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AIMING STAKE LIGHTING DEVICE

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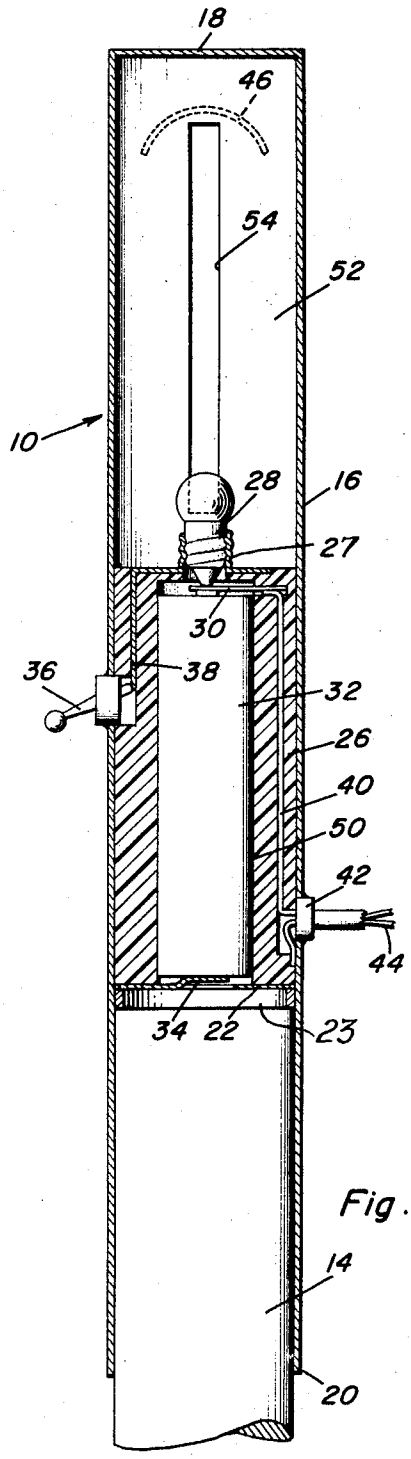


Fig. 2

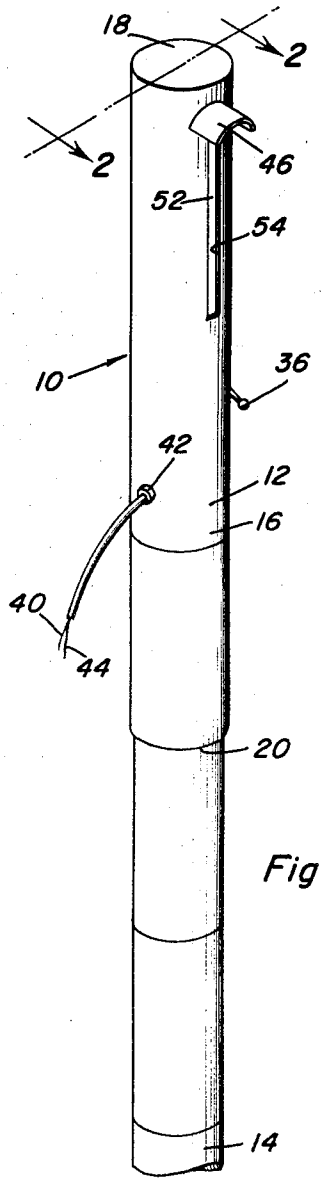


Fig. 1

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AIMING STAKE LIGHTING DEVICE

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1 Claim. (Cl. 240—6.4)

This invention relates to an aiming stake and more particularly to an aiming stake which designates the exact stake position during night firing.

An object of the present invention is to provide an aiming stake which is illuminated in such a way as to provide a fine line of light emanating from the stake and visible from the gun position and non-visible from the position opposite the gun, marking clearly the location of the aiming stake. In this way night firing is more effectively achieved.

A further object of the invention is to provide an illuminated aiming stake which is hooded to prevent exposure to aircraft and which is both weatherproof and shockproof. In this way a safe device is constructed considering safety from two aspects, the first being from discovery from aircraft and the second being in handling the aiming stake.

A further object of the invention is to provide an illuminated aiming stake used for artillery or other fire wherein the lighting is capable of being controlled from the stake and also from a remote location, for example, a master battery at a permanent installation or a gun implacement.

Another object of the present invention is to provide a practical attachment for an ordinary aiming stake or for any other stake, the attachment converting the aiming stake or the ordinary stake into an illuminated aiming stake whereby the stake is clearly visible from the gun implacement or position at night time enabling more accurate fire at night.

It is a further general object of the invention to provide such an illuminating aid to firing wherein the illumination is directed in the proper way and carefully hooded and protected from vision from the direction that the weapon is firing.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of an aiming stake made in accordance with the invention; and

Figure 2 is a sectional view on an enlarged scale taken approximately on the line 2—2 of Figure 1.

In the accompanying drawing there is an aiming stake **10** which is constructed in accordance with the invention. This aiming stake is shown as being made of an attachment **12** fitting onto the top of a stake or post **14**. The invention may be practiced by having attachments fitting over ordinary aiming stakes, for example, stakes **14** or in connection with some other type of stake **14** or may be practiced by building the features of the invention directly into the stake. Due to practical space limitations one configuration of the invention is illustrated and it consists of a tube or casing **16** of cylindrical formation and having a top wall **18** and an open bottom end **20** to fit over the top of the stake **14**. A

transverse partition **22** having a short cylindrical side wall **23** is in the tube **16** whereby when the tube **16** is inserted over an end of stake **14**, the partition **22** serves as a stop, the socket being formed by the lower extremity of the tube frictionally embracing the stake **14**. It is preferred that the stake and the tube **16** having red and white colored stripes to coincide with ordinary practice of aiming stake construction.

A non-conductive insert **26** rests on partition **22**, this insert being of rubber or plastic or any equivalent material and having a bulb socket **27** at its upper end. Light bulb **28** is in socket **27** and has a center post in contact with contact strip **30**, on one side of which the center pole of battery **32** is touched. The casing of the battery **32** rests on an upwardly protruding tongue **34** of partition **22** so that the tube **16** functions as a ground, much like the flashlight. In fact, the circuit is essentially of a flashlight since the shell of the bulb **28** is grounded by switch **36** and the switch **36** is grounded to the tube and has a switch operator which is moved to an on and off position by touching and being separated from conductor **38** which extends from socket **27**.

For local control, switch **36** is used. For remote control the aiming stake may be wired for simultaneous operation with other aiming stakes or for individual operation. In either case the conductor **40** extends from contact **30** and passes through grommet **42** along with a ground wire **44** that is soldered or otherwise connected to tube **16**. In this way a remote wet or dry cell battery or some other source of electrical energy may be used in place of the dry cell battery or batteries **32**. For remote control, partition **22** which is only frictionally held in place by short wall **23** contacting the inner surface of casing **16** is removed and battery **32** is removed. Switch **36** is closed, and battery **32** or some suitable electric source is connected to wires **40** and **44**, either or both of which may have a conventional switch anywhere along the length thereof to control the energization of light bulb **28**.

Dry cell battery or batteries **32** are fitted in the battery bore **50** in insert **26**. Contact **30** protrudes transversely across the bore at the upper extremity thereof and slightly below the socket **27** so that upon screwing the bulb **28** in place the center post thereof touches the contact **30**. This automatically positions the light bulb in light chamber **52**. The light chamber extends from the top of insert **26** to the top wall **18** and is defined by the cylindrical side wall of the tube **16** above insert **26**. A slot **54** extends along the side wall of the light chamber **52** and when the light bulb **28** is energized a fine line of illumination is visible from one side of the aiming stake. An upper hood **46** is carried by the tube **16** and deflects the light downward, that is, what little light actually passes through the slot **54** and more important, prevents discovery of the aiming stake from above.

In operation the aiming stake is used exactly like any ordinary aiming stake with the exception that there is provision for illumination through the slot **54**. The illumination may be individually controlled for each aiming stake, as by use of switch **36** or may be controlled from a remote location by an external circuit operatively connected with the conductors **44** and **40**.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

An illuminated aiming stake comprising a stake, a

hollow electrically conductive casing attached to said stake and having an illumination chamber, a battery holding insert of insulating material and fitted in said casing, a conductive partition in said casing and contacting said casing, said partition being separably carried by said casing so that the partition may be removed for removal of the battery, said casing having a longitudinal axis which is generally coincident with the longitudinal axis of the stake, the upper end of said insert constituting a transverse wall in said hollow casing, a lamp socket carried by said transverse wall and supporting a lamp within said illumination chamber, said casing having an opening through which light rays from the lamp may pass, said opening located in a side wall of said casing, a hood carried by said casing and protruding laterally from said side wall of said casing and above said opening to shield the opening from inspection from a position above the casing, an electrical circuit for selectively energizing the lamp at the aiming stake or at a

position remote from the aiming stake, said electrical circuit including a switch carried by said casing, a conductor extending from said switch to said socket with the center contact of the lamp adapted to operatively connect with the battery in the battery holding insert and said conductive casing and partition constituting a ground path for the battery and lamp, an electrical conductor in said insert and adapted to touch the center contact of the lamp, a wire extending from the last mentioned conductor and a wire extending from said casing to a remote location at which it may connect to an additional source of electrical potential.

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