

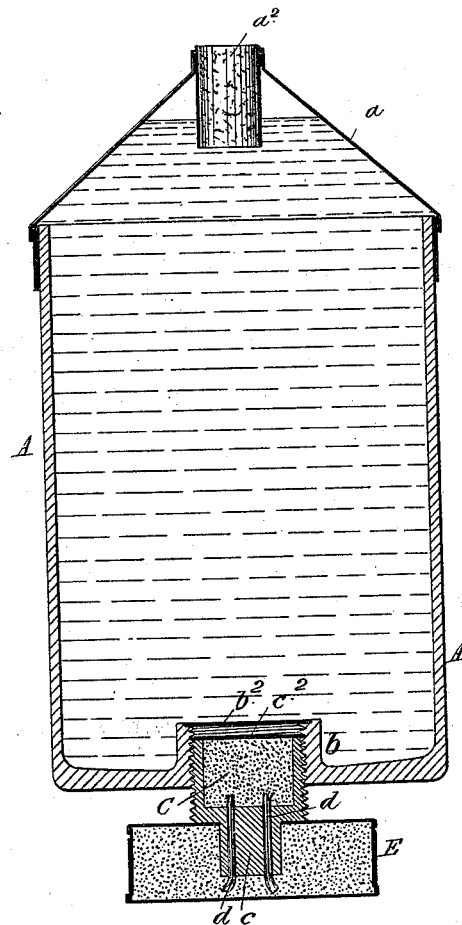
(No Model.)

J. GORDON, Jr.

SHELL FOR CARRYING AND DISCHARGING OIL.

No. 303,507.

Patented Aug. 12, 1884.



Witnesses:

E. A. Smith

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Inventor:

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UNITED STATES PATENT OFFICE.

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JOHN GORDON, JR., OF DUNDEE, COUNTY OF FORFAR, SCOTLAND.

SHELL FOR CARRYING AND DISCHARGING OIL.

SPECIFICATION forming part of Letters Patent No. 303,507, dated August 12, 1884.

Application filed March 5, 1884. (No model.) Patented in England January 12, 1884, No. 1,332.

To all whom it may concern:

Be it known that I, JOHN GORDON, Jr., a subject of the Queen of Great Britain and Ireland, and residing at Dundee, in the county of Forfar, North Britain, have invented certain improvements in apparatus for discharging oil upon the sea or waters, when agitated, for the purpose of calming or allaying the force thereof, applicable also to explosive projectiles, (for which I have obtained a patent in Great Britain, No. 1,332, dated January 12, 1884,) of which the following is a specification.

This invention relates to a projectile, shell, or vessel which can be discharged from a gun or other equivalent projecting apparatus, and which thereafter at any predetermined time will be opened or ruptured, so as to insure the escape of oil which the shell or vessel contains, and the distribution of said oil upon the water, the rupturing of the shell being accomplished by means of a bursting-charge which is exploded at the proper time by a time-fuse.

In my improved shell or vessel the bursting-charge and time-fuse are carried by a chamber with a suitable cover to retain the charge and to open on firing. The fuse is of a length timed to ignite the said charge when the can, shell, or vessel arrives at or over the place where the oil is to be distributed. I make a recess in the base of the projectile, shell, or vessel, and cover it with a suitable cover or filling, and shape the chamber holding the bursting-charge and fuse so that it can be screwed or fixed in the said recess. Thus the said can, shell, or vessel may be used as an ordinary oil-can until it is required for use for the purposes of my invention, when the said chamber holding the bursting-charge and fuse can be attached. The charge for the gun may be put thereinto separately, or it may be contained in a box or receptacle fixed to the base of the chamber holding the bursting-charge and fuse.

The accompanying drawing represents an apparatus constructed according to my invention.

A is the projectile, shell, or vessel containing the oil, and provided with a cover to top piece, *a*, the opening through which may be closed by a cork, *a'*, or in any other suitable

way. The said vessel A has a screw-threaded recess in its base at *b*, which is covered with a disk of thin metal, *b'*. The chamber C, containing the bursting-charge, is covered by a disk of thin metal, *c'*, and is screw-threaded on its exterior, so that it can readily be secured in the vessel A when required for use. At other times, when the fuse is not secured in place, the vessel A may be used as an ordinary oil-can. The fuses *d* are held in the projection *e*, and are of a length in accordance with the time which is to elapse between the discharge from the gun and the rupture or dismemberment of the shell or vessel A.

E represents a box or receptacle fixed to the chamber C, in which box or receptacle the charge for the gun may be contained, instead of being put independently into the gun; but of course it may be put in independently, if desired.

In order to prevent a sudden firing through the whole length of the fuse, owing to the great heat of the gun-chamber, I dip the said fuse in or coat it with a material which will be melted or liquefied by the heat of the discharge, and, while not extinguishing the fuse, will retard the progress of the fire along the same for the requisite time to delay the firing of the bursting-charge until the projected shell or vessel has arrived at its destination. I have found paraffine-wax a suitable substance for this purpose, and it possesses the additional advantage of being a material impervious to moisture, or practically so.

These improvements may be applied to explosive shells—such as are used in warfare—whereby the bursting-charges and fuses can be used at the base of the projectile, and the arrangement for having the bursting-charge separate from the shell and attachable thereto, when desired, as hereinbefore described, can consequently be applied to shells of this class. By this means the shells can be stored separately from the bursting-charges, and so the said shells will not be liable to danger of bursting accidentally, while after the bursting-charges and fuse are attached to the base of the shell the practical certainty of the ignition of the fuse and subsequent bursting of the shell is insured.

I claim—

1. Apparatus for discharging oil upon the

sea or waters when agitated, consisting of a closed receptacle, shell, or vessel containing the oil, and a time-fuse and bursting-charge detachably connected to the exterior of the closed bottom of the vessel, as shown and described.

2. The oil-containing shell or vessel provided at its base with an internally-screw-threaded neck, *b*, closed at its inner end, in combination with the screw-threaded part C, containing the bursting-charge and time-fuse,

and detachably connected to the exterior of the vessel by screwing into said neck, as herein shown and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN GORDON, JR.

Witnesses:

CHARLES WHARTON,

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Both of 31 Lombard Street, London, E. C.