

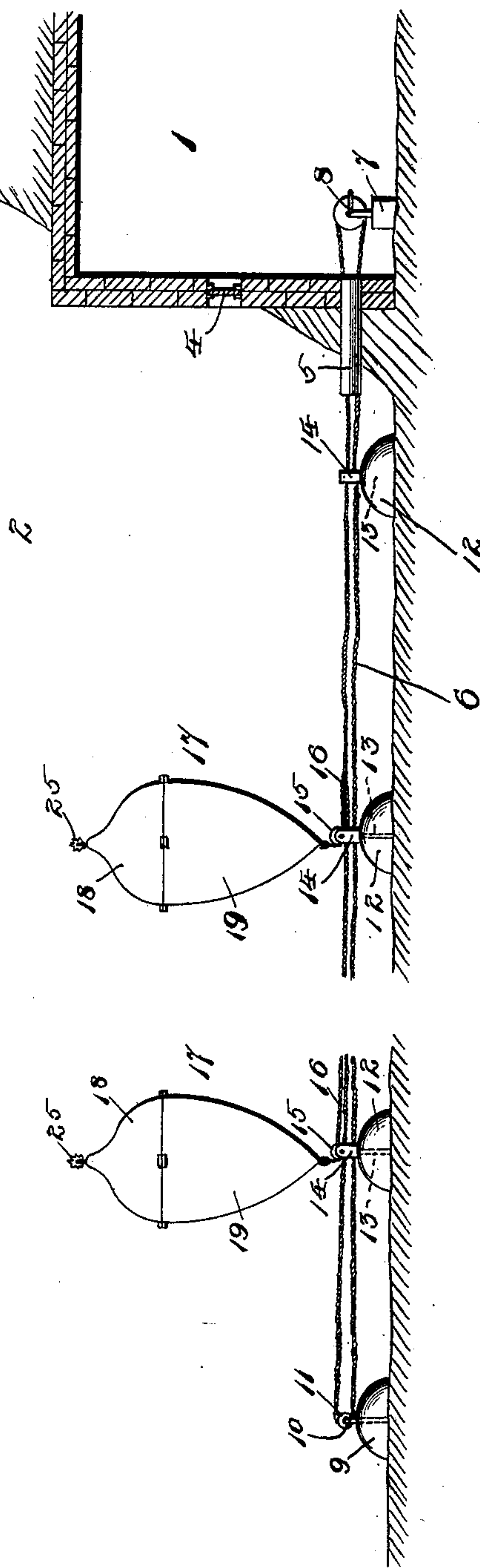
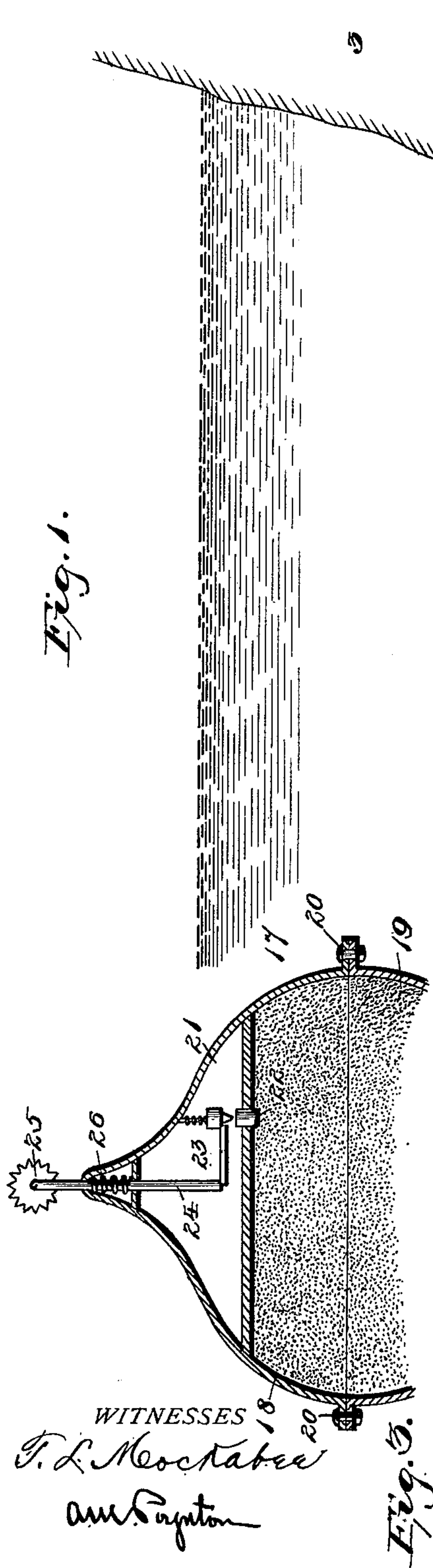
(No Model.)

2 Sheets—Sheet 1.

J. JACOBSON.
SUBMARINE TORPEDO.

No. 597,289.

Patented Jan. 11, 1898.



INVENTOR
Jacob Jacobson,
By John Hendrickson
Attorney

(No Model.)

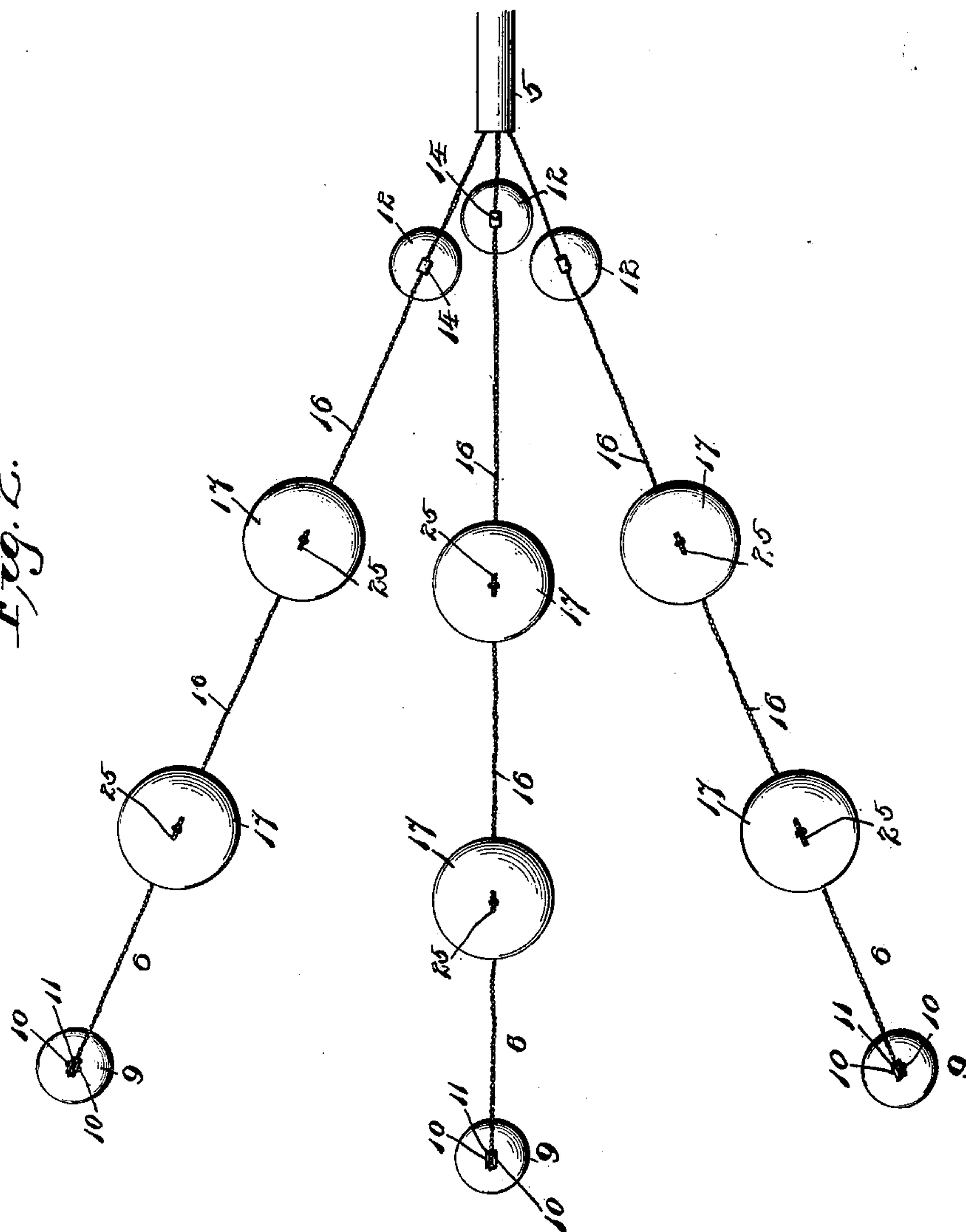
2 Sheets—Sheet 2.

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Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

JACOB JACOBSON, OF LEAD CITY, SOUTH DAKOTA, ASSIGNOR OF ONE-HALF TO MARGAGRETA JOHNSON AND MARGAGRETA ANDERSON, OF SAME PLACE.

SUBMARINE TORPEDO.

SPECIFICATION forming part of Letters Patent No. 597,289, dated January 11, 1898.

Application filed March 19, 1897. Serial No. 628,248. (No model.)

To all whom it may concern:

Be it known that I, JACOB JACOBSON, a citizen of the United States, residing at Lead City, in the county of Lawrence and State of South Dakota, 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 appertains to make and use the same.

This invention relates to torpedoes and the operating means therefor; and the object in view is to provide suitable mechanism whereby a battery or several batteries or gangs of torpedoes may be operated with facility from the shore, the torpedoes being stationed at suitable points beneath the surface of the water in the channel or beneath the course traversed by ships of war. These torpedoes are capable of being shifted from place to place and operated by one or more persons stationed on the shore, so that upon the entrance of an enemy's vessel into a port or harbor the torpedoes may be operated at an opportune moment for destroying such a vessel.

With this general object in view the invention consists in certain novel features and details of construction and arrangement of parts, as hereinafter fully described, illustrated in the drawings, and incorporated in the claims hereto appended.

In the accompanying drawings, Figure 1 is a sectional view showing a battery of torpedoes, the manner of submerging the same, and the means for operating and shifting said torpedoes. Fig. 2 is a plan view showing the relative arrangement of several batteries or gangs of torpedoes. Fig. 3 is an enlarged detail section through one of the torpedoes. Similar numerals of reference designate corresponding parts in the several figures of the drawings.

In embodying the present invention a subterranean compartment 1 is formed at a suitable distance beneath the surface of the ground, the depth of such compartment varying according to the depth of the bed of the stream, 2 designating the stream and 3 the shore. This compartment contains an observation-window 4, by means of which a clear view may be had of the torpedoes or by means

of which rays of light may be projected through the water, so as to illuminate the plant.

5 5 designates a tubular conduit which extends from the compartment 1 into the stream, near the bed thereof, and forming a passage for an endless cable 6, which within the compartment passes around a windlass 7, operated by a crank-shaft 8 for enabling the cable to be run back and forth. At a point a considerable distance out in the stream is a weight 9, which has a flat lower surface and a rounded upper surface, the weight being of hemispheroidal shape, the rounded upper surface preventing wear upon the cable by reason of the cable coming in contact therewith, there being no sharp corners or angular projections on the upper surface of the weight to abrade the cable. Extending through the weight or projecting upwardly therefrom is a bolt or pair of bolts 10, connected to the upper end of which is a revoluble pulley 11, around which the outer end of the endless cable 6 passes. At a number of intermediate points on the cable 6 are arranged other hemispheroidal weights 12, having bolts 13 passing therethrough and carrying at their upper ends rectangular-shaped guides 14, through which the cable 6 passes, said guides also comprising at their upper ends pulleys 15, beneath which pass auxiliary and smaller cables 16, all of the cables 16 being preferably of the same length and connected at their inner ends to the main cable 6. Attached to the free or outer ends of said cables are torpedoes 17, each of which is constructed as follows: The torpedo comprises an upper section 18 and a lower section 19, the said sections being divided diametrically and connected by means of bolts or other fasteners 20, passing through ears on the two sections. The upper section 18 is provided with a cavity or chamber 21, in which is arranged a box or receptacle 22, adapted to receive a percussion-cap, the said cap-box being in communication with the explosive compound in the torpedo. Extending laterally from the cap-box 22 is a trigger 23, engaging a hammer for exploding the cap, and connected to said trigger is a rod or plunger 24, which extends up through the upper portion of the section 18 of the torpedo, where it

is provided exteriorly of the torpedo with a head or button 25, which is preferably of star shape or provided with a number of points for insuring the engagement of said head or button with the bottom or hull of a vessel. The plunger 24 is normally pressed upward by means of a coiled spring 26, which surrounds the plunger within the upper section 18 of the torpedo, said spring being of sufficient tension to require, preferably, the application of, say, five pounds pressure on the head before the plunger may be depressed to operate the trigger for exploding the cap, and consequently the torpedo.

As shown in the plan view, several lines or batteries of these torpedoes may be placed below the surface of the water in the channel and beneath the course traversed by incoming war-ships. A person stationed in the compartment 1 may by operating the windlass 7 allow the torpedoes to move upward with any desired speed, and upon one of said torpedoes coming in contact with the bottom of the vessel the head 25 will be depressed, thus exploding the torpedo.

It is preferred to give each of the torpedoes a buoyancy equivalent to an uplift of twenty-five pounds, although of course this may be varied at will. It is also within the scope of this invention to provide a number of torpedoes along each main cable, according to desire or as may be found most expedient. The entrance to a port, harbor, or other inclosed body of water may thus be thoroughly protected against the enemy.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. The combination with an endless cable extending from the shore along the bed of a stream and anchored as described, of a series of auxiliary cables connected at intervals to the main cable and carrying at their free ends submerged captive and buoyant torpedoes, guides common to both the main and auxiliary cables, and means for operating said main cable, substantially as described.

2. The combination with a suitable station or compartment located on a shore and hav-

ing a tubular conduit leading into an adjacent stream, of an endless cable passing through said conduit and around a suitable guide or pulley located at a distant point, operating means for effecting a movement of said cable, auxiliary cables connected to the main cable, submerged buoyant torpedoes connected to the free ends of said auxiliary cables, and sheaves common to both the main and auxiliary cables, substantially as described.

3. The combination with an endless cable adapted to be located adjacent to the bed of a stream, and operating means therefor located on the shore, of a series of hemispheroidal weights carrying guides for said cable, and a series of buoyant torpedoes held captive by auxiliary cables connected to and operated by the main cable and engaging the same guides, substantially as described.

4. The combination with a torpedo having an inclosed cavity or chamber, of a cap-box in communication with the explosive compound, a trigger connected therewith, a plunger operatively connected to said trigger and extending exteriorly of the torpedo and arranged to be thrust inward for operating the trigger, a spring for pressing said plunger normally outward, and a head on said plunger outside of the body of the torpedo, substantially as described.

5. The combination with a torpedo having an inclosed cavity or chamber, of a cap-box arranged in said cavity and communicating with the chamber containing the explosive compound, a trigger-supported hammer for exploding said cap, a spring-supported plunger engaging said trigger and extending outside of the body of the torpedo, and a star-shaped or pointed head connected to the end of said plunger, all arranged substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JACOB JACOBSON.

Witnesses:

J. W. CURRAN,
R. H. PURCELL.