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PYROPHORIC STRIKER CONSTRUCTION

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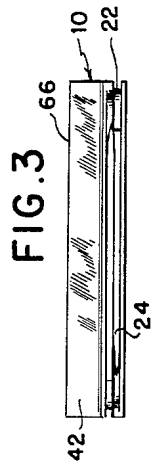


FIG. 3




FIG. 2




FIG. 1

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# PYROPHORIC STRIKER CONSTRUCTION

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1 Claim. (Cl. 67—7.1)

This invention relates generally to the field of pyrophoric lighters, and more particularly to an improved construction of the type employing a pyrophoric striker which is struck against a flint element, in a manner similar to that employed when using conventional matches.

It is among the principal objects of the present invention to provide improved striker construction having means for readily replacing the flint element which comprises an essential part thereof.

Another object of the invention lies in the provision of pyrophoric construction which may be of the usually compact configuration, to permit the same to be used in combination tools, such as, pocket knives, and the like.

A further object of the invention lies in the provision of structure of the above type, in which the cost of fabrication may be of a reasonably low order, with consequent wide sale, distribution and use.

Another object of the invention lies in the provision of pyrophoric striker construction which may be readily assembled and disassembled by those possessing only ordinary skill, and without resort to any tools whatsoever.

A feature of the invention lies in the fact that the fully assembled device may be substantially rectangular in over-all configuration, thereby possessing an unusually attractive appearance.

These objects and features, as well as other incidental ends and advantages, will become more clearly apparent during the course of the following disclosure, and be pointed out in the appended claim.

On the drawing, to which reference will be made in the specification, similar reference characters have been employed to designate corresponding parts throughout the several views.

Figure 1 is a view in perspective showing a fully assembled embodiment of the invention.

Figure 2 is an exploded view in perspective of the embodiment.

Figure 3 is a side elevational view of the device showing the side opposite that seen on Figure 1.

In accordance with the invention, the device, generally indicated by reference character **10**, comprises broadly: a base element **12**, a tank element **14**, a striker element **16**, a flint element **18** and a cover element **20**.

The base element **12** may be of any suitable configuration, and may form, if desired, a support for other tools, as for example, a knife **22**, having blades **24** thereupon. The details of the knife **22**, or any other combination tool which may be substituted, form no part of the invention.

The base member includes a grooved member **26**, having a left-hand groove **28** and a right-hand groove **30**, which define an upper elongated member **32** and a lower elongated member **34**. The upper elongated member **32** has an angularly disposed positioning member **36**, the inner surface **38** of which is engageable with a portion of the tank element **14** to position the same upon the base element when the device is fully assembled.

The tank element **14** is of generally rectangular configuration, including a pair of relatively wider sides **40**, and a pair of relatively narrower sides **42**, as well as a pair of end portions **44**. The end portion **44** seen on Figures 1 and 2 is provided with a recess **46** and bore **48** to accommodate the striker element **16** when the same is positioned therein. At the opposite end, a rectangularly-shaped recess **50** extends inwardly from one of the narrower sides **42**, and provides means for retaining the flint element **18**.

The striker element **16** is of match-like configuration, as shown on Figure 2, including a tubular portion **52**, which suports a wick member **54**, and striking steel member **56**. The handle member **58** is of generally larger diameter, so as to accurately fit within the recess **46** in the tank element **14**.

The flint element **18** is preferably cast from molten flint to the configuration shown on Figure 2. It is bounded by three planar surfaces **60**, a pair of end surfaces, one of which is shown at **62**, and a grooved surface **64**, the last-mentioned surface being adapted to be struck by the member **56** on the striker element **16**.

The cover element **20** is adapted to be slidably engaged with the base element **12**, and includes an upper side member **66**, a left side member **68**, a right side member **70**, and an end member **72** adapted to abut the outer surface (not shown) of the positioning member **36**. Extending toward each other from the left and right side members **68** and **70**, are a left tongue member **74** and a right tongue member **76**, respectively, which are adapted to slide within the left and right grooves **28** and **30** in the base element **12**. A small cut-out portion **80** matches the recess **46**, when the device is assembled, and permits the handle member **58** of the striker element **16** to be easily grasped.

The device is assembled substantially as shown on Figure 2, the flint element **18** being inserted within the flint retaining recess **50** in the tank element **14**, after which the tank element is in turn positioned upon the upper surface **82** of the base member **12**. The cover element is then engaged within the grooves **28** and **30**, and slid rightwardly as seen on Figure 2, until the device assumes the condition shown on Figure 1. The device is then used in a well-known manner, the striker element **16** being inserted within the bore **48** at the end of each use, to be remoistened with fuel, after which the same may be removed as shown on Figure 2, and the steel member **56** being struck upon the flint element **18** by inserting the same through the elongated slot **78** which overlies the same. As the dimensions of the slot are smaller than those of the flint element **18**, a relatively loose fit may be employed between the flint element **18** and the flint retaining recess **50**, since when the device is fully assembled, the cover maintains the same in proper position.

To replace the flint element after the same has become worn, it is necessary only to slide the cover element **20** to the left as seen on Figure 2, and remove the tank element **14** from contact with the base element **12**. The front element may then be easily moved with the fingers of the user, to be replaced by a fresh element. Reassembly of the device in the manner above set forth again maintains the flint element in operative position.

It may thus be seen that I have intended novel and highly useful improvements in pyrophoric striker construction, in which there has been provided a simple, easily manufactured device which may be readily disassembled at will, without the use of any special skill. The flint element is maintained within the device without resort to screws or tightening devices, which may readily break or otherwise damage the flint. When it is desired to replace the same, it is necessary only to disengage a cover element from a base element and lift free the tank element which supports the flint element,

and the reassembly of the device is equally simple. The device may be manufactured at a reasonably low cost, and may be of sufficiently sturdy construction to offer a relatively long useful life.

I wish it to be understood that I do not consider the invention limited to the exact details of structure shown and set forth in this specification, for obvious modifications will occur to those skilled in the art to which the present invention pertains.

I claim:

A pyrophoric lighter comprising: a base element, a cover element, a tank, a striker element and a flint element; said cover element having means for slidably engaging said base element to form a space into which said tank, striker, and flint elements are disposable; said tank element having a recess therein in which said flint element is engageable; said cover element having slot means smaller than said flint element to permit ingress of said striker element therethrough to contact said flint element; whereby upon insertion of said flint element into said recess in said tank element, and engagement of said cover element and base element with said tank element, said case element may maintain said flint element within said recess in said tank element.



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