Aug. 4, 1925. 1,548,724

E. MANN

MARINE TORCH

Filed Jan. 12, 1925

FIG. 1.

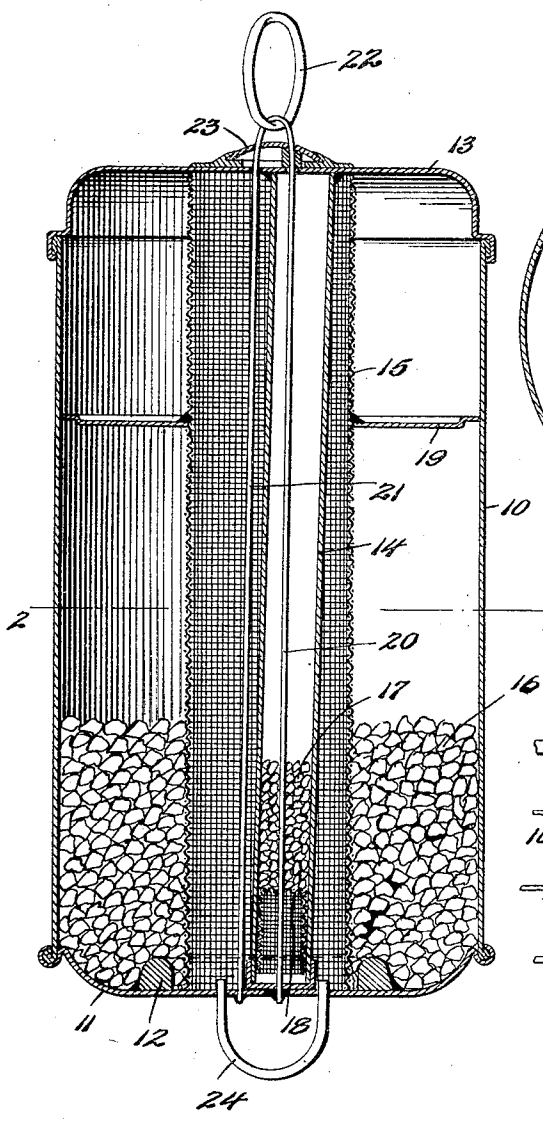


FIG. 2.

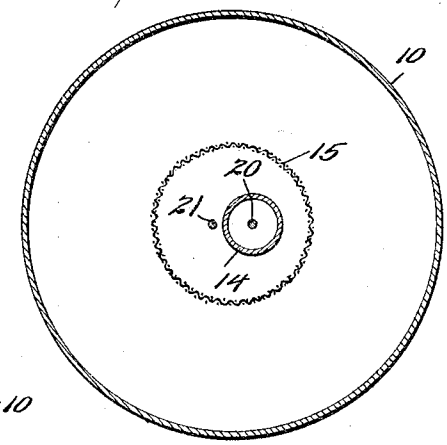
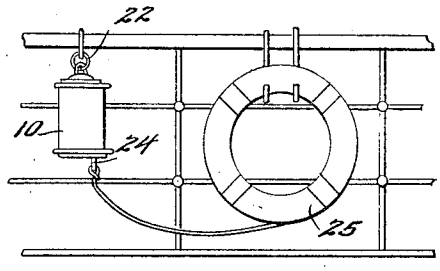


FIG. 3.



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UNITED STATES PATENT OFFICE.

EDINA MANN, OF BALTIMORE, MARYLAND, ASSIGNOR TO MARINE TORCH COMPANY OF BALTIMORE CITY, OF BALTIMORE, MARYLAND, A CORPORATION OF MARYLAND.

MARINE TORCH.

Application filed January 12, 1925. Serial No. 2,003.

To all whom it may concern:

Be it known that I, EDINA MANN, a citizen of the United States, and residing at Baltimore, county of Baltimore, State of Maryland, have invented certain new and useful Improvements in Marine Torches, of which the following is a specification.

This invention relates to marine torches of the type in which illuminating gas and igniter gas are automatically generated when the torch is launched into the water, the latter gas serving to ignite the former. In torches of this kind it is desirable to have all of the illuminating gas forming material so arranged that it can be readily reached by water entering the torch, thereby preventing part of the material from clogging the torch and hindering passage of water to the rest of the material, which sometimes occurs, causing extinguishment of the torch. The present invention aims to provide a simple arrangement for overcoming this difficulty, the parts being so arranged that the illuminating gas forming material is readily accessible to the water, thus avoiding any possibility of the material becoming clogged and preventing generation of the illuminating gas. A further object is to provide a torch in which the illuminating gas forming material is arranged in an elongated body, whereby only a small quantity is reached by the water at any one time thus preventing the generation of an excessive amount of illuminating gas and prolonging the burning period of the torch. The invention also aims to provide a torch construction having few parts, all of which are strong and rigid and easily produced, thus simplifying and cheapening the manufacture of devices of this kind.

The invention is illustrated in the accompanying drawings in which:

Figure 1 is a longitudinal section of a torch constructed in accordance with the present invention;

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

Figure 3 illustrates the manner of supporting the torch when used in connection with a life preserver.

Referring to the drawings in detail, the torch comprises an outer buoyant container 10 preferably of cylindrical form, the bottom 11 of which preferably carries a weight 12 to cause the torch to maintain an upright position when floating in the water. The upper part of container 10 is closed by a head 13. An inner container 14 is arranged within the container 10, this inner container preferably being of tubular form and having its ends rigidly secured to the ends 11 and 13 of the outer container, as by being soldered thereto. A screen member 15 is arranged within the outer container 10, this member being formed of ordinary wire screen of comparatively fine mesh or from any other suitable foraminous material. This screen member 15 is spaced inwardly from the outer container 10 and the same surrounds and is spaced from the inner container 14. The space between the outer container and the screen member 15 is adapted to receive illuminating gas forming material illustrated as 16. Within the inner container 14 is arranged a suitable quantity of igniter gas forming material illustrated at 17, this material preferably being supported on a suitable shelf 18 of perforated material. The screen member 15 is relatively large and the space between the same and the inner container 14 is left open or unoccupied for a purpose hereinafter pointed out. A suitable disc 19 is rigidly secured to the screen member 15 adjacent its upper end, this disc filling the space between the outer container 10 and the screen member 15 and serving to prevent the illuminating gas forming material from falling into the upper end of the container 10 when the torch is turned upside down. To provide for the admission of water to the gas forming materials a rod 20 extends downwardly through the inner container 14 and through an opening in the bottom thereof and through a registering opening in the bottom 11 of the container 10. Another rod 21 extends downwardly through the space between inner container 14 and the screen member 15, this rod also projecting through an opening in the lower end 11 of the container 10. It will be understood that the openings in the bottom 11 of the container through which the rods 20 and 21 extend are normally closed against the ingress of water, this being accomplished by the rods themselves, and in addition, a small amount of solder placed around the rods. At their upper ends the rods 20 and 21 are connected and are preferably secured to a ring 22. A cap 23 is also secured to the upper end 13

of the container by means of a weak layer of solder. This cap is also strongly attached to the rods 20 and 21. The rods 20 and 21 near their upper ends pass through openings which register with the space within the inner container 14 and with the space between the inner container 14 and the screen member 15. An eye 24 is firmly secured to the lower part of the container.

In use the ring 22 of the torch is attached to the rail of a ship and the eye 24 secured to a life preserver 25 as indicated in Figure 3. In launching the life preserver and the torch, the cap 23 and the rods 20 and 21 are pulled out of the container. Hence when the torch floats in the water, water will enter through the openings in the lower end 11 and come in contact with the illuminating gas forming material in the bottom of the outer container and with the igniter gas forming material in the inner container 14. Illuminating gas will be generated in the former and igniter gas in the latter, and as these gases escape through the openings at the upper end of the container, ignition of the illuminating gas will occur.

When the water enters the space between the inner container 14 and the screen member 15 it will have free access through the member 15 to the illuminating gas forming material surrounding the screen member 15. As the illuminating gas forming material is used up and the torch sinks deeper in the water, the water will still have ready access to the upper portions of the body of illuminating gas forming material. In other words, the portions of such material which have become exhausted will not clog the torch or prevent ready access of the water to the upper portions of the material, as is the case in some constructions. On the contrary, as long as any illuminating gas forming material is left the water will have ready access to the same because it can rise through the space between the inner container 14 and the screen member 15, and readily pass through the latter member.

The screen member 15 also serves the purpose of providing a comparatively long and narrow space in which the illuminating gas forming material may be placed. The result of this is that when water enters the torch a comparatively small amount of the illuminating gas forming material is exposed to the water at any one time, and consequently the torch will continue to burn longer and more uniformly than it would if the gas forming material were in a single large body near the bottom of the torch.

Modifications in the details of the foregoing construction may of course be made without departing from the spirit of the invention.

Having thus described the invention, what is claimed as new and desired to be secured by U. S. Letters Patent is:

1. A marine torch comprising an outer container for holding illuminating gas forming material and an inner container for holding igniter gas forming material, the latter container being secured within the former, a screen member mounted in said outer container and surrounding said inner container and spaced from each of said containers, whereby a space is formed between said screen member and the outer container, for receiving the illuminating gas forming material, and a second space is formed between said screen member and said inner container and means for admitting water to said second space and to said inner container when the torch is launched.

2. A marine torch comprising an outer container, an inner container mounted therein and adapted to receive igniter gas forming material, said inner container having its ends secured to the ends of said outer container, a screen member surrounding said inner container and spaced therefrom, whereby a space is formed outside of said screen member for receiving illuminating gas forming material, and a second space is formed between said screen member and said inner container, and means rendered operative upon launching of the torch for admitting water to said second mentioned space and to said inner container.

3. A marine torch comprising an outer container, a tubular container mounted therein and adapted to receive igniter gas forming material, said tubular member having its ends secured to the ends of said outer container, a screen member surrounding said tubular member and extending substantially from one end to the other of said outer member, and being spaced from said outer container and said tubular container, whereby a space is formed outside of said screen member for receiving illuminating gas forming material, and a second space is formed between said screen member and said tubular container, a rod extending through said tubular container and through an opening in the bottom thereof and the bottom of said outer container, a second rod extending through said second mentioned space and through a second opening in the bottom of the outer container and means rendered operative upon the launching of the torch for pulling said rods out of said openings, whereby water is admitted to said tubular container and to said second mentioned space.

In testimony whereof I hereunto affix my signature.

EDINA MANN