W. H. McNUTT.

CARTRIDGE SYSTEM FOR EXPLOSIVE ENGINES.

APPLICATION FILED JAN. 14, 1907.

900,765. Patented Oct. 13, 1908.

FIG. 1

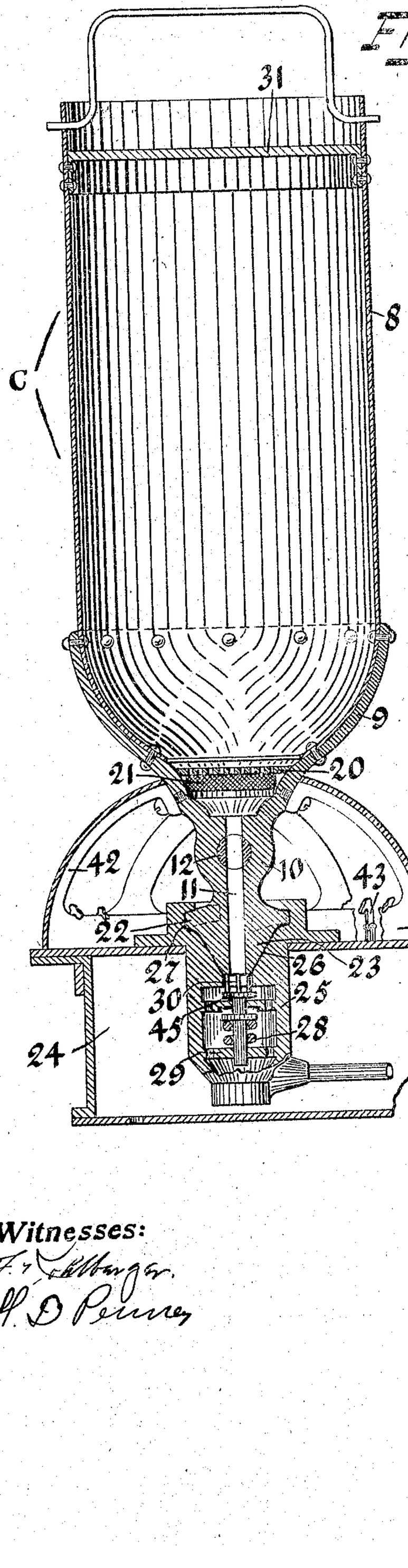


FIG. 3

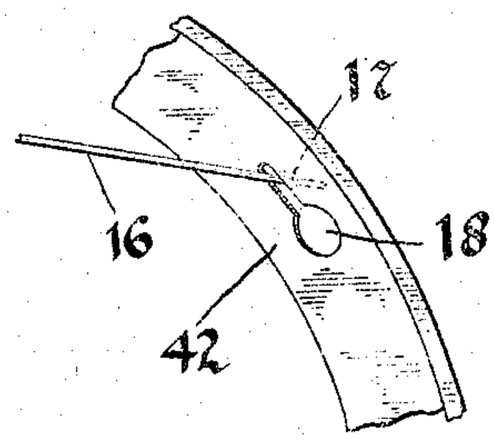
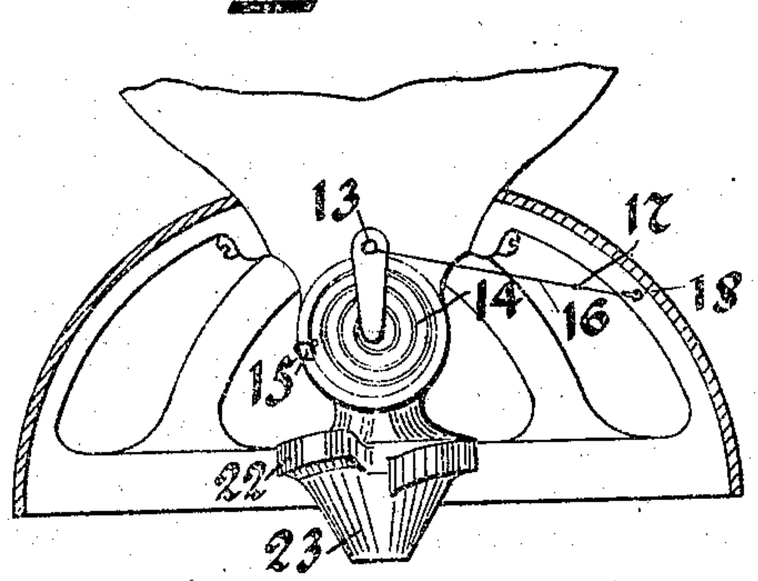


FIG. 2



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UNITED STATES PATENT OFFICE.

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CARTRIDGE SYSTEM FOR EXPLOSIVE-ENGINES.

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Application filed January 14, 1907. Serial No. 352,110.

To all whom it may concern:

Be it known that I, WILLIAM H. McNUTT, a citizen of the United States, residing in New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Cartridge Systems for Explosive-Engines, of which the following is a specification.

This invention relates to vessels for containing explosive liquids such as gasolene, kerosene or the like, for use in connection with boats or vehicles operated by an engine, either an explosive engine or a steam engine in which the steam is generated by burning such liquid as fuel.

The object of the invention is to provide a vessel in the nature of a cartridge that will be first filled, and then it and the boat or vehicle are provided with means whereby the cartridge can be readily attached, and when empty can be detached quickly and another filled cartridge substituted; the empty cartridge is then refilled for future substitution, a number of such cartridges being filled and kept on hand. By this means it is not necessary to pour the gasolene or other liquid into the receiving vessel for the boat or car, but the cartridge is quickly attached and then a suitable valve is turned permitting its contents to be used as needed.

One of the objects of the invention is to provide suitable safety devices for preventing access of flame to the vapor in the vessel, should a fire occur in the vicinity of the vessel.

In the accompanying drawings illustrating one embodiment of my invention, Figure 1 is a vertical section through the cartridge, showing it attached to a vessel. Fig. 2 is a fragmentary view in elevation of the lower part of the cartridge showing the safety valve means, and the removable joint. Fig. 3 is a detachable view showing the key-hole portion of the frame.

A cartridge denoted generally by C is shown as comprising a cylindrical body 8 having a curved conical lower portion that is secured to the funnel-shaped member 9. The member 9 has a plug portion 10 provided with a bore 11 permitting the outlet for the cartridge. In this bore is arranged a suitable plug valve 12 that is controlled by a handle 13, and is provided with a coil spring 14 for swinging it to the closed position in which the handle 13 will strike the abutment 15. A cord 16 or the like of inflammable material is secured to the handle 13, and has one end locked by means of one or more knots 17, the cord being slipped into a key-hole slot 18. The number of knots can be used for adjusting the position in which the handle is secured, to retain the valve in the open position. But in the event of a fire near the cartridge, the string will burn off releasing the handle when the spring will move the valve to closed position. This will prevent the inflammable contents of the cartridge escaping and causing explosion.

At the lower portion of the cartridge, above the inlet 11 are arranged a number of members with minute openings to prevent any possibility of flame passing into the vessel. A perforated plate 20 is shown at the lower part of the cartridge and also a wire gauze member 21, which will also serve as a strainer for the gasolene.

Suitable means are arranged at the bottom of the cartridge to coöperate with the portion of the receiving vessel or member on the boat or car whereby the cartridge can be readily attached and detached. In the construction shown, the plug portion 10 of the cartridge is provided with screw-threads 22 on a tapered end portion 23. The receiving vessel 24 for the boat or car is provided with a member 25 having a tapered bore 26 provided with a threaded slot 27 into which the threads 22 can engage. By this means, the cartridge can be screwed onto the vessel 24 and make a very tight joint therewith. The receiving member 25 is provided with a valve 45 closing the bore 26 from below, and coil spring 28 resting on a bridge 29 in the valve member, serving to normally retain the valve closed. But when the cartridge is inserted, the lower end of its plug 10 will engage projecting pins 30 on the valve member and unseat the valve, permitting the contents of the cartridge to flow downward when the plug valve 12 is opened.

Having thus described by invention, I claim:

1. The combination of the cartridge vessel having a conical lower end terminating in a plug, the plug having a conical extremity and provided with a threaded portion above said extremity, a sleeve member comprising a body portion and a flange portion adapted for attachment to a receiving vessel, a sleeve member having a

threaded portion in its upper end, and a conical portion below the threaded portion corresponding in shape to the said plug for attachment thereto, the sleeve having a chambered portion in its lower end, a valve at the upper part of the chambered portion arranged to close the opening, a spring in the chambered portion arranged to engage the valve and yieldably retain it seated, and fingers attached to the valve and projecting into the plug engaging portion causing the valve to be automatically opened and retained open when the plug is secured in the bushing.

2. The combination of the cartridge vessel having a conical lower end terminating in a plug, the plug having a conical extremity and provided with a threaded portion above said extremity, a sleeve member comprising a body portion and a flange portion adapted for attachment to a receiving vessel, a sleeve member having a threaded portion in its upper end, and a conical portion below the threaded portion corresponding in shape to the said plug for attachment thereto, the sleeve having a chambered portion in its lower end, a valve at the upper part of the chambered portion arranged to close the opening, a spring in the chambered portion arranged to engage the valve and yieldably retain it seated, fingers attached to the valve and projecting into the plug engaging portion causing the valve to be automatically opened and retained open when the plug is secured in the bushing, the cartridge member having a flaring based portion arranged to rest on the receiving vessel when the plug is secured to said bushing, and latch members carried by the receiving vessel and arranged to secure the cartridge base in position.

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