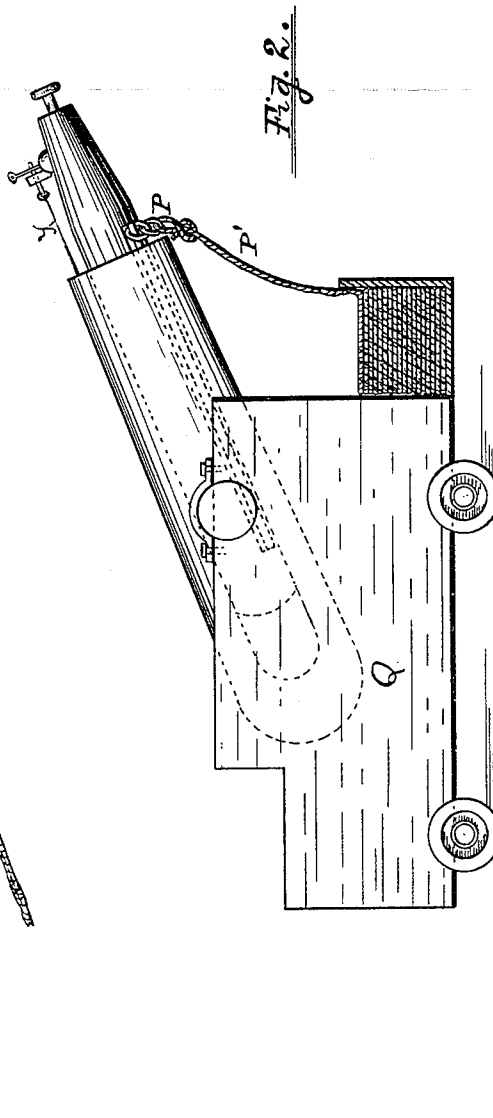
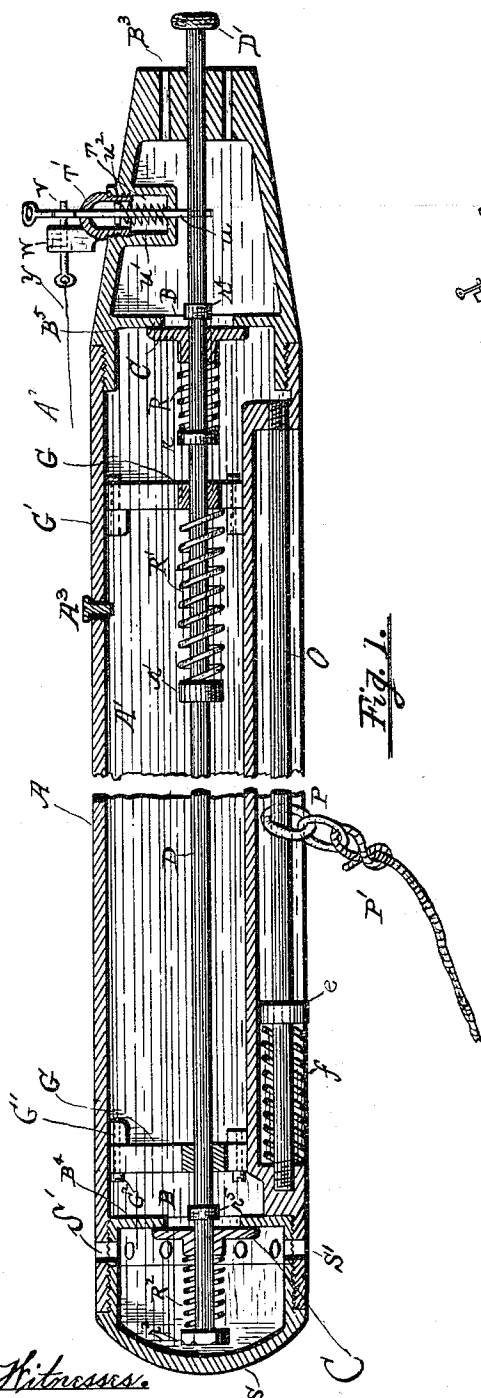


(No Model.)

E. D. MOORE.
OIL PROJECTILE.

No. 478,705.

Patented July 12, 1892.



Witnesses.
A. J. Adams
E. L. Harlow

Inventor
Everett D. Moore
By J. Stuart Bush
His Attorney.

UNITED STATES PATENT OFFICE.

EVERETT D. MOORE, OF BALTIMORE, MARYLAND, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO THE AMERICAN OIL PROJECTILE COMPANY, OF SAME PLACE.

OIL-PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 478,705, dated July 12, 1892.

Application filed June 11, 1891. Serial No. 395,847. (No model.)

To all whom it may concern:

Be it known that I, EVERETT D. MOORE, of Baltimore, State of Maryland, have invented a new and useful Oil Projectile and Distributer, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in means or apparatus for saving life and property during storms in harbors, along the coast, or at open sea; and it particularly relates to the discharge of oil into the sea, whereby there is produced a smooth surface which is not broken by the wind, as is usually the case when the surface of the sea is violently acted on by the wind.

My invention consists of an oil projectile and distributor filled with oil and having means for controlling the discharge of oil into the sea, the said means being positively operated by suitable mechanism independently of the action of surrounding water.

My invention also consists of certain novel features and constructions hereinafter described, and particularly pointed out in the claims.

This specification relates to the applications filed January 23, 1891, Serial No. 378,752, and March 11, 1891, Serial No. 384,536.

In order to utilize the well-known property of oil for producing a smooth surface on the water which has been broken by the wind, I have constructed an oil projectile and distributor in which the valves controlling the flow of oil to the sea are operated or opened before the device is drawn backward through the water.

In the accompanying drawings, which illustrate my invention, Figure 1 is a longitudinal central section of the oil projectile and distributor, showing the valves closed. Fig. 2 is a side elevation showing the projectile and distributor in the mortar ready to be projected.

Within the shell A is an oil-chamber A', at the rear end of which is a partition B⁴ and at the forward end a partition B⁵, the said partitions having ports B closed by valves C, mounted on the valve-rod D, at the forward end of which is the handle D', for a purpose hereinafter described. The rod D passes

through the guides G, which may be cast with the shell, if desired, or may be secured thereto by bolt G², passing through the guides into a lug G', cast with the shell. After the partition B⁴ has been screwed to its place, as shown, the holes S' are drilled and the cap S screwed to its place, the ends of the partition B⁴ and the cap abutting, as shown, to distribute the shock through the projectile as it is thrown from the projecting device.

In order to close the valves, the handle D' is drawn forward, compressing the springs R, R', and R² until the rod U is in alignment with an opening in the rod D, into which it is forced against the tension of the spring U', which bears against the bottom of a recess T and shoulder U². The rod U extends through the cap T' and has an eye near its upper end, through which eye and a projection W, cast with the shell, the key V passes, thereby holding the rod in the opening in rod D and the springs U', R, R', and R² compressed and valves C closed. The wire string or rope Y extends back and is secured to the side of the mortar or other projecting device Q, and as the projectile is thrown from the projecting device the key V is drawn from the rod U and projection W, so that the said rod U is drawn from the rod D by the expansion of spring U' and the valves C opened by the expansion of springs R, R', and R² and shoulders r⁴ and r⁵, bearing upon the backs of the valves C. The springs R and R² bear against valve C and shoulders r and r² and the spring R' bears against guide G and shoulder r'.

The projectile is filled with oil through opening A² in the shell, which opening is closed by a cap. When the projectile reaches the water, it is drawn backward by means of a rope P', attached to rings P, running along rod O, at the rear end of which is a sleeve e and its spring f for taking up the tension of the rope as the projectile is thrown through the air, thereby avoiding the breaking of the rope, and the valve C being open the oil is driven forward out through the channels B³ in the head, the water having entered the perforations S' and forced the oil out through the said channels.

The device is not only useful for smoothing the water during storms along the coast and

open sea between ships, but also useful in case of storms by being projected ahead of the ship and then drawn backward, so as to produce a smooth surface through which the ship can sail.

I do not limit myself to the exact construction shown, as the same may be varied without departing from the spirit of my invention. Having thus ascertained the nature and described the construction of my invention, I claim as new, and desire to secure by Letters Patent, is—

1. An oil projectile and distributor having an oil-chamber provided with water-inlet and outlet ports, valves mounted on the valve-rod and closing said ports against pressure, a rod passing through said valve-rod for holding the valves closed and adapted to release the valve-rod as the projectile is fired, and a rope secured to said projectile and distributor for drawing it through the water after the projection, for the purpose set forth.

2. An oil projectile and distributor having an oil-chamber provided with water-inlet and outlet ports, valves mounted on the valve-rod and closing said ports against pressure, means for holding said valves closed and adapted to release the valve-rod as the projectile is fired, and a rope secured to said projectile and distributor for drawing it through the water after the projection, for the purpose set forth.

3. An oil projectile and distributor having an oil-chamber provided with water-inlet and outlet ports, valves mounted on the valve-rod and closing said ports against pressure, means for holding the valves closed and adapted to release the valve-rod as the projectile is fired, a perforated cap at the water-inlet port, and a rope secured to said projectile and distributor for drawing it through the water after the projection, for the purpose set forth.

4. An oil projectile and distributor having an oil-chamber provided with water-inlet and

oil-outlet ports, valves mounted on the valve-rod and closing said ports against pressure, a rod passing through said valve-rod for holding the valves closed and adapted to release the valve-rod as the projectile is fired, a rope secured to said projectile and distributor, and means for taking up the tension of the rope as the projectile is thrown through the air, for the purpose set forth.

5. An oil projectile and distributor having an oil-chamber provided with water-inlet and oil-outlet ports, valves mounted on the valve-rod and closing said ports against pressure, a rod passing through said valve-rod for holding the valves closed and adapted to release the valve-rod as the projectile is fired, a rod secured to said projectile, a spring on said rod, and a rope secured to said projectile and distributor for drawing it through the water after the projection, the tension of said rope being taken up by said spring as the projectile is thrown through the air, for the purpose set forth.

6. A projectile having a recess in its side, a rod secured to said projectile and located in said recess, a rope traveling on said rod, and a cushion on said rod for taking up the tension of the rope as the projectile is thrown through the air, for the purpose set forth.

7. A projectile having a recess in its side, a rod secured to said projectile and located in said recess, a rope, rings to which said rope is secured traveling on said rod, and a spring-cushion on said rod for taking up the tension of the rope as the projectile is thrown through the air, for the purpose set forth.

In testimony whereof I, EVERETT D. MOORE, have signed my name to this specification, in the presence of two subscribing witnesses, on this 6th day of June, A. D. 1891.

EVERETT D. MOORE.

Witnesses:

R. E. SCALLY,
C. A. YOUNG.