

(No Model.)

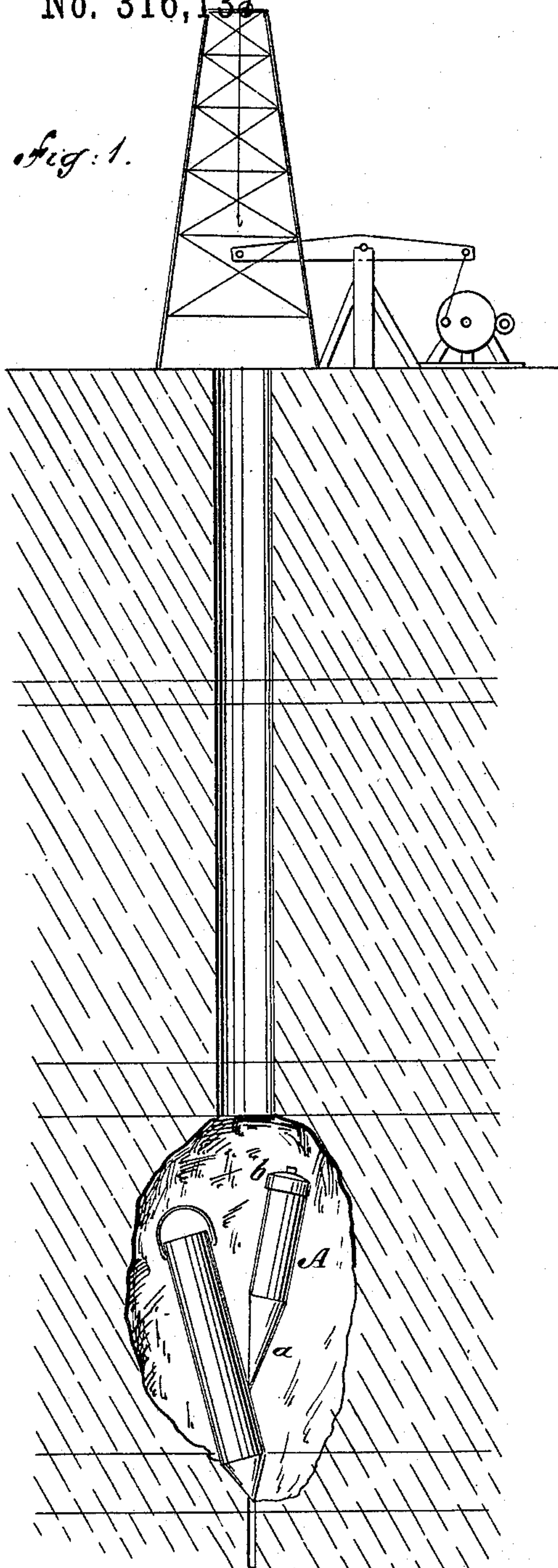
J. E. GALLAGHER.

EXPLOSIVE WEIGHT FOR TORPEDOES.

No. 316,137

Patented Apr. 21, 1885.

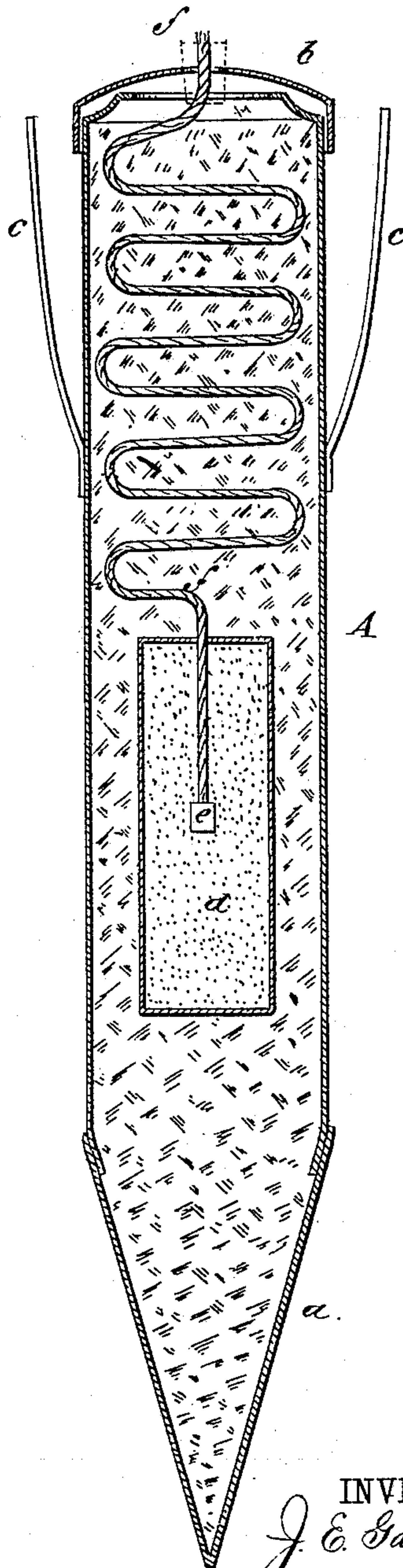
Fig: 1.



WITNESSES:

Chas. Nida
Co. Sedgewick

Fig: 2.



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EXPLOSIVE WEIGHT FOR TORPEDOES.

SPECIFICATION forming part of Letters Patent No. 316,137, dated April 21, 1885.

Application filed August 12, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. GALLAGHER, of Olean, in the county of Cattaraugus and State of New York, have invented a new and useful Improvement in Exploding Weights for Torpedoes, of which the following is a full, clear, and exact description.

The object of my invention is to insure the explosion of torpedoes placed in oil-wells. This is usually done by a weight dropped in after the torpedo has been lowered; but in many cases, especially when a well has been previously "shot," the torpedo lopes to one side and the weight misses the cap, so that there is no explosion.

My invention consists in a weight or exploder containing a cartridge and a fuse, whereby the weight can be fired, so that in case it misses striking the torpedo the latter will be exploded by the explosion of the cartridge, thus furnishing a sure means of shooting wells at every trial, as hereinafter described and claimed.

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

Figure 1 is a representation of an oil-well, and illustrates the use of the exploding weight, and Fig. 2 is a longitudinal section of the weight or exploder.

A is the case of the weight, made of metal or other suitable material, in hollow cylindrical form, with a pointed end, *a*, and cover *b*.

c c are flexible arms or guides attached to the outside for retaining the weight out of contact with the sides of the well.

d is a cartridge within the weight, contain-

ing a high explosive—such as giant-powder—and also a fulminating-cap *e*, to which is connected a fuse, *f*, that is coiled in the case and passes out through cover *b*.

In preparing the weight it is first partly filled with sand, the cartridge *d* and fuse then put in and the case then filled up with sand. The filling renders the device heavy enough to serve as an exploding weight, so that when dropped in the well with the fuse lighted it explodes the torpedo by striking the cap thereon, or if it misses the cartridge will be fired by the fuse, and the torpedo is exploded by the concussion. In case the torpedo is fired by the blow of weight A on the cap, the weight being filled with sand acts as a tamp to confine the force of explosion at the bottom of the well.

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

1. An improved weight for exploding torpedoes, consisting of a cylindrical and pointed casing containing a filling for weighting the same, and provided with an explosive held in position in the casing by said filling, and a fuse extending from the explosive through the top of the casing, substantially as herein shown and described.

2. The combination, with the hollow weighted case A, of the cartridge *d* within the case, the cap *e* within the cartridge, and the fuse *f* extending from the cap through the upper end of the case, substantially as herein shown and described.

JAMES E. GALLAGHER.

Witnesses:

T. H. PORTER,

L. E. GERRETY.