

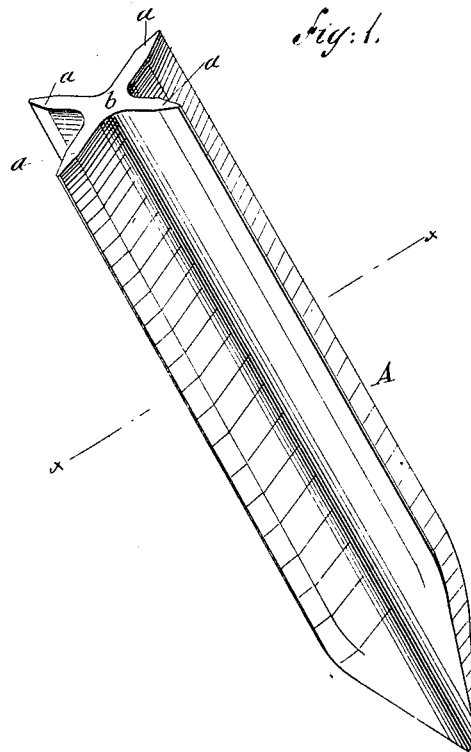
(No Model.)

J. S. SCHOONOVER.

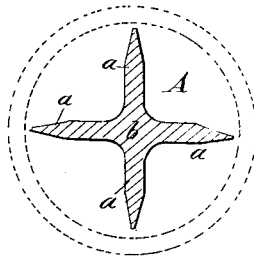
TORPEDO EXPLODER.

No. 262,485.

Patented Aug. 8, 1882.



*Fig: 2*



WITNESSES:

*Chas. N. A. A.*  
*C. Seagwick*

INVENTOR:

*J. S. Schoonover*  
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# UNITED STATES PATENT OFFICE.

JAMES S. SCHOONOVER, OF TITUSVILLE, PENNSYLVANIA.

## TORPEDO-EXPLODER.

SPECIFICATION forming part of Letters Patent No. 262,485, dated August 8, 1882.

Application filed April 14, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES S. SCHOONOVER, of Titusville, Crawford county, Pennsylvania, have invented a new and Improved Torpedo-Exploder, of which the following is a full, clear, and exact description.

The object of my invention is to provide a device for exploding torpedoes in oil or salt wells, having such construction that it will not materially agitate the water in the well during its descent; and to this end my invention consists of a pointed torpedo-exploder having a small center or web and two or more side projections or wings leading therefrom, which fit the diameter of the well or casing, all made in a single piece.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in both figures.

Figure 1 is a perspective view of my new and improved torpedo-exploder; and Fig. 2 is a sectional elevation of the same, taken on the line *xx* of Fig. 1.

My new and improved torpedo-exploder, A, is by preference made of iron, and is cast by preference in the form shown in the drawings with the four side or radial wings, blades, or

projections, *aa*, which reach out from the small central portion or web, *b*. There may be two, three, four, or more of the wings *aa*, as desired. The exploder is made pointed at one end, as shown in Fig. 1, and is used for exploding the torpedo in the well in the ordinary way by letting it drop into the well, as indicated in dotted lines in Fig. 2. By being made with the small central portion or web, *b*, the exploder will not be resisted in its descent by the water in the well to the extent it would if otherwise formed, but drops rapidly and delivers a heavy blow upon the torpedo, the wings serving to keep the exploder central in the well for striking the torpedo, thus making the exploder always certain in its action and reliable.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

As an improved article of manufacture, the torpedo-exploder A, consisting of the small central web, *b*, having the radial wings *aa*, all made in one piece, substantially as and for the purpose set forth.

JAMES S. SCHOONOVER.

Witnesses:

JOHN O'NEILL,

SIEGMUND STETTHEIMER.