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54 Night sight.

57 The invention consists of one or more mobile foresights of suitable material lighted by a set of direct or transported light with optical fibres to make the hitting of the bull easier even in conditions of insufficient light with fire arms of any kind and with those jet ones (compressed air and spring carabine, or string-arms as bows, corrbows and the like).

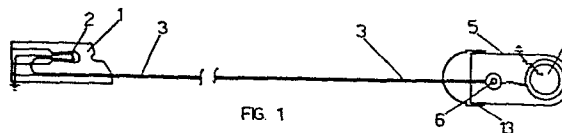


FIG. 1

TITLE

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The inventions consists of one or more mobile foresights of suitable material lighted by a set of direct or transported lights with optical fibres to make the hitting of the bull easier even in conditions of insufficient light with fire arms of any kind and with those jet ones (compressed air and spring carabines, or string-arms as bows, crossbows and the like).

By the actual state of technique, the present foresights don't allow to aim at targets when light is insufficient.

It is known that under a certain luminous threshold the human eye, less sensible than that one of other animals, is not able to aim exactly and in a short time: if he sees the beginning of the sight in a hunting-arm, he won't see the muzzle of the barrel.

This is the reason for which the undersigned decided to study accurately how to equip an arm to use also with scarce light in a manner, which is simple, not very expensive and suitable to any arm, also already in use, with a mobile apparatus that allows at any moment to take, in few seconds, the arm to pieces for the cleaning, reparation or transport in a case without using any tools.

Besides, he wanted the apparatus to be pocket, strong, protected from collisions or vibrations, and hermetictight closure against dust, humidity and water; to be able to be taken off when it wasn't useful and to be inserted in few seconds as soon as necessary.

Suitable to any fire and jet arm, as spring and compressed air guns; and to any string-arm, as bows and crossbows also for competitions.

This apparatus - from now on, for the sake of brevity, it will be called "the invention", - consists (see enclosed Table n. 1, Pict. 1) of a foresight (1) of suitable material, which is also transparent or opaque partly, containing a microlamp (2), fed by a bipolar little cable (3), enameled or under sheath, or monopolar if the earth can be utilized, connected with a battery or an accumulator of any kind, preferably from a mercury or silver oxide battery (1,4 - 1,5 v), because, for low consumption, they last many hours, they last many hours, they weigh about two grams and are as large as a nail, contained inside a container (5) of suitable form together with an ignition button, preferably like a bell by pressing, it closes the circuit and opens it when pressure stops.

Dimensions of lamp and eventual slits (7) (and their form) in foresight (1) are such as to eliminate any dazzling or diffusive halo that could prevent a right aim.

In double-barrelled gun (Pict. 4) the foresight (1), with slit (7) and joint feet (9), overlaps with pressure on sight (10).

In Pict. 2 other two types of foresight - among the many we can use for our invention - with slit (7) and magnetic paste of attack (11) and with slit (7B) and joint feet (9B) for monobarrel (Pict. 5 and 6) are represented.

The wire (3) runs near the sight (10) along the line (8) (or between barrels (Pict. 5) or sideways to the barrel (Pict. 6) and, the container (5) with battery and button is stuck to the under barrel (12), where, on shot the fingers of the hand that hold up the under barrel can press the button (6).

Similar solutions (not represented) allow to utilize the invention for other fire and jet arms.

A second solution, very practical, to lead a luminous point or sign in the foresight, consists in assembling (Pict. 3) the battery (4), the button (6) and the lamp (2) inside the container (5).

An optical fibre (14) - or a thin beam of optical fibres with a smaller

diameter - sheathed or not, will joint the foresight (15) that must be lighted with the inside of the container (5) through a little hole (16), gaugetight.

5 The invention will be placed, as already above-mentioned about the guns in Pict. 4,5 and 6, with the difference that the lamp (2), moved from the barrel to the under barrel (12), that, with blows, has less vibrations and, well protected inside (5), eventually packed with foam rubber or the like (17) (dashed in Pict. 3), will last unlimitedly.

10 In fact it will be switched on by the shooter some minutes before shooting and switched off immediately afterwards.

After firing hundreds of shots it will be still lighted for few hundreds  
15 of seconds, i.e. some minutes at the most.

The power consumption will be about 300 milliampère in an hour and the life of the battery over 12 hours - i.e. only with a battery, over 10.000 shots could be fired.

20 Naturally the optical fibre (14), inserted with an extreme in (5), will have the other extreme (18) inserted in the luminous foresight (15) (Pict. 3) with the last section (19) turned towards the shooter's eye, i.e. towards the butt (20) of the arm.

25 The optical fibre (14) will be able to have any section.

The invention will be composed of one or more foresights (with slits model 7, or 7A or 7B or other similar), the electric little cable (3) or  
30 the optical fibre (14), and the container (5) equipped as in Pict. 1 or in Pict. 3.

The above-described set will be able to stay in a small sack or cas, as big as a box matches, of short weight and low price and it will be able  
35 to be bought and applied to arms already in possession of the buver or together with the arm, for its equipment.

The container (5) will be able to stick to the under barrel (12) (Pict. 4) with two magnetic pastes fixed with bioadhesive to the under barrel

and to the container, or, in the same way, with two tongues of velcro, or with dovetails.

Or, on the other hand, it will be able to stay in a cavity inlaid on the  
5 under barrel (12), leaving the only button of the interrupter, to stick out.

In this way the visible side of (5) will be able, anyhow, to be doodled in the style of the arm, and it will be able to have, in protection of  
10 the invention the milled mark of protection that marks it.

The container will be able to open in (13) to take the place of battery, lamp or interrupter; the wire (3) or (14) will be able even to be replaced if damaged; and, in the foresight with lamp, this one will be able  
15 to be replaced, lodged in the way of screw, of embedding or in another similar way.

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## Claims

- 1) Luminous foresight to apply to any fire or jet arm, consisting of a luminous spy to apply near the muzzle of the arm or in another suitable position, set in action by a battery or a pile through a wire and an interrupter preferably like a button.
- 5 2) Foresight as in 1) in which the luminous part can cling and move away from the chosen point with pliers, magnetic attack, spring collar or the like.
- 10 3) Foresight as the preceding numbers in which a lamp is inserted in the luminous part, of any suitable material, completely, partly or any transparent through a slit of any dimension and form.
- 4) Foresight as above in which the electric lamp receives the power through  
15 a bipolar and insulated wire.
- 5) Foresight as above in which the insulated wire is unipolar and the metallic part of the arm connects the other pole of the battery to the lamp.
- 20 6) Foresight as above in which the power supplied to the lamp comes from batteries or accumulators, preferably from mercury or silver oxide batteries.
- 7) Foresight as above in which the interrupter and battery are inside a  
25 container tha can however be opened and applied to the arm, with magnets, joints in velcro or embedding.
- 8) Foresight as the preceding numbers in which lamp, interrupter and battery are inside the container that can be opened, and the luminous spy re  
30 ceives the light from one or more optical fibres, also sheathed, with an extremity inside the container and the other in the luminous part, with

the ray of light turned towards the shooter's eye.

9) Foresight as the preceding numbers in which the optical fibres are of any section.

5

10) Foresight in which the part of the luminous spy turned towards the shooter's eye is milled or stamped so as to eliminate any luminous halo, and give any form to the beam of light.

10 11) Foresight as the preceding numbers in which opaque and suitable shields let points or rays of light of any form leak out towards the marksman's eye.

12) Foresight as the preceding numbers in which the extremes of the beam  
15 of the optical fibres are included and arranged in a luminous spy so as to make up any geometrical form.

13) Foresight as the preceding numbers in which the container stays however on the barrel, sideways to the barrel, or under the barrel of the  
20 monobarrel in proximity to the point of attack of the luminous spy.

14) Foresight as the preceding numbers that in the double-barrelled gun, has the container in proximity to the luminous spy, exactly below the same spy, in the saddle between the two barrels.

25

15) Foresight as the preceding numbers that, in guns with barrels that are placed upon, has the container situated sideways to the luminous spy, in the side cavity between the two barrels.

30 16) Foresight as the preceding numbers in which, there are two containers always near the luminous spy, aligned in the monobarrels and in the double-barrelled guns and placed as in 13) and 14), or the one situated on the right and the other on the left of the two barrels and of the luminous spy in the arms with barrels that are placed upon.

35

17) Foresight as the preceding numbers in which the container or the containers are however inside the luminous spy, so that the invention becomes a monobloc from which only the button (or the buttons) of the interrupter (or of the interrupters) juts out. In these cases, as in the pre-

ceding 13), 14), 15), 16) it will be preferably a release rather than  
'a bell button.

18) Foresight as the preceding numbers in which the preceding numbers  
5 in which the two containers are jointed to the luminous spy in autonou  
mous way, so that each of them can act as reserve in case of damage or  
bad working of the other one.



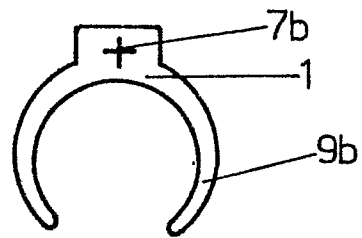
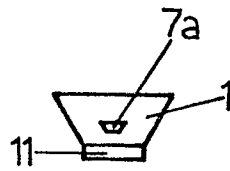
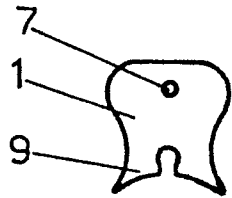
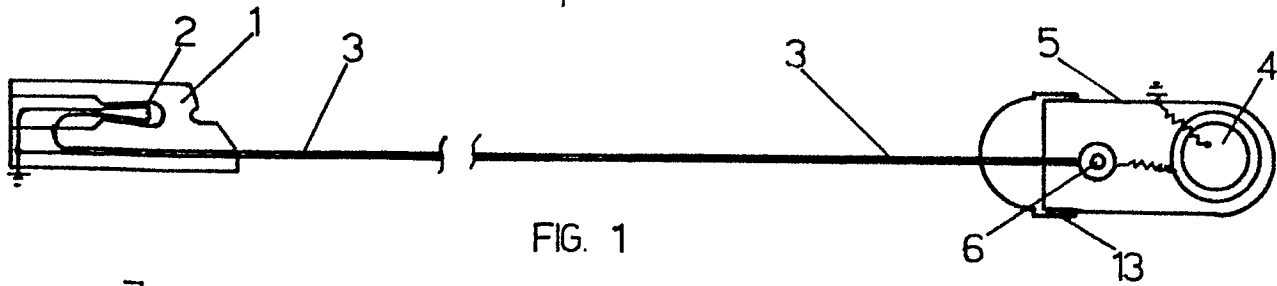


FIG. 2

