

(No Model.)

J. H. BATES.
TORPEDO.

No. 483,126.

Patented Sept. 27, 1892.

Fig. 1

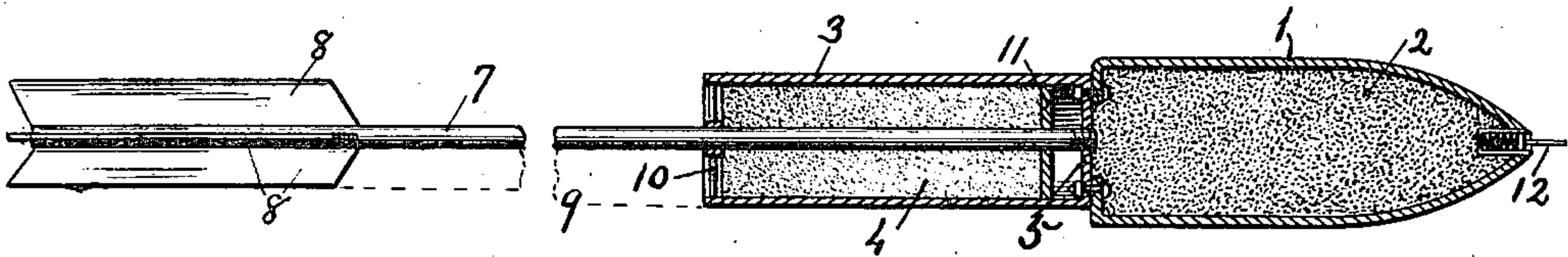


Fig. 3.

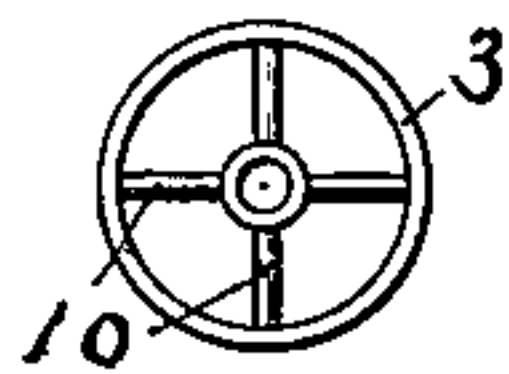


Fig. 2.

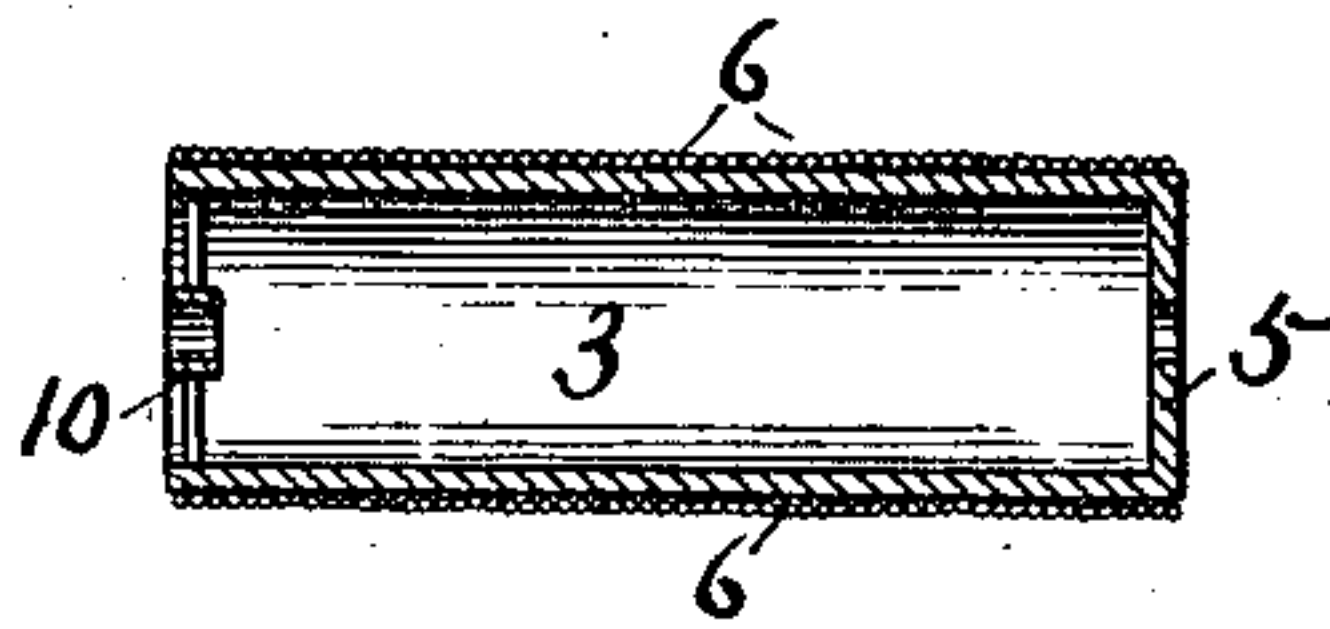


Fig. 4.

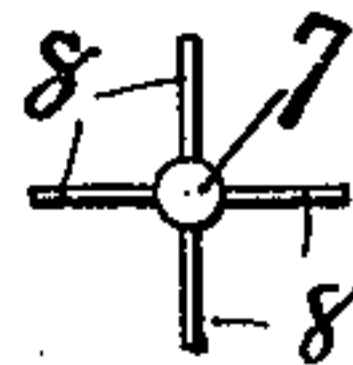
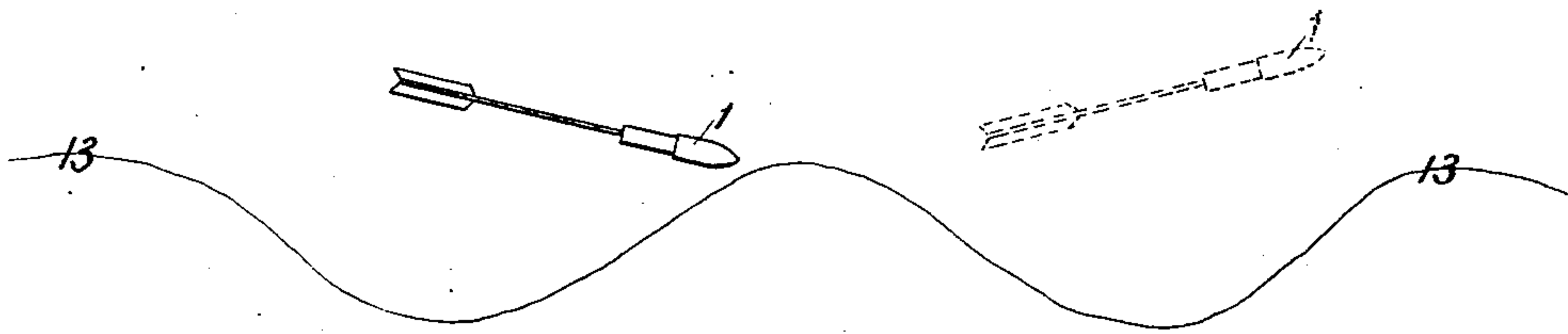


Fig. 5.



Witnesses:

Wm. J. A. Schutte

Erastus Moore

Inventor:

James H. Bates

UNITED STATES PATENT OFFICE.

JAMES H. BATES, OF NEW YORK, N. Y.

TORPEDO.

SPECIFICATION forming part of Letters Patent No. 483,126, dated September 27, 1892.

Application filed February 13, 1892. Serial No. 421,122. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. BATES, of New York, N. Y., have invented certain new and useful Improvements in Torpedoes, whereof the following is a specification.

My invention relates to torpedoes for use in times of war.

It consists, in general terms, in a device with two chambers, one of which contains the high-power explosive, which does the damage, and the other contains a slow-burning powder or analogous material, whose combustion propels the device.

It consists, further, in other matters, chiefly of detail, which will be described in connection with the specific embodiment of the invention shown in the accompanying drawings.

In the drawings, Figure 1 is a longitudinal section of the whole device. Fig. 2 is a separate longitudinal section of the chamber for the propelling-powder. Figs. 3 and 4 are details. Fig. 5 shows how the device will skip on the surface of the water.

In the figures, 1 is a chamber containing a power explosive, as dynamite 2. Behind chamber 1 is a second chamber 3 to contain the slow-burning propelling-powder 4. The two shells which form these chambers may be separately made and fastened together by bolts or rivets, as shown, or may be otherwise constructed. The essential is that they be separated by a stout partition 5 of cast-iron or other suitable material.

In Fig. 2 I have shown shell 3 as formed of sheet material wound with wire 6 and then soldered, which makes a very strong, light, and cheap shell. 7 is a pole of wood or gas-pipe extending through the chamber 3 and secured to partition 5. At its rear end it is provided with wings or vanes 8 to guide the torpedo. If desired, these guide-blades may extend forward to the body of the torpedo, as indicated by the dotted line 9 in Fig. 1. At the rear end of shell 3 is a spider 10 to brace the stem 7. 11 is a loose piston in shell 3 in front of the propelling-charge 4. It has an air-space between it and partition 5 to constitute a cushion to prevent shock being trans-

mitted from the propelling-charge to the exploding charge 2. 12 is a percussion firing device of the usual form; but any other firing device may be used.

In practice the torpedo is propelled by the combustion of the propelling-charge, after the manner of a rocket. It may be used as a submarine or aerial projectile. In Fig. 5 I have shown it as fired near the water's surface and skipping or ricocheting on the surface, 13 being the water surface or wave-line.

I claim—

1. In a torpedo, the combination, substantially as set forth, of two shells, connected together, one containing an explosive charge to be exploded at the destination of the device and the other containing a propelling-charge of slow-burning powder to propel the device, and a stem projecting rearwardly from said shells to guide them in their course.

2. In a torpedo, the combination, substantially as set forth, of a double shell, one chamber of which contains an exploding charge and the other a propelling-charge, a cushion between the two charges to prevent the transmission of shock, and a stem projecting rearwardly from said shells to guide them in their course.

3. The combination, substantially as set forth, in a torpedo, of the two shells, with a loose piston 11 in the after shell in front of the propelling-charge.

4. The combination, substantially as set forth, in a torpedo, of the shell containing the explosive charge, the shell containing the propelling-charge, a stem projecting rearwardly from said shells, and guide-blades on said stem.

5. The combination, substantially as set forth, in a torpedo, of the double shell with a partition between its chambers, the stem secured to said partition and extending rearwardly through the after shell, the spider to brace the stem at the end of the after shell, and the guide-wings upon the stem.

JAMES H. BATES.

Witnesses:

WM. F. A. SCHULTE,
ERASTUS D. MOORE.