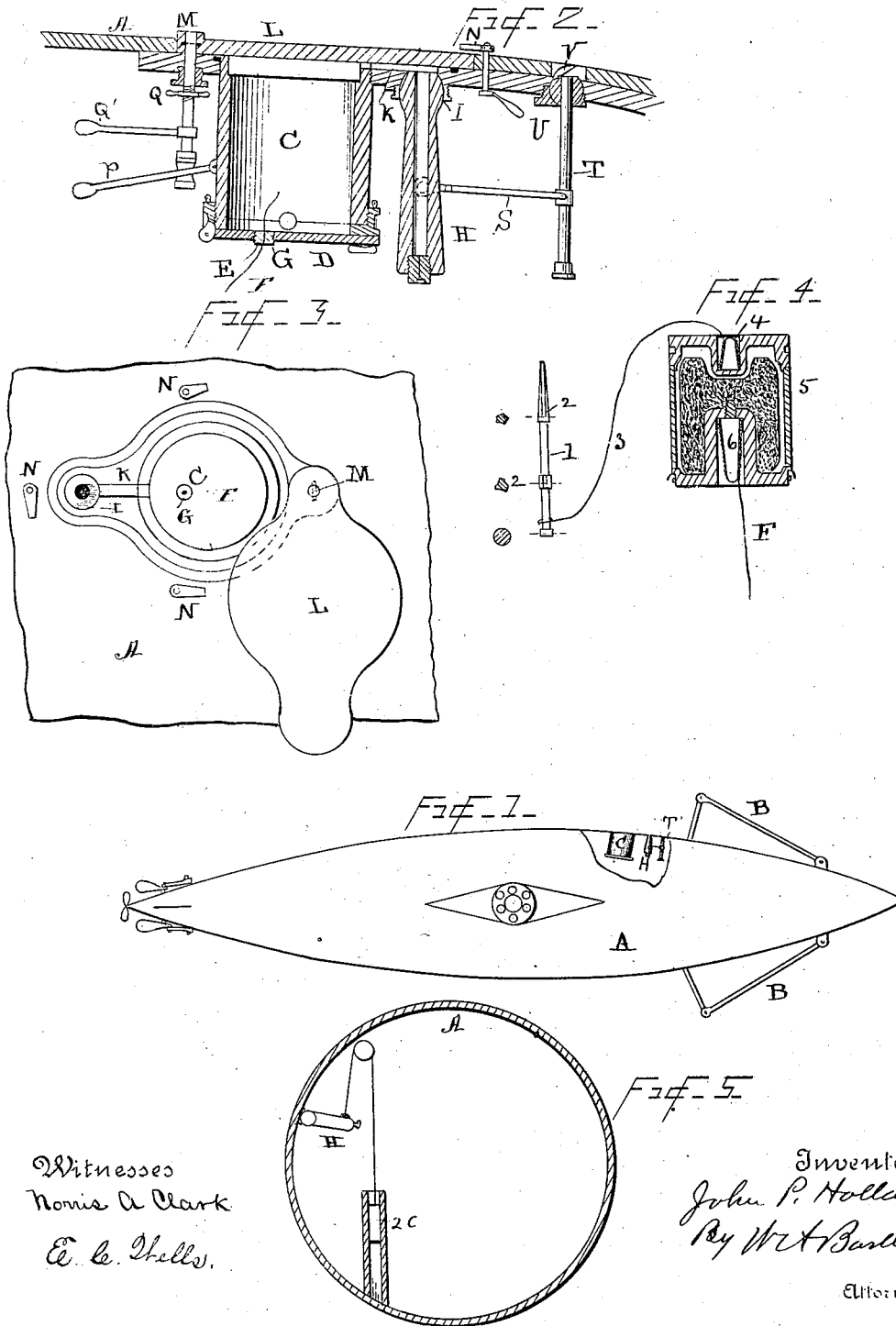


No Model.)

J. P. HOLLAND.  
SUBMARINE GUN.

No. 491,051.

Patented Jan. 31, 1893.



Witnesses  
Noris A Clark  
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# UNITED STATES PATENT OFFICE.

JOHN P. HOLLAND, OF NEWARK, NEW JERSEY.

## SUBMARINE GUN.

SPECIFICATION forming part of Letters Patent No. 491,051, dated January 31, 1893.

Application filed May 23, 1892. Serial No. 433,968. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN P. HOLLAND, residing at 185 Court street, Newark, in the State of New Jersey, have invented certain new and useful Improvements in Submarine Guns, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to the mounting, training, and operating of submarine guns in torpedo boats and similar structures.

The object of the invention is to produce an efficient means for the attachment of a large torpedo to the bottom of a ship, so that the torpedo may be afterward fired from a distance.

Figure 1 is a plan diagram, partly broken away, of boat. Fig. 2 is a sectional plan of broadside guns. Fig. 3 is a muzzle view of guns and port. Fig. 4 is a section of torpedo and attaching harpoon. Fig. 5 is a cross section of boat showing gun counterpoise.

A indicates the shell of the submarine boat.

B B denote tangent rods which may operate signals on the boat.

C indicates a large gun or mortar having its muzzle attached to the side of the boat, and covered by a cover L, which cover may be swung to one side by turning its pintle M. Pintle M passes through a tight bearing in the side of the boat, and may be turned open or closed by lever Q, or held fast by lock nut Q engaging the pintle and bearing. Lever P operating on a swivel head on the pintle, serves to ease the movement of the pintle and cover.

The mortar C has a movable breech piece D, perforated as at E for the passage of an insulated electric wire F, which wire is surrounded by a water-tight elastic bushing G where it passes through the breech block.

A small gun H, having its muzzle pivoted in the shell of the boat I, is covered by the same cover L, a passage K under the cover serving to connect the muzzles of the two guns. Catches N hold the cover L tightly closed when desirable. The small gun H is connected by a link to the water telescope T, the link being pivoted to gun and telescope. The gun H is counterpoised by a weight 20 as indicated in Fig. 5. The water telescope

may have a spring cover V. The gun H, being held by link S in a definite relation to the telescope, will partake of the movement of the telescope. When the telescope shows a proper aim, gun H may be fired.

The gun H will be loaded with a projectile in form of a dart or spike 1, having barbed end and bearing studs 2, which permit wire 3 to pass out the muzzle alongside the projectile, said wire being fastened to the projectile 1, and also to a large torpedo, 5. A part of the wire 3 may be coiled around a spindle, 4, of the torpedo, if a greater length is desired than will readily lie in the space between the gun and mortar.

The torpedo 5 is loaded into mortar C, and can be expelled by a small powder charge, or air pressure. The wire 3 connects projectile 1 in the gun with torpedo 5 in the mortar, through passage K, the connections being made before cover L is opened, and electric wire F is connected to the torpedo through the breech of the mortar.

The submarine boat being run into proximity with its enemy, and the range found by telescope, gun H is to be fired, and its projectile driven into the enemy, serving as an anchor. The boat will now back off, ejecting torpedo 5, which will swing down under the anchor 1. When the submarine boat has retreated to a safe distance, the torpedo may be fired by means of wire F.

I claim—

1. In combination with a torpedo boat, a pair of guns secured at their muzzles in the shell of said boat, and a covered passage communicating with both muzzles.

2. In combination with a pair of guns secured at their muzzles in the shell of a boat, a single cover extending over both muzzles and a passage-way connecting the muzzles beneath the cover.

3. In combination with a pair of guns secured at their muzzles in the shell of a boat, a single cover for both muzzles pivoted to the side of the boat, a passage-way connecting the muzzles under said cover and an operating handle and clamps for said cover.

4. In combination with the shell of a torpedo boat, a breech-loading gun having its muzzle permanently secured to said shell, a

breech piece to said gun having an aperture provided with a water-tight bushing and a wire passing through said aperture and attached to the projectile in the gun, as set forth.

5. The combination with the shell of a boat of a muzzle-pivoted gun, a front pivoted telescope, and a connecting link between the body of the gun and telescope whereby the two are held in parallelism, substantially as described.

6. In combination with the shell of a boat,

a gun pivoted at the muzzle in a water-tight packing in said shell and a counterpoise attached to and supporting the gun at the breech, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN P. HOLLAND.

Witnesses:

HENRY KROFF,

ELIOT B. HURST.