

J. E. JOHANNESSEN & O. A. WAAGE.  
 MECHANISM FOR THE OPERATION OF SUBMARINE ARMAMENT.  
 APPLICATION FILED FEB. 23, 1917. RENEWED APR. 11, 1918.

1,270,164.

Patented June 18, 1918.  
 2 SHEETS—SHEET 1.

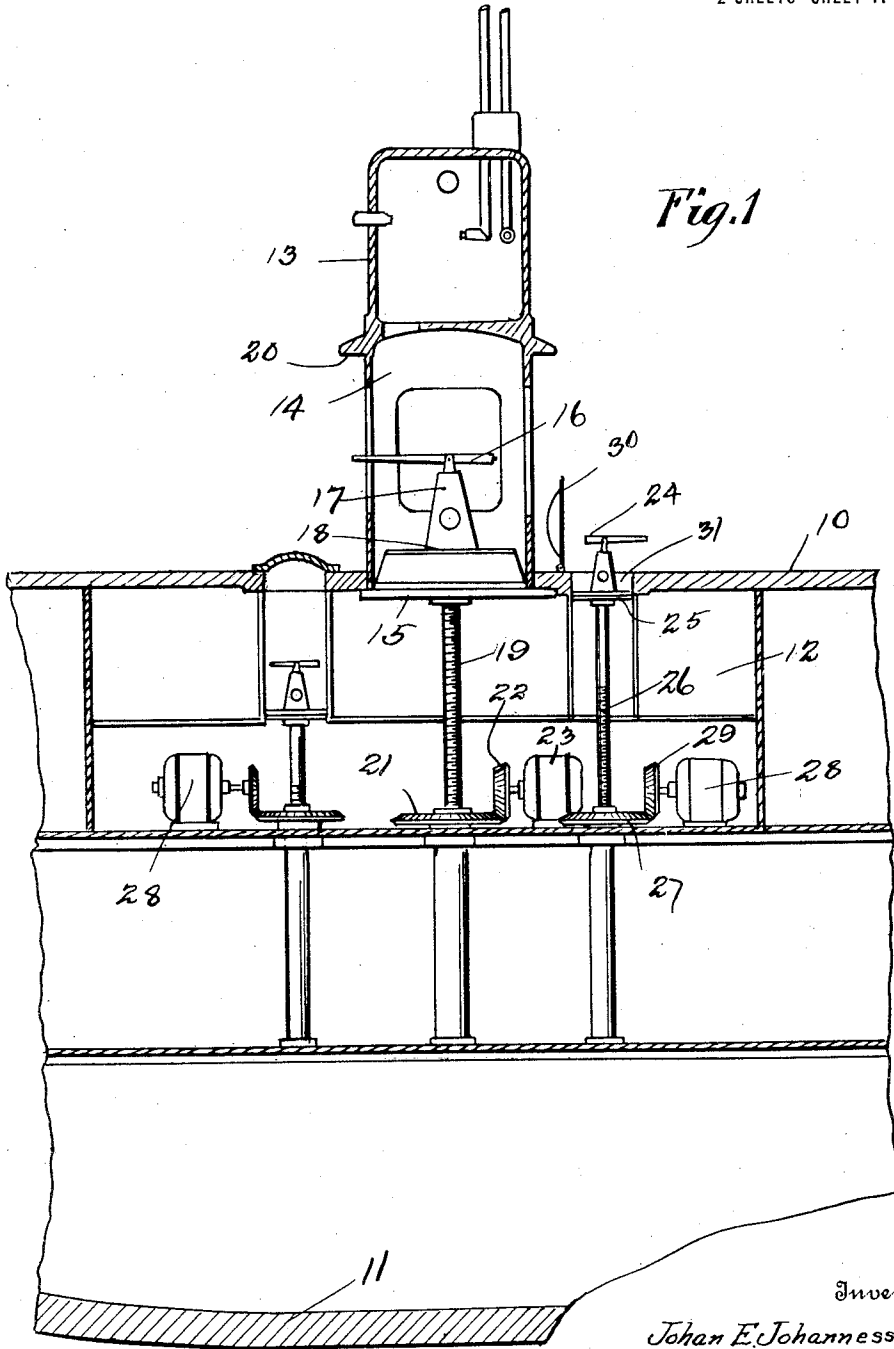


Fig. 1

Witnesses

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By

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2 SHEETS—SHEET 2.

Fig. 2

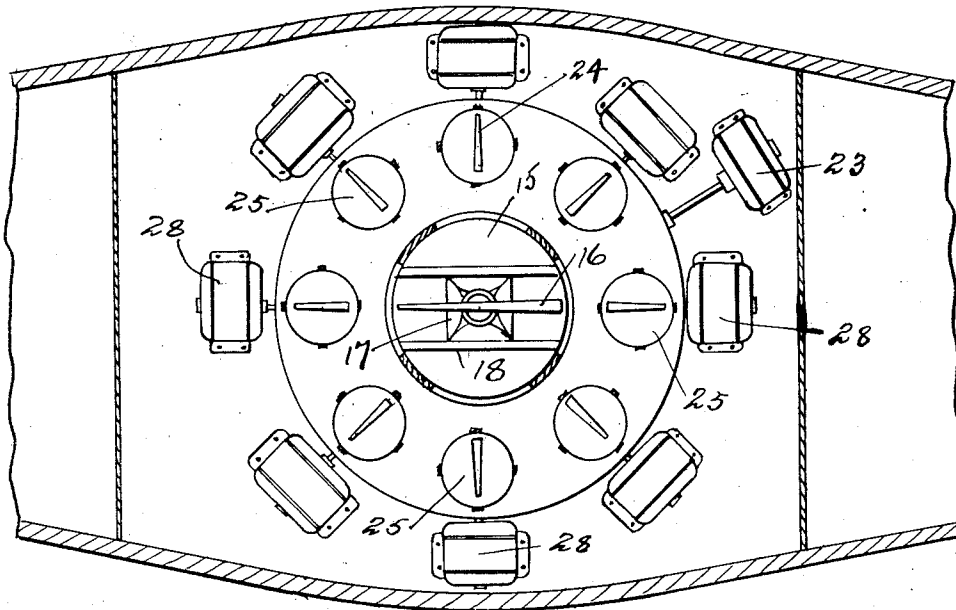


Fig. 3

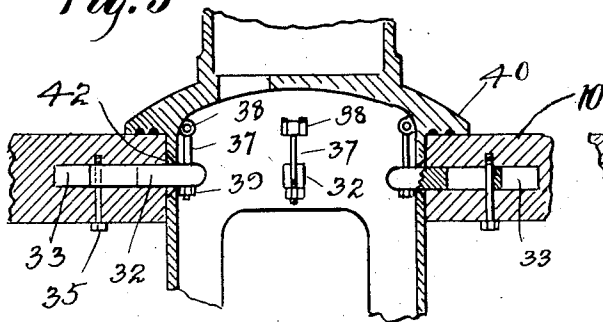


Fig. 5

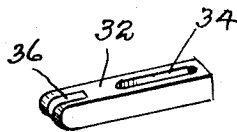
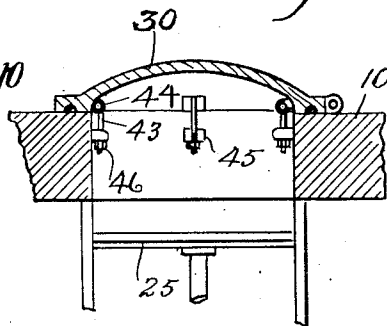


Fig. 4

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# UNITED STATES PATENT OFFICE.

JOHAN E. JOHANNESSEN, OF BROOKLYN, AND OSBORNE A. WAAGE, OF NEW YORK, N. Y.,  
ASSIGNORS OF ONE-THIRD TO DUTEE W. FLINT, OF PROVIDENCE, RHODE ISLAND,  
AND ONE-NINTH TO JOHAN A. SETHER, ONE-NINTH TO OLAF C. HOFF, AND ONE-  
NINTH TO CHARLES J. CHRISTIANSEN, ALL OF BROOKLYN, NEW YORK.

MECHANISM FOR THE OPERATION OF SUBMARINE ARMAMENT.

1,270,164.

Specification of Letters Patent. Patented June 18, 1918.

Application filed February 23, 1917, Serial No. 150,450. Renewed April 11, 1918. Serial No. 228,040.

To all whom it may concern:

Be it known that we, JOHAN E. JOHANNESSEN, a citizen of the United States, and OSBORNE A. WAAGE, a subject of the King  
5 of Norway, and residents of Brooklyn, county of Kings, and State of New York, and New York city, in the county of Kings, and State of New York, respectively, have  
10 invented certain new and useful Improvements in Mechanism for the Operation of Submarine Armament, of which the following is a specification.

This invention relates to the operation of armament for submarine vessels, and the object of the invention is to provide simple and effective means for mounting a plurality of guns on a submarine vessel, each of said guns being independently operable to be moved quickly into and out of action position.  
20 tion.

A further object of the invention is to provide a central turret with superimposed chambers, the lower chamber containing a gun on a transversely movable carriage, and means for moving the entire turret vertically, to position its gun for action and to withdraw the same and close the opening when the gun is out of action and the vessel is submerged.

The invention further consists in the positioning of a plurality of independently operable auxiliary gun platforms arranged about the central turret, whereby each gun may be raised to firing position and then withdrawn within the body of the vessel.  
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A still further object of the invention is to provide motor driven screws for raising or lowering the gun platforms.

A still further object of this invention is to provide improved securing means for locking the turret and deck closures in closed position to make them water tight.  
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With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.  
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In the accompanying drawings:

Figure 1— is a central longitudinal sec-

tion through the gun elevator room showing the operating mechanism. 50

Fig. 2— is a plan view showing a portion of the vessel, and the arrangement of mechanism in the elevator room.

Fig. 3— is a detailed sectional view showing the double form of bolts for locking the turret in closed position. 55

Fig. 4— is a perspective view of one of the main bolts.

Fig. 5— is a sectional view showing the means for securing the gun in closed position. 60

Referring to the drawings, 10 designates the upper deck of the vessel and 11 the bottom portion thereof. 65

Beneath this upper deck 10 is the elevator room 12 in which all of the guns are mounted on separate elevator platforms.

The turret 13 in addition to its upper closed chamber is provided with a lower chamber 14, on the platform 15 of which is mounted the large gun 16 on a standard 17 arranged to slide longitudinally on the ways 18 and this platform 15 is supported on the screw 19, whereby the whole turret may be raised to lift the gun into position for action and then lowered to return the gun below the deck, and at the same time bring the collar 20 of the upper chamber of the turret down onto the deck forming a water-tight joint about the opening. This screw 19 is arranged to be operated by a nut in the bevel gear 21, which gear is rotated through the pinion 22 by the electric motor 23, by means of which the gun may be lifted to firing position and then dropped very quickly. 85

It is found in practice to be desirable to provide a plurality of smaller guns positioned so that a shot may be fired in any direction. Therefore to accomplish this and provide a formidable armament for this submarine war ship, we have mounted a plurality of small guns 24, each on separate and independent platforms 25, each of which is operated by means of a screw 26 through a nut-carrying bevel gear 27 by an electric motor 28 through the pinion gear 29. When 90 95

any of these smaller guns are to be raised into position a hatch plate 30 is released and swung back thereby providing an opening 31 through which the gun may be raised into position for action.

By mounting these guns on platforms arranged close together about the central turret, they will cover the full circle about the ship and a number may be brought into action at the same time.

By mounting each one separate and independent any desired number may be raised into position for action and the others kept below in readiness when wanted.

Another feature of this invention is the compound locking mechanism employed in securing the turret in closed position.

To accomplish this we have provided a set of main bolts 32 adapted to slide radially in sockets 33 formed to receive them in the deck.

These main bolts 32 are preferably square in cross section as illustrated in Fig. 4, and are provided with longitudinal slots at 34 through which a pin 35 passes to limit their outward movement. The outer ends of these bolts when slid forward are adapted to pass through the openings 42 in the side of the turret frame and these ends are slotted as at 36 to receive the binding bolts 37 which are pivoted at 38 in the turret frame, the end 39 of these binding bolts being adapted to swing into these slots 36 and a nut is threaded onto each for the purpose of drawing the collar or deck plate 40 of the turret down firmly against the deck 10 to provide a water-tight joint.

Fig. 5 illustrates our method of drawing down and locking the hatches 30 through which the small guns are raised on the platforms 25, which locking mechanism comprises a plurality of bolts 43 pivoted at 44 with their free ends adapted to swing into a slotted boss 45 in the deck opening and each of these bolts is provided with a nut 46 adapted to be set up against the under side of these bosses to draw the hatch firmly down onto the deck 41 and form a water-tight joint.

Means have herein been illustrated for carrying out our invention, but we do not wish to limit ourselves to any of the specific constructions as various changes in shape and form of the several features may be necessary. We, therefore, desire it to be understood that we reserve the privilege of resorting to all the mechanical changes to which the device is clearly susceptible, the invention being defined by the appended claims.

We claim:

1. In a submarine, a turret having a water-tight observation chamber and a lower gun-

carrying platform connected thereto, and means for raising the turret and platform to bring the gun on the latter into position for action.

2. In a submarine, a turret having an upper water tight chamber, and a lower open sided gun-carrying chamber connected thereto, means for raising both chambers to bring the gun into position for action, means for making a water-tight joint about said turret when depressed, and means for locking the same in closed position.

3. In a submarine vessel, a turret having a portion above the deck and a portion below the deck carrying a gun, means for elevating said turret to expose its gun for action, and for lowering the gun within the hull and closing the opening.

4. In a submarine, a turret having a water-tight observation chamber above the deck and a lower gun-carrying platform connected thereto and normally below the deck, and a motor driven screw for raising the turret and platform to bring the gun on its platform into position for action.

5. In a submarine, a turret having a water-tight observation chamber and a lower gun-carrying platform connected thereto, a motor-driven screw for raising the turret and platform to bring the gun on its platform into position for action above the deck, a plurality of independently operable gun-carrying elevator platforms surrounding said turret, and means for operating each.

6. In a submarine, a turret having a water-tight observation chamber above the deck and a lower gun-carrying platform connected thereto, means for raising said turret and platform to bring the gun on the latter into position for action above the deck, a plurality of main bolts adapted to be positioned to extend through the walls of the turret when the latter is depressed, and tightening bolts engaging said main bolts to exert a downward tension on the turret to make a water-tight joint about the same.

7. In a submarine, a turret having a water-tight observation chamber and a lower gun-carrying platform connected thereto, means for raising the turret and platform to bring the gun on the latter into position for action, a plurality of endwise slidable main bolts connected to the deck and adapted to extend through the side wall of the turret when depressed, tension bolts connected to the turret and adapted to engage said main bolts to apply a downward tension on the turret to make a water-tight joint about the same.

In testimony whereof we affix our signatures.

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OSBORNE A. WAAGE.