

R. S. ORSBURN.
Torpedoes for Oil Wells.

No. 166,627.

Patented Aug. 10, 1875.

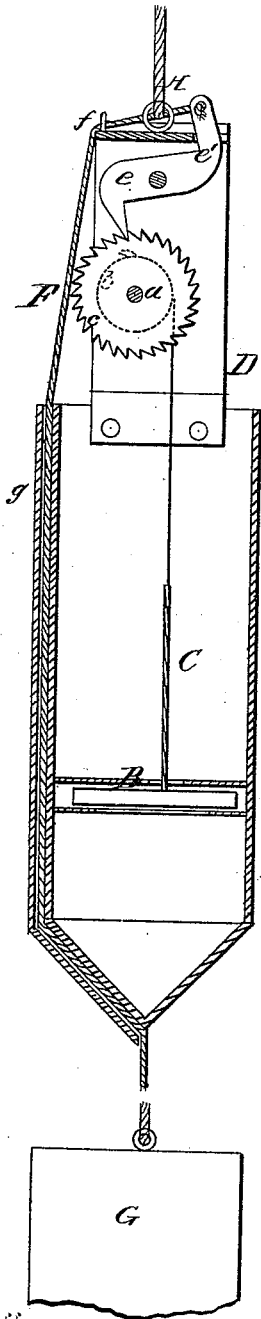


Fig 1

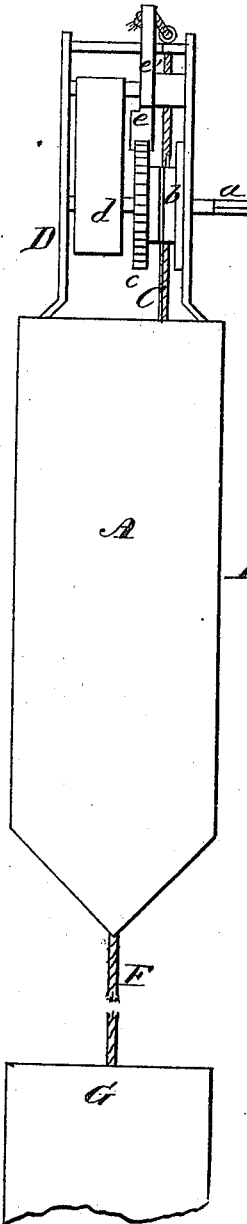


Fig 2

Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT S. ORSBURN, OF NEWCASTLE, PENNSYLVANIA.

IMPROVEMENT IN TORPEDOES FOR OIL-WELLS.

Specification forming part of Letters Patent No. 166,627, dated August 10, 1875; application filed July 15, 1875.

To all whom it may concern:

Be it known that I, ROBERT S. ORSBURN, of Newcastle, in the county of Lawrence and State of Pennsylvania, have invented certain new and useful Improvements in Torpedoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a vertical central section, and Fig. 2 a side view, of my invention.

This invention has relation to the means for increasing the flow of oil-wells; and it consists in the novel construction of a torpedo embracing the following peculiarities: The torpedo-body is of the ordinary character, containing any suitable explosive compound, to be discharged through the agency of a cap, having connected to it a wire cord or chain, by pulling which the cap is exploded. Within a suitable frame attached to the torpedo is arranged a key-shaft, holding a coiled spring, a chain-drum, and a ratchet-wheel, and a dog to engage with said ratchet, and retain the mechanism after the spring has been wound, until it is proper to explode the torpedo. A weight suspended upon a cord attached to the dog holds the latter in contact with the ratchet. When the spring is wound and the dog adjusted, the cord or chain from the cap is attached to the drum. The weight first, and the torpedo following, are then lowered into the well, when, as soon as

the weight touches the bottom, the dog releases the ratchet, allowing the spring to wind the cap cord or chain, and thus effecting the explosion of the torpedo.

Referring to the drawings, A designates the torpedo; B, the cap; C, the cap chain, cord, or wire; D, the frame containing the discharging mechanism, of which *a* is the key-shaft; *b*, the drum, having a hook or other means for the attachment of C; *c*, the ratchet; *d*, the coiled spring, and *e* the dog, having an arm, *e'*, to which is attached the weight-cord. F is the weight-cord, passing forward from the arm *e'* through an eye, *f*, and thence down through a tube, *g*, on the side of the torpedo. G is the weight. H is the cord by means of which the torpedo is lowered into the well.

Having fully described my invention, I claim—

1. The combination, with the torpedo, of the cap-wire, winding mechanism, ratchet, dog, and weight, arranged and operating substantially as described.

2. The combination, with a torpedo in which the discharge is effected through the agency of clock-work mechanism, of a weight controlling the action of the same, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of June, 1875.

ROBERT S. ORSBURN.

Witnesses:

ANSON L. HAZEN,
GEORGE W. JOHNSON.