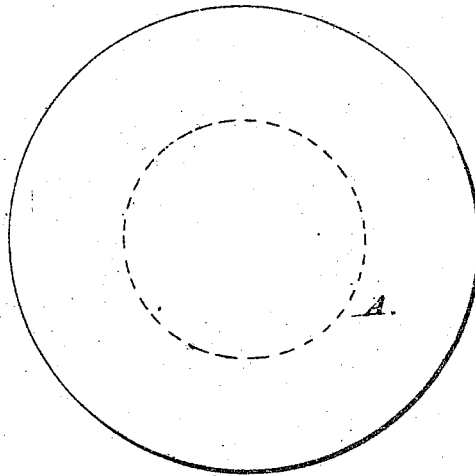


H. HOLDEN.  
Torpedo.

No. 49,474

Patented Aug. 15, 1865.

*Fig 1*



*Fig. 2.*



Witnesses:  
*W. H. May*  
*Wm. Brown*

Inventor:  
*Henry Holden*

# UNITED STATES PATENT OFFICE.

HENRY HOLDEN, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND JOHN E. STOW, OF SAME PLACE.

## IMPROVED TORPEDO.

Specification forming part of Letters Patent No. 49,474, dated August 15, 1865.

### *To all whom it may concern:*

Be it known that I, HENRY HOLDEN, of the city, county, and State of New York, have invented a new and Improved Torpedo; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a plan of this invention when unfolded and ready to be exploded. Fig. 2 is a transverse section of the same.

Similar letters of reference indicate corresponding parts.

This invention consists in a torpedo made of a plain sheet of paper or other absorbent material, which is wholly or partially saturated with a solution of fulminate of silver, or of mercury, in such a manner that after drying the fibers or pores of the paper or other absorbent material are filled with fulminate, and a slight blow or pressure with a hard substance causes the same to explode with considerable noise.

A represents a sheet of paper—thick soft blotting-paper being used by preference—which I cut in the shape of a polygon or circle, so that the same can be readily folded in a small compass for packing and sending. I do not wish to confine myself, however, to any particular

shape of the sheet of paper. Neither do I restrict myself to the use of a particular kind of material. The sheet A, I immerse in a hydrated solution of fulminate of silver, which I use in preference to fulminate of mercury, and after it has been thoroughly saturated therewith I hang it up or lay it on a flat board for drying; or, instead of immersing the whole sheet, only a portion of the same may be saturated by folding it up and pouring a quantity of the solution into it or in any other suitable manner. After the saturated sheet has been dried the torpedo is ready. It explodes, when struck with a small pebble or other hard substance, with great noise without the least danger to surrounding objects, and the manufacture of my torpedoes can be effected without danger of an explosion, since the fulminate is employed in solution, and consequently in such a state that a spontaneous explosion is impossible.

I claim as new and desire to secure by Letters Patent—

A torpedo made of a sheet of absorbent material saturated wholly or partially with a solution of fulminate of silver or of mercury, substantially as and for the purpose set forth.

HENRY HOLDEN.

Witnesses:

W. HAUFF,

M. M. LIVINGSTON.