No. 667,048. Patented Jan. 29, 1901.

E. F. WHITMAN.

TORPEDO PROJECTILE.

(Application filed July 6, 1900.)

(No Model.)

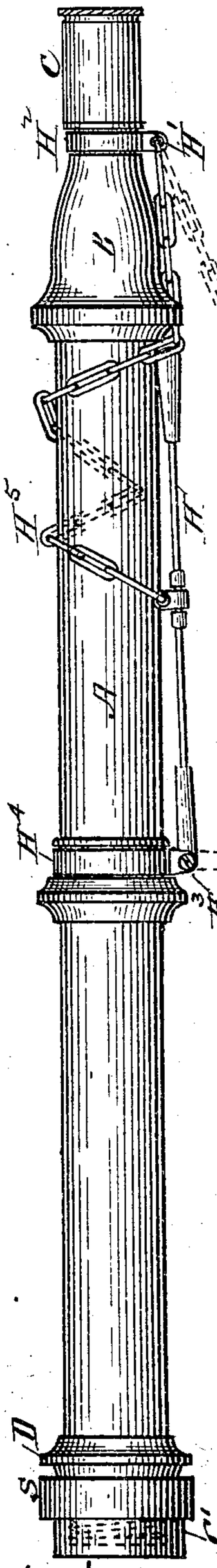

FIG. 1.

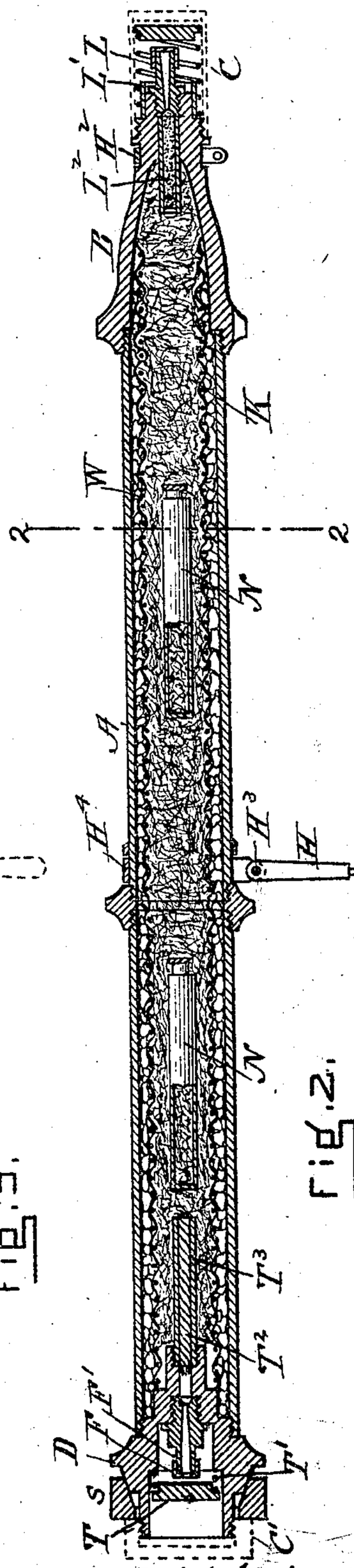

FIG. 2.

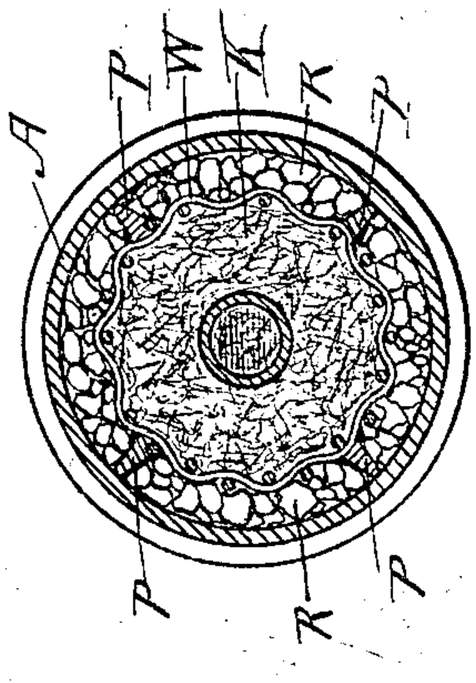

FIG. 3.

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EDSON F. WHITMAN, OF SOMERVILLE, MASSACHUSETTS.

TORPEDO-PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 667,048, dated January 29, 1901.

Application filed July 6, 1900. Serial No. 22,748. (No model.)

To all whom it may concern:

Be it known that I, EDSON F. WHITMAN, of Somerville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Torpedo-Projectiles, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention consists in combining with a torpedo-projectile a device by which its direction, when it comes near an underlying object, shall be so changed as to cause the projectile to take a nearly direct downward course, and thus strike some part of the underlying object, and in improvements in the charging and ignition.

The objects are to make a torpedo-projectile which shall be more likely to strike the object aimed at and have a greater effect in exploding than those now in use. These objects I attain by the means illustrated in the accompanying drawings, in which—

Figure 1 shows one of my torpodoes in elevation. Fig. 2 is a longitudinal section of the same. Fig. 3 is a cross-section, enlarged, taken on line 2 2 of Fig. 2.

The body of the torpedo is represented in the drawings by A, and the headpiece by B. Safety-caps C and C′ are placed on the ends of the torpedoes when they are stored or in transit and are only removed when the torpedo is placed in the gun. A swinging arm H is attached to the torpedo by means of a joint at H^3 and a loosely-fitting band H^4, which is free to swing around the body of the torpedo. A chain H^5 (also indicated by dotted lines) serves to connect the swinging arm H to the torpedo by a swiveling-collar H^2, the connection being made at H′.

When the torpedo is placed in the gun, the arm H and its chain H^5 are arranged as indicated by full lines in Fig. 1. I do not wish to confine myself to one arm, as a number may be used, in which case it is not necessary that they should be swivelly attached. When the projectile leaves the mouth of the gun, the arm H drops, as indicated by dotted lines, Fig. 1. The chain serves to hold the arm from swinging back. The function of this arm is to change the direction of the projectile in passing over an object—for instance, we suppose that the torpedo in its flight comes so near any part of a vessel or any land construction that the arm H comes in contact with any fixed part and is checked. This will at once throw its forward end downward and change the direction of flight, causing the torpedo to pitch downward, and thus strike the object, over which it would otherwise fly harmlessly.

The body of the torpedo is filled with an explosive K, and, in addition to the explosive, masses N N of some inflammable material may be added, so that upon the explosion of the torpedo the inflammable matter will spread, setting fire to the surrounding objects.

A percussion-cap L is mounted upon a tube L′ at the front of the projectile and connects with a column of powder L^2, by means of which the flame from the exploded cap will be communicated to the contents K.

A wire cage W surrounds the explosive K, so as to confine it to the center of the chamber and permit of packing missiles R between the explosive and the walls of the torpedo. To keep the missiles in their places, longitudinal division-bars P P P P are affixed to the outside of the wire cage W. (See Fig. 3.)

At the rear end of the torpedo I have a percussion-cap F on the tube F′, so arranged that the fire from the cap will ignite the slow-match fuse T^2 in the tube T^3. The cap is exploded by the force of the powder in the gun acting on the hammer-piece T, the said hammer-piece being normally held away from the cap by the spring T′. Although the cap F at the rear of the torpedo is exploded in the gun, its effect is not communicated to the explosive charge for some time, (which is definitely fixed by the maker,) so that the explosion will not take place until the torpedo has made a certain flight.

A sabot S, of ordinary construction, is mounted on the part D.

I claim—

In a torpedo-projectile; a swinging arm pivoted at its rear end to a band adapted to turn loosely on the body of the projectile and free to swing downwardly during the flight of the projectile; a chain, one end of which is attached to the front end of the projectile, and the other end, to the free end of the said swinging arm, whereby the said arm hangs below the projectile during the flight, and in

such a position that when it, the said arm, meets an obstacle, it will cause the projectile to pitch downward onto the object and destroy it, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 3d day of July, A. D. 1900.

EDSON F. WHITMAN.

Witnesses:
FRANK G. PARKER,
ANNA C. KINGSBURY.