J. H. STOELT.

LIFE BOAT.

APPLICATION FILED JULY 7, 1908.

919,974.

Patented Apr. 27, 1909.

3 SHEETS—SHEET 1.

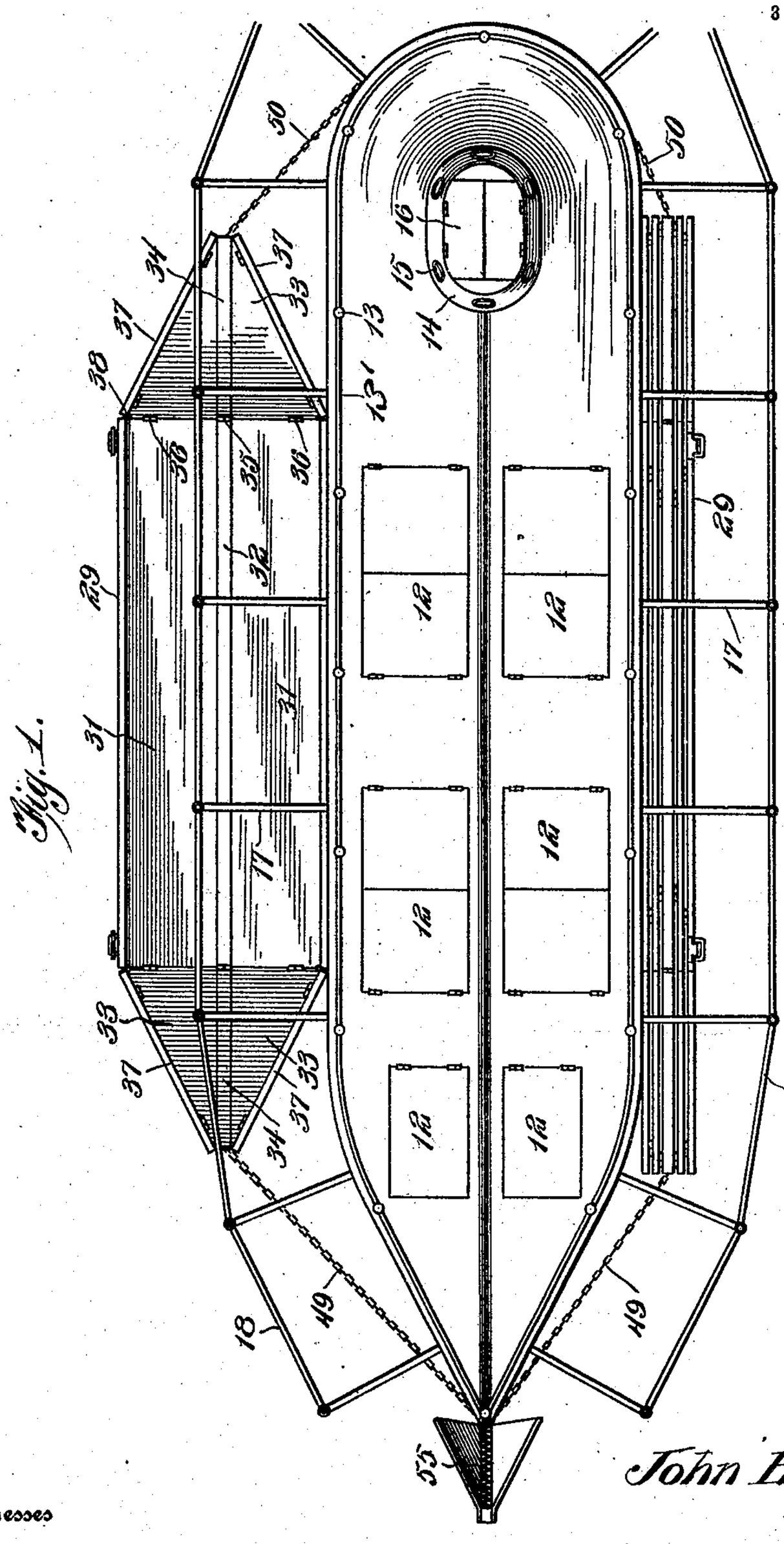

Fig. 1.

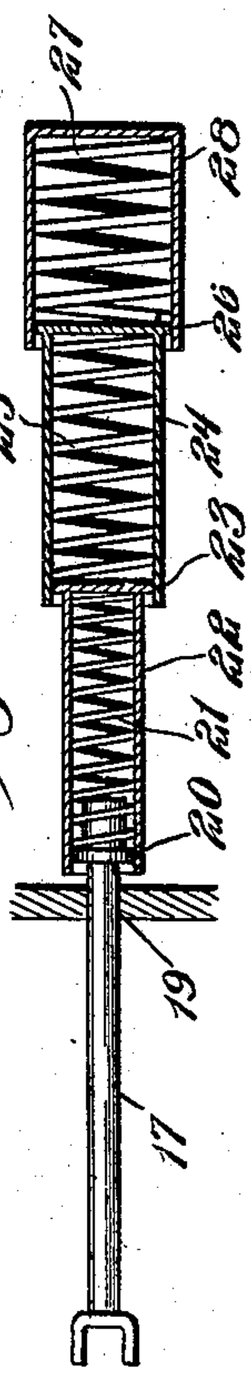

Fig. 8.

Witnesses

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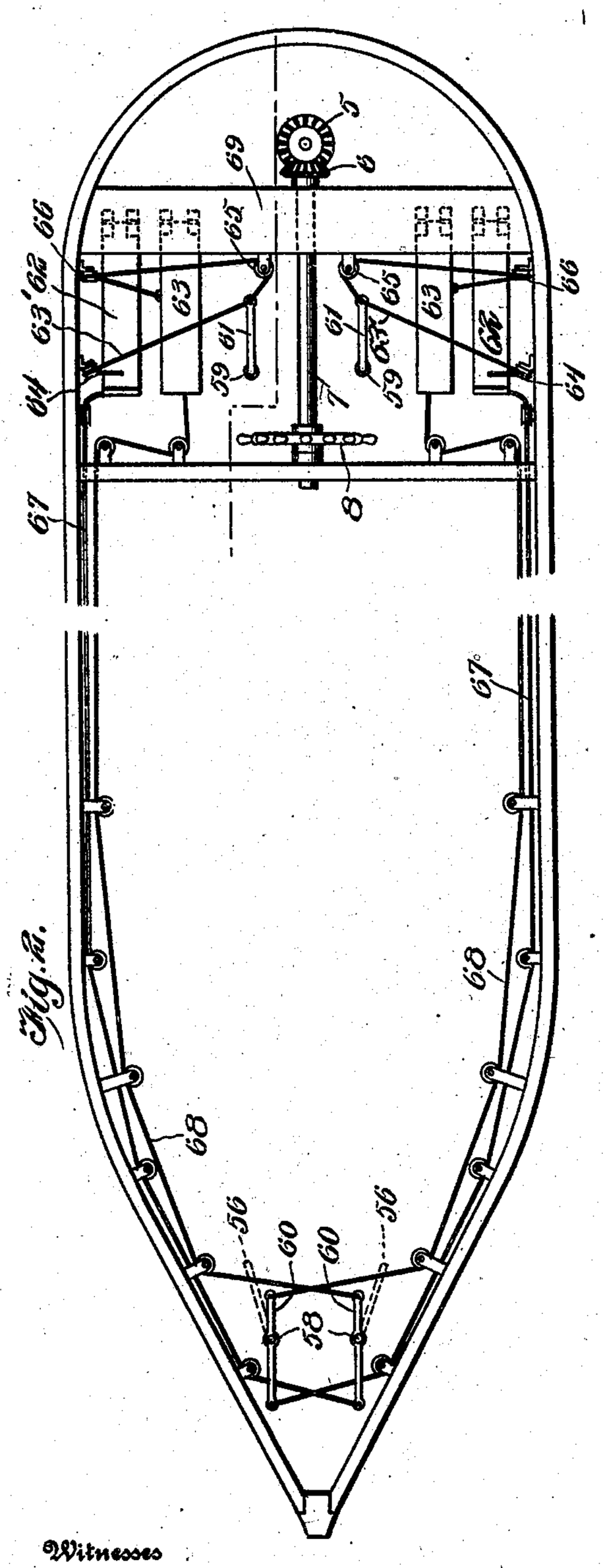
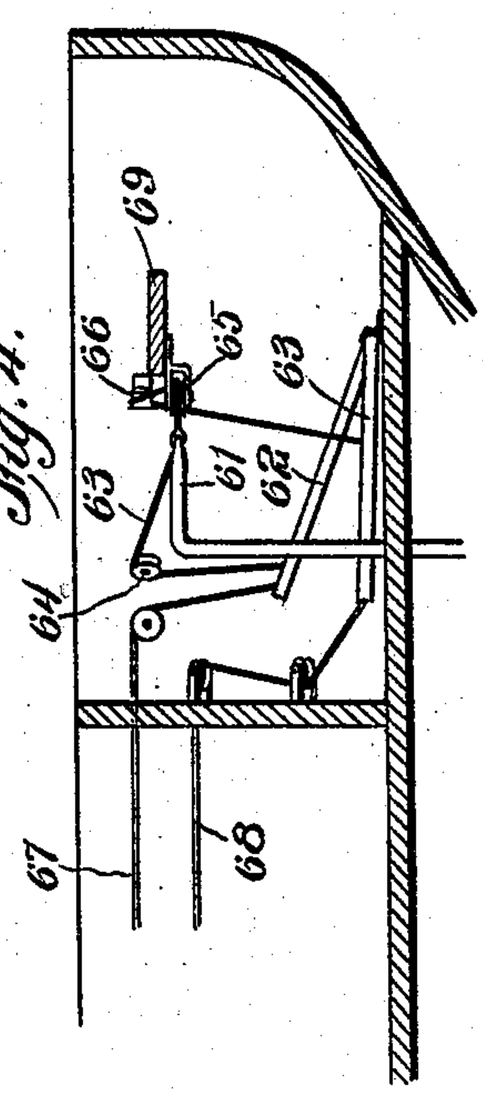


Fig. 4.



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3 SHEETS—SHEET 3.

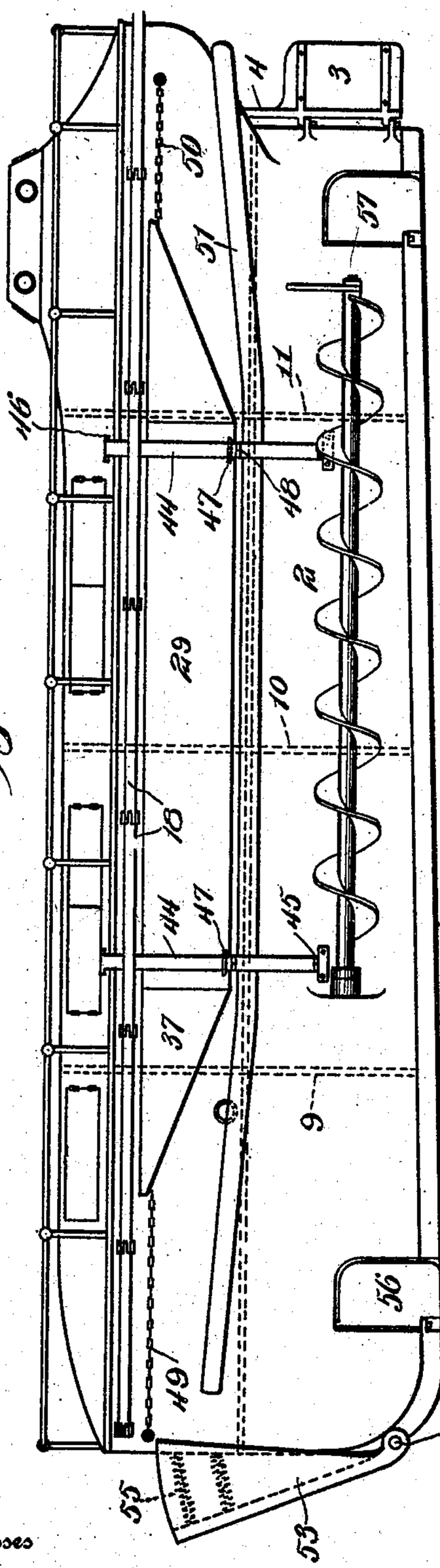

Fig. 3.

Fig. 6.

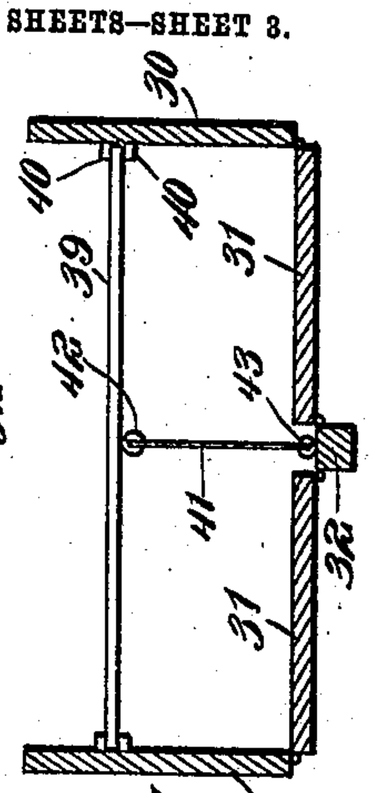

Fig. 7.

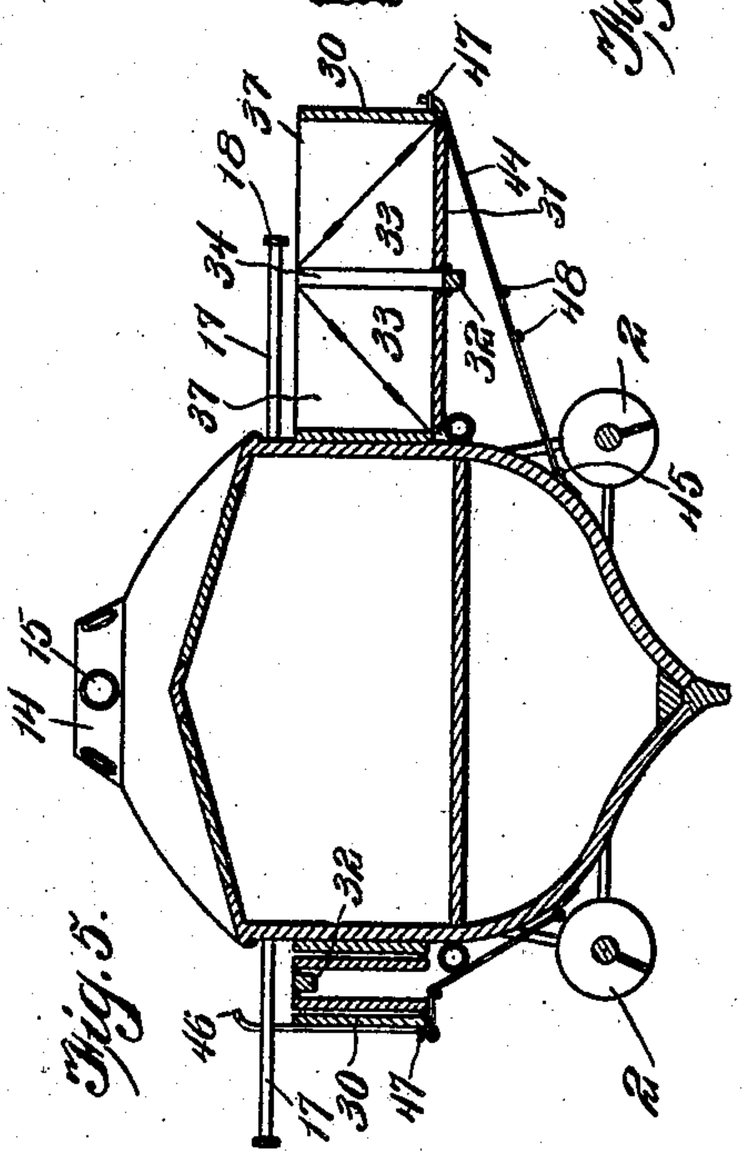

Fig. 5.

Witnesses

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UNITED STATES PATENT OFFICE.

JOHN H. STOELT, OF SEBEWAING, MICHIGAN.

LIFE-BOAT.

No. 919,974. Specification of Letters Patent. Patented April 27, 1909.

Application filed July 7, 1908. Serial No. 442,287.

To all whom it may concern:

Be it known that I, JOHN H. STOELT, a citizen of the United States, residing at Sebewaing, in the county of Huron and State of Michigan, have invented new and useful Improvements in Life-Boats, of which the following is a specification.

This invention relates to life boats, and has for its object to produce a safe, reliable and non-collapsible boat of the class described adapted to be driven by a motor and either to be carried as a part of the equipment of a sea-going vessel or to be used by life saving corps, the boat being especially adapted for the latter purpose.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a plan view of the life boat embodying the present invention, showing one of the side extension boats set in position for use and the other side extension boat folded. Fig. 2 is a plan view of the boat on an enlarged scale omitting the deck in order to illustrate the interior construction. Fig. 3 is a side elevation of the boat. Fig. 4 is a vertical fore and aft section through the rear end of the boat, showing a portion of the steering mechanism. Fig. 5 is a mid-ship section. Fig. 6 is a detail longitudinal section through a portion of one of the buoyant side fenders. Fig. 7 is a vertical cross section through one of the folding side extension boats showing the means for holding the same extended. Fig. 8 is an enlarged detail longitudinal section through one of the bumper rods.

In the preferred embodiment of the invention the hull 1 of the boat is long, narrow and deep or what is usually termed the cutter type in order to give the requisite stability and speed to the boat. The boat is equipped with twin screw propellers arranged one at each side as shown in Fig. 5, each of said propellers being in the form of a spiral screw as shown at 2. The propellers 2 are hung in suitable bearings at their forward and rear ends and may be geared in any suitable manner to a motor of any desired type, such gearing and motor not being illustrated as they form no part of the present invention.

The form of propeller shown and described, however, will be found especially effective and speedy in a boat of the type referred to. The hull is also equipped with the usual rudder 3 located at the stern and provided with a rudder post 4 which extends through the counter of the hull and is provided at its upper end with a beveled gear wheel 5 which meshes with and is actuated by another beveled gear wheel 6 on the rear end of a steering shaft 7 mounted in suitable bearings and provided with a steering wheel fast thereon.

In carrying out the present invention, the hull of the boat is completely decked over as best illustrated in Figs. 1 and 5, the deck being peeked centrally as shown and slanting in opposite directions from the center toward the sides of the boat, the major portions of the sides being described on straight parallel lines as shown in Fig. 1 to provide for the attachment thereto of the folding side extension boats hereinafter more particularly described. The hull is also divided into a plurality of independent water tight compartments by means of bulkheads 9, 10 and 11 while the deck above the several compartments thus formed is provided with a corresponding number of hatches 12 giving access to the compartments and rendering the same independent of each other so that in case one of said compartments should become flooded the others will be protected. Extending upward from the deck at suitable intervals are stanchions 13 which support a hand or guard rail 13′ which by preference extends entirely around the boat as shown in Fig. 1.

14 designates a turret which as will be seen by reference to Fig. 5 is frusto-conical in shape or provided with a slanting outer surface to better deflect the sea, the said turret being provided with any desired number of dead lines 15 to enable the helmsman to make observations in either direction to assist him in managing the boat. The top or roof of the turret embodies a hatch 15 which may be open to give access to the rear compartment over which the turret is located.

Extending outwardly in substantially horizontal planes from the sides and bow and stern of the boat are bumper rods 17 which are connected at their outer ends by bumper rails 18 forming a guard to prevent damage to the boat by contact with other vessels or mooring places. Each of said rods is of the construction illustrated in detail in Fig. 8 wherein it will be seen that the outer section of the rod passes through an opening 19 in the side of the hull and is provided with a

head 20 which operates against a spring 21 arranged in a tubular section 22 of the bumper rod. The section 22 is provided at its inner end with a head 23 which slides in a tubular section 24 containing another spring 25. In like manner the section 24 is provided at its inner end with a head 26 which bears against another spring 27 housed on the innermost section 28 of the bumper rod. As many tubular telescopic sections may be employed as may be found necessary in accordance with the size of the life boat and it will, of course, be understood that the springs may be varied in size to withstand the shock to which the bumper rail will be subjected in actual practice.

Arranged on opposite sides of the hull of the boat are folding side extension boats 29 one of which is shown extended and the other folded in Figs. 1 and 5 of the drawings.

By reference to Figs. 1, 5 and 7 of the drawings it will be observed that each folding side extension boat embodies the oppositely arranged side sections 30 and a pair of bottom sections 31 which are hinged at their outer edges to the sides 30 and hinged in other inner edges to a keel 32. At the bow and stern, each folding side extension boat is provided with triangular bottom sections 33 which are hinged to a keel section 34, the latter being hinged to the main gear section as shown at 35 while the triangular bottom sections 33 are hinged to the main bottom sections 31 as shown at 36. The bow and stern of each folding side extension boat also comprises the triangular side sections 37 which are hinged to the triangular bottom sections 33 and also hinged to the side sections 30 as shown at 38. By means of the construction just described, each of the folding side extension boats is adapted to be folded from the position shown at one side of Figs. 1 and 5 to the position shown at the opposite side and when in the latter position said extension boats occupy but small space while they are extended and they not only accommodate a large number of persons but they also add materially to the ease, readiness and stability of the boat, as a whole.

The folding side extension boats are held extended by means of seats 39 any number of which may be employed, the opposite ends of each seat being received between parallel cleats 40 on the sides of the boats while a tie rod 41 extends from an eye 42 on the seat to an eye 43 on the keel as shown in Fig. 7, thus firmly anchoring the seat in place and preventing any liability of the extension boat from accidentally collapsing.

Each folding side extension boat has connected therewith a plurality of stays 44 shown in Figs. 3 and 5 each of said stays being hinged to the side of the hull as shown at 45 while the outer end thereof is provided with a tee-shaped head 46, the stay being adapted to slide through an eye or loop 47 adjacent to the outer lower angle or corner of the extension boat. At one or more intermediate points, each stay 44 is jointed or provided with sections hinged together as shown at 48 to enable said stay to fold alongside of the folded extension boat as shown at the left hand of Fig. 5. The stays 44 effectively guard against the extension boats being turned away from the sides of the main hull and this is further aided by the bow and stern connections 49 and 50 respectively, said connections being preferably in the form of chains, each of which has one end connected to the corresponding end of the extension boat while the other end is connected to the main hull as clearly shown in Figs. 1 and 3. The boat is further provided on opposite sides with buoyant fenders 51 extending practically the entire length thereof each of said fenders being in the form of a hollow tube as shown in Fig. 6 containing a plurality of air-tight sections 52 each containing air and each being independent of the other so that in case one of said sections should become flooded the remaining sections will not be affected. The fenders not only add to the buoyancy of the boat as a whole but also act in the capacity of fenders to prevent injury to the hull when the hull comes in contact with other hulls or obstacles. The boat is also equipped with bow fenders 53 illustrated in Figs. 1 and 3, the same being hinged to the stem of the boat at 54 and having rearwardly diverging sides conforming to the shear of the bow of the boat as shown in Fig. 1, the fender being held forward by means of one or more cushioning springs 55 interposed between the stem of the boat and the stem of the fender. The bow fender 53 protects the stem of the hull and also will be found effective in rescuing persons from a wreck or grounded vessel.

In addition to the usual rudder 3, I provide two series of emergency rudders each series comprising a forward rudder 56 and a rear rudder 57. These rudders are preferably led into recesses in the keel as best indicated in Fig. 3 and have posts 58 and 59 provided at their upper ends with tillers 60 and 61. The forward tillers 60 comprise two arms each while the rear tillers comprise but a single arm. To operate the emergency rudders I provide two sets of treadles, each set comprising a right hand treadle 62 and a left hand treadle 63. From the right hand treadle 62 a steering rope or cable 63′ passes upward over a guide pulley 64 to the rear end of the tiller arm 61 and from thence around other pulleys 65 and 66 to the left hand treadle 63. From the right hand treadle 62 a steering rope or cable 67 extends around suitable guide pulleys to the forward arm of one of the forward tillers 60 while from the opposite arm of said tiller another

rope or cable 68 extends around guide pulleys back to the left hand treadle 63. The helmsman sitting upon a seat 69 just over the treadles may readily depress one or the other of either pair of treadles and thus swing the emergency rudders 56 and 57 outward and inward, correspondingly deflecting the course of the boat. The emergency rudders are particularly useful in case of injury of the ordinary or main rudder 3 and may also be used as an auxiliary to the rudder 3 when it is necessary to make unusually quick or abrupt turns in the boat.

I claim:—

1. In a boat, the combination with the main hull, of folding side extensions therefor arranged above the water line and each embodying a plurality of hingedly connected bottom sections and side sections, and a keel to which the bottom sections are hingedly connected.

2. In a boat, the combination with the main hull, of folding side extensions therefor, arranged at opposite sides of the main hull and each consisting of a plurality of fore and aft sections hinged together, and folding stays extending under said extensions and connecting the outer portions thereof with the main hull.

3. In a boat, the combination with the main hull, of folding side extensions therefor located at opposite sides thereof, each of said extensions comprising a series of main fore and aft sections hingedly connected together, and pointed or triangular shaped bow and stern sections also hingedly connected together and to the main fore and aft sections.

4. In a boat, the combination with the main hull, of bumper rails extending lengthwise thereof at opposite sides of the main hull, and a series of bumper rods connected at their outer end to said bumper rail, at their inner ends to the main hull and each comprising a plurality of spring pressed telescopic sections.

5. In a boat, the combination with the main hull, of a fender pivotally connected at its lower end to the bow stem of the hull and comprising rearwardly diverging sides adapted to embrace the bow of the boat, and one or more cushioning springs interposed between the bow stem of the boat and bow fenders.

6. In a boat, the combination with the main hull, of folding side extensions therefor connected to opposite sides of the hull and each consisting of a series of fore and aft sections connected hingedly together, and seats interposed between the side sections of each extensions therefor and provided with attaching means to hold said seat in place, said seats acting to hold the extensions open.

7. In a boat, the combination of a main stern and rudder and the steering connections therefor, a plurality of emergency rudders set into opposite sides of the hull near the bow and stern, a plurality of treadles for each emergency rudder, and flexible connections attached to each set of treadles and connected with the post of one of the emergency rudders, whereby the emergency rudders may be controlled independently of the main stern rudder.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. STOELT.

Witnesses:
ELLA K. WINTER,
J. T. HADWIN.