

C. A. McCOY.
Torpedo for Oil-Wells.

No. 196,815.

Patented Nov. 6, 1877.

Fig. 1

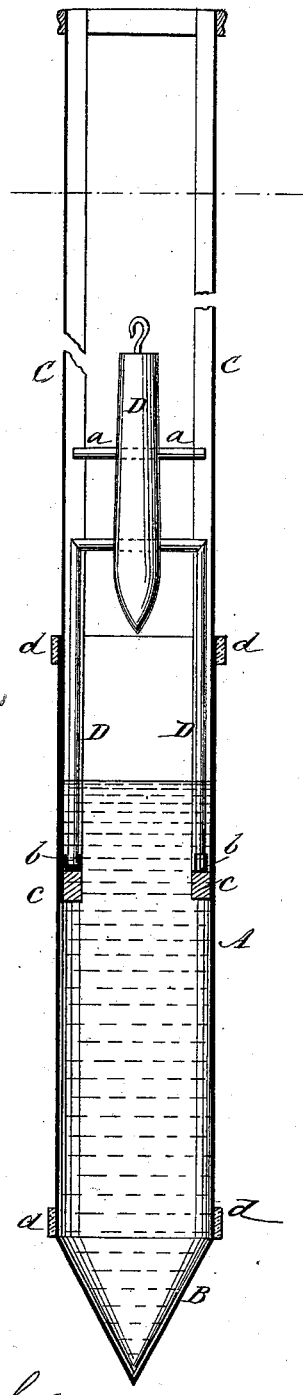
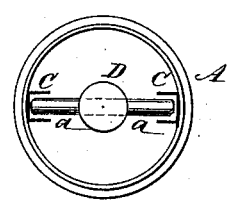


Fig. 2



WITNESSES:

C. Neveu
J. N. Scarborough.

INVENTOR:

C. A. McCoy.
BY *Mumford*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

CHARLES A. McCOY, OF EDENBURG, (KNOX P. O.), PENNSYLVANIA.

IMPROVEMENT IN TORPEDOES FOR OIL-WELLS.

Specification forming part of Letters Patent No. **196,815**, dated November 6, 1877; application filed October 6, 1877.

To all whom it may concern:

Be it known that I, CHARLES A. McCOY, of Edenburg, in the county of Clarion and State of Pennsylvania, have invented a new and Improved Torpedo, of which the following is a specification:

This invention relates to torpedoes which are especially designed for opening the fissures of oil-wells, and which are charged with nitro-glycerine.

The nature of my invention and improvement consists in a cylindro-conical vessel, which is adapted to contain nitro-glycerine, and which is provided externally with annular elastic cushions, in combination with percussion-cap plungers, which are secured to a weight, and suitably guided and arranged to strike upon anvils fixed inside of the said vessel, as will be hereinafter explained.

In the annexed drawing, Figure 1 is a vertical section through the shell and its attachments. Fig. 2 is a horizontal section.

Similar letters of reference indicate corresponding parts.

The letter A designates a cylinder, and B the frustum of a cone, forming a cylindro-conical shell adapted to contain nitro-glycerine.

This shell may be made of metal or other suitable material, and it is surrounded at each end, or at other suitable points, by bands *d d*, of india-rubber or other suitable elastic material, which form cushions to prevent concus-

sions, which might prematurely explode the nitro-glycerine in the shell while lowering it in a well.

C C designate gutter-shaped guides, which are secured to the shell A B diametrically opposite each other, and which may extend to the top of the well. These guides are designed to receive a cross-bar, *a*, which is fixed to a pointed weight, D, having a hook on its upper end for the attachment of a rope. To the lower end of this guided weight I secure two rods, D D, which work in the guides C C, and which receive percussion-caps *b b* on their lower ends.

When the weight D is allowed to drop suddenly, the caps *b b* will strike two anvils, *c c*, and be exploded, which will explode the nitro-glycerine in the shell A B.

Should both percussion-caps fail to explode at the first trial, the weight, with its attached rods, can be drawn to the top of the well, and other caps applied on the rods.

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

In combination with the shell A B and guides C C, the weight D, cross-bar *a*, rods D D, and anvils *c c*, arranged to operate substantially in the manner described.

CHARLES A. McCOY.

Witnesses:

ALBERT A. STEWART,
M. L. WOOD.