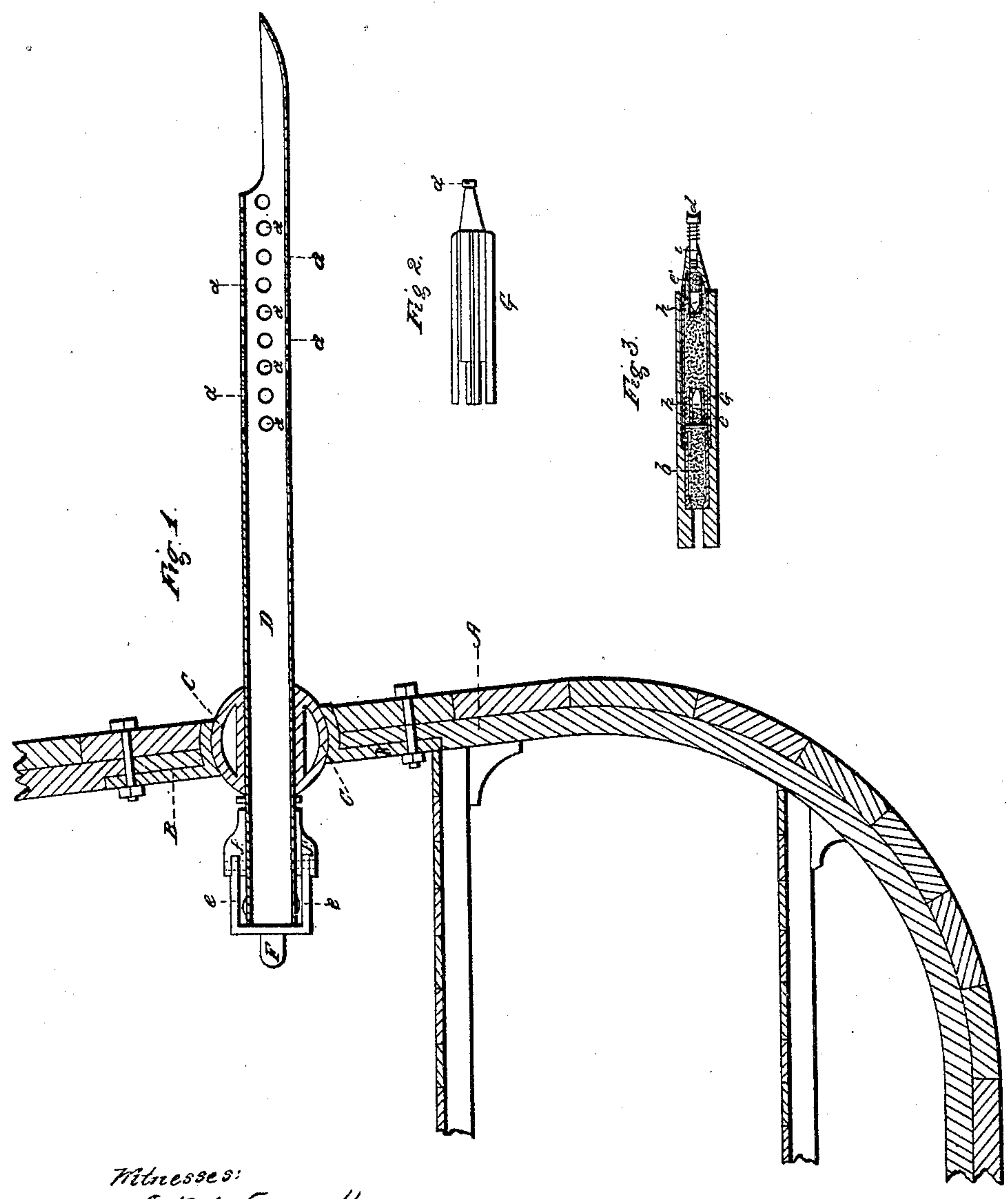


P. PLANT.
 APPARATUS FOR DISCHARGING TORPEDOES UNDER WATER.
 No. 36,965. Patented Nov. 18, 1862.



Witnesses:
J. B. Woodruff
S. O. Rosh

Inventor:
Pascal Plant

UNITED STATES PATENT OFFICE.

PASCAL PLANT, OF WASHINGTON, DISTRICT OF COLUMBIA, ASSIGNOR TO HIMSELF AND RUFUS WAPLES, OF SAME PLACE.

IMPROVED APPARATUS FOR DISCHARGING TORPEDOES UNDER WATER.

Specification forming part of Letters Patent No. 36,965, dated November 18, 1862.

To all whom it may concern:

Be it known that I, PASCAL PLANT, of the city of Washington, in the District of Columbia, have invented a new and useful apparatus for firing or driving rocket-torpedoes under water for the purpose of destroying obstacles of any kind or the vessels of an enemy; and the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 shows a section of the side of a war-ship having a ball-and-socket joint, through which the tube or rocket-conductor is fitted so as to slide in or out. Fig. 2 shows the exterior form of the winged rocket-torpedo. Fig. 3 shows a section through or interior of the rocket-torpedo.

My invention consists in the construction and arrangement of a peculiar kind of a conducting-tube made to slide in a ball and socket fixed in the side of a vessel above the water-line, so as to allow the tube to be depressed into the water and brought to bear upon any point or object, the outer end of the tube being open on one side and curved to give direction to the rocket-torpedo.

To enable others skilled in the art to construct, apply, and use my invention, I will proceed to describe it more fully, referring to the drawings and to the letters of reference marked thereon.

In the side of the vessel A, two or three feet above the water-line, I make a port-hole or opening, into which I fit the plate B B, the same forming a socket for the ball C C to fit and turn in, so as to be easily moved and remain in any desired position. Through the ball C is a round hole or opening, into which is fitted the conducting-tube D, so that it will slide in or out nearly the whole of its length. On the inner end of the tube D is a cap, E, having arms *e e* and hinges *f f*, so that it will allow the cap E to move off the end of the tube for the purpose of inserting the rocket-

torpedo G, and when brought back to its place closes the tube, so that the gases of burning rocket are confined, and operate to throw the torpedo with great force. About one-half of the outer end of the tube D has on all sides holes or openings *a a a a a*, to allow the air and water to escape and not retard the progress of the missile. For some considerable portion of the outer end of the tube D one side of it is open, and the remaining part forms a trough curved so as to somewhat resemble the bowl of a spoon. By having the end of the tube formed in this manner the rocket will take the direction of the curve, and be brought to bear or act directly against any place or portion of the hull of a vessel.

The rocket-torpedoes, as seen in Figs. 2 and 3, are made with metallic cases having wings on opposite sides to aid in their direction. The interior is so arranged that by the burning out of the rocket composition in the rear *b*, the powder in the small chamber *c c* is ignited, which shoots a ball through the powder-magazine in the rocket, thus opening the way to ignite all of the powder at the same instant; and should the point or projection *d* strike against any hard substance before the rocket composition *b* should reach the magazine, the tube having in it a percussion-cap, *i*, the point *d* being inserted and acting on a spiral spring, so that it can come in contact with the cap, a ball, *h*, will be fired from the front end through the powder in the magazine, thus igniting in the same manner, only the reverse.

I am aware that tubes have been used for projecting shells under water; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The tube placed above the water-line, with the ball-and-socket joint, and otherwise, substantially as and for the purpose described.

PASCAL PLANT.

Witnesses:

J. B. WOODRUFF,
J. C. HOWELLS.