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K. M. VAN NORMAN

2,729,085

LIGHTERS

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FIG. 1

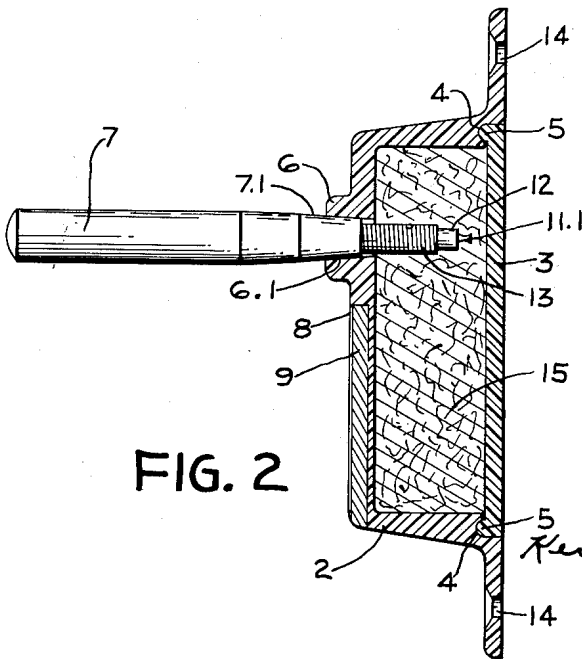
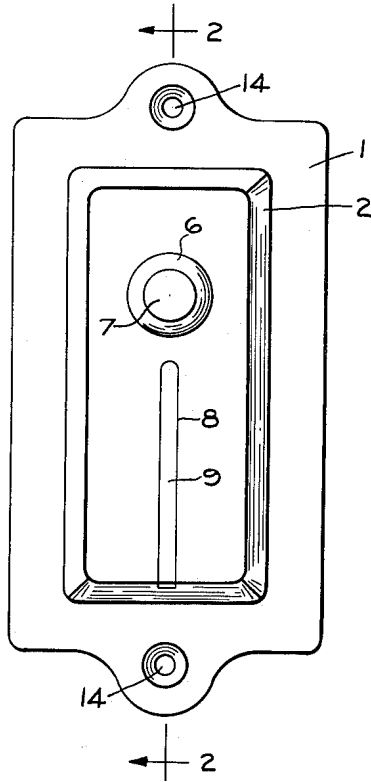


FIG. 2

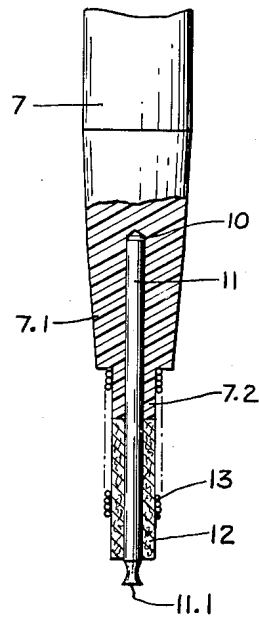


FIG. 3

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2,729,085

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2 Claims. (Cl. 67—4.1)

My invention relates to an article of manufacture including improvements in a lighter which may be readily attached to a stove, wall or other supporting means or may be held in the hand or laid on a table or similar object.

The objects of my invention are to provide as an article of manufacture a beautiful, simple, cheaply constructed improved form of lighter of transparent material in which a plastic base and container are cast or molded in a single piece; to provide a back piece or closure permanently united to the base by grooves formed in the base and ridges cast upon the back piece secured by airplane glue or other suitable material whereby the outer surface of the back piece and the adjacent surface of the base are of uniform surface level; to provide an improved form of handle or lighter stick with the inner end tapered to fit a corresponding opening in the front wall of the container to form an easily removable fluid-tight and gas-tight connection; to provide an improved form of mounting for the ignition pin and the sleeve surrounding the pin, including a coiled spring shield around a sleeve of asbestos or other fire-resistant fibers, whereby the spring and sleeve may be easily dismounted from the ignition pin and easily replaced and when in place will confine the flame to the outer end of the sleeve; to provide an improved means for supplying ignition fluid to the sleeve in small amounts; to provide a replaceable frictional abrasive to be contacted by the ignition pin to produce sparks for ignition with projecting lateral means to secure the abrasive in place.

I attain these objects by the means illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of my lighter;

Figure 2 is a sectional view on the line 2—2 of Figure 1;

Figure 3 is an enlarged detail of the handle, ignition pin, sleeve and spring.

My lighter comprises a base plate 1 with a container 2 formed integral therewith, having united thereto a separate piece or plate 3 formed with a rounded rim or ridge 5 integral therewith which fits into a groove 4 formed in the walls of the container 2 at the rear thereof. The ridge 5 is preferably secured in the groove 4 by airplane glue or other cementing material which is not soluble by alcohol or other common lighter fluid. A handle or lighting stick 7 is mounted in the front wall of the container 2 in a nipple 6 formed with a round bore extending therein arranged to fit closely the inner tapering end 7.1 of the handle 7. The inner end of the handle has a bore 10 formed therein which contains the inner end of the ignition pin 11 a portion of which is surrounded by an absorbent fibrous sleeve preferably of asbestos having a head 12 united thereto and through which the ignition pin 11 extends with a sharp-edged head 11.1 projecting therefrom.

The inner end of the handle has a reduced part or stub 7.2 integral therewith on which a tightly coiled spring 13 is mounted and the spring encloses and shields the tube or sleeve excepting the head 12.

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The interior of the container is preferably filled with a pad 15 of felt such as plexi-glass felt, or other suitable absorbent material, before the door 3 is sealed in the base. The lighting fluid may be inserted in the lighter 5 by removing the handle 7 from the tapered opening in the nipple 6. The pad or filling of the container will absorb the lighting fluid and act to limit somewhat the amount of fluid which can contact and be absorbed by the head 12, and the size of the flame produced thereby.

A longitudinal groove 8 is formed in the front plate of the container in which an abrasive strip or filling 9 of flint, cerium, prepared steel, or other abrasive, spark-producing element is mounted to produce sparks from frictional contact by the head 11.1 of the pin 11, and when worn out may be readily removed and replaced.

In the use of my apparatus the base may be fastened to the frame of a gas stove or other support by screws or bolts passing through openings 14 left in the base plate, to a wall or other support or the lighter may be laid in horizontal position with its base on a table or other suitable support and is of convenient size and shape to be held in one hand.

I prefer to have the base secured by the screws 14 in vertical position as shown in Figures 1 and 2 either to the wall or to a vertical portion of a stove. When so positioned, the handle 7, standing at right angles to the base, will necessarily be in horizontal position so that a person in front of it can readily reach the handle 7 and pull it out. The handle 7 may also be more readily replaced when in this position without any danger of either breaking or injuring the edges of the nipple 6 and without injuring the head 12 of the asbestos sleeve. This position is of great importance because of the probability that persons attempting to place the plug or handle in vertical position as required in lighters heretofore patented, is almost certain to cause injury either to the edges of the orifice in which it is inserted, or to the plug or to the head of the asbestos sleeve.

The base and container, as well as the handle, are preferably made of a fire-resistant transparent plastic and may be tinted with blue, yellow or any other desirable color and so afford a very ornamental fixture as shown in my co-pending application for design patent.

In the use of my device, the felt pad is saturated with alcohol or any other desired lighting fluid through the opening in the nipple. The handle is then inserted and the head 12 comes in contact with the felt pad 15 and absorbs a small amount of the lighting fluid so that when the head 11.1 of the pin is rubbed upon the ignition strip, sparks will form and light the fluid on the head 12. The handle being somewhat longer than the ordinary match, affords a very convenient means for lighting the burners of a kerosene or gas stove or oven or for lighting the fire in an ordinary kitchen stove or for lighting cigars or cigarettes.

When the abrasive strip is worn out, it may be readily replaced and if the tube or the head 11.1 upon the ignition pin becomes reduced, it may be readily and easily replaced as the spring 13 may be readily pulled off from the sleeve and pin. There being no wear upon the felt pad, there will be no occasion for removing it so that it will never be necessary to remove the back door 3.

Some modifications may be made in the form and proportion of the parts and I do not limit my claims to the precise forms shown in the drawings, but only to the spirit of my invention as expressed in the claims.

I claim:

1. As an article of manufacture, a lighter including a unitary rectangular chamber of transparent plastic with a flat projecting flange around the lower edge thereof, a fibrous absorbent pad mounted in the chamber, a flat

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plate having a projecting rim formed upon one face thereof secured in a corresponding groove formed in the flange and forming one wall of the chamber, an opening in the opposite wall of the chamber holding in air-tight contact therewith a handle, said handle having mounted thereon an ignition pin with a sharp-edged head formed upon the outer end of said pin, a sleeve of asbestos fiber mounted upon said ignition pin extending to its sharp-edged head, and a closely coiled spring surrounding and shielding the sleeve, said sleeve having a small portion thereof extending beyond the outer end of the spring and said spring being adapted to shield the body of the sleeve from direct contact with the fire when the lighter is ignited, the sleeve and spring being readily removable and replaceable.

2. In a lighter, a handle with an ignition pin mounted therein, with a sharp-edged head formed upon the outer end of said pin, a sleeve of fire-proof fiber mounted upon said ignition pin adjacent its sharp-edged head, and a closely coiled spring surrounding and shielding the body

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of the sleeve and with its inner end united to the handle, said sleeve having a small portion thereof extending beyond the outer end of the spring and said spring being adapted to shield the body of the sleeve from direct contact with the fire when the lighter is ignited.

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