striker lever 17 has its end cut back and is very slightly bent to enable it to move under the safety pin 18 and is pressed by a spring 19 towards its outer position against the pin. The tubular member 5 is formed with a gripping surface providing a skirt or overhanging flange to ensure that the lever 17 will remain captive and pivot in the brackets 7 when the member 5 is tight in the top of the reservoir 1, as will be clear from Figs. 1 and 2. The trigger catch 20 can then be secured on the lever 17. Alternatively and in other cases, a trigger might be simply suitably spring-pressed and pivoted on an extension of the plate 8. The operation of the lighter will be readily understood: when the bracket 11 is closed down against the springs 14 the cup 12 encloses the wick with its rim against the bracket 8. The trigger catch 20 springs out slightly and back to engage the rim 12a. A slight pressure on the lever 17 will withdraw the trigger catch and release the mechanism, automatically causing the wick to be exposed and lighted. It will be understood that the term striker lever includes a substituted part representing a striker lever. It will be apparent that a trigger operated type, e.g. the type in which the trigger operation rotates (or sets parts to rotate) the wheel and uncovers the wick against spring pressure which may effect the operative rotation of the wheel and restores the parts automatically when the trigger is released, can equally well be used. Indeed, for large reservoirs it may be preferable because possibly safer.

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. Means to form a lighter of the trigger operated or trigger released type from an article capable of serving as a spirit reservoir including a tubular member adapted to fit a hole in the article, the complete trigger operated or released mechanism including the flint holder being mounted on the tubular member which will enclose the wick passing to the reservoir.
2. Means according to claim 1, having a trigger to operate or release the mechanism also mounted on the tubular member.
3. Means according to claim 1 arranged for operation or release by a part of the article adapted to serve as a trigger.
4. A lighter formed from a grenade casing by the means claimed in any of the preceding claims.
5. A lighter formed from a grenade casing by fitting the means of any of claims 1 to 3 to the hole in its end.
6. A lighter formed from a grenade casing by fitting the means of claim 3 to the hole in its end and adapting the striker lever to operate the mechanism against a spring return.
7. A lighter formed from a grenade casing by fitting the means of claim 3 to the hole in its end and adapting the striker lever to release the mechanism.

Dated the 15th day of December, 1944.

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

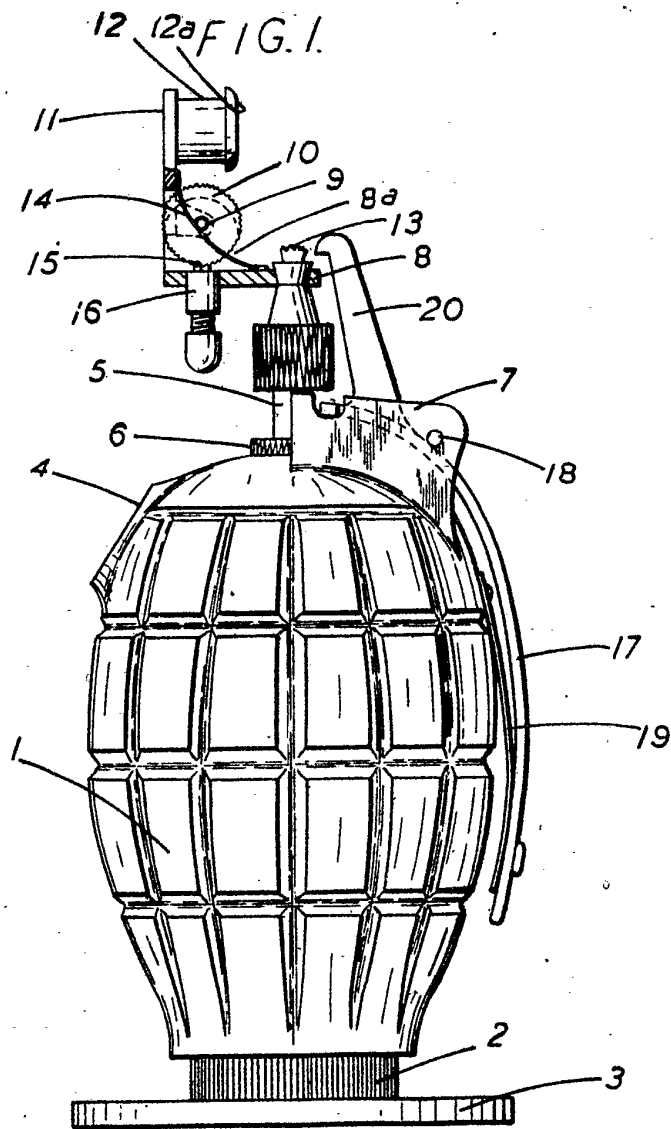


FIG. 2.

