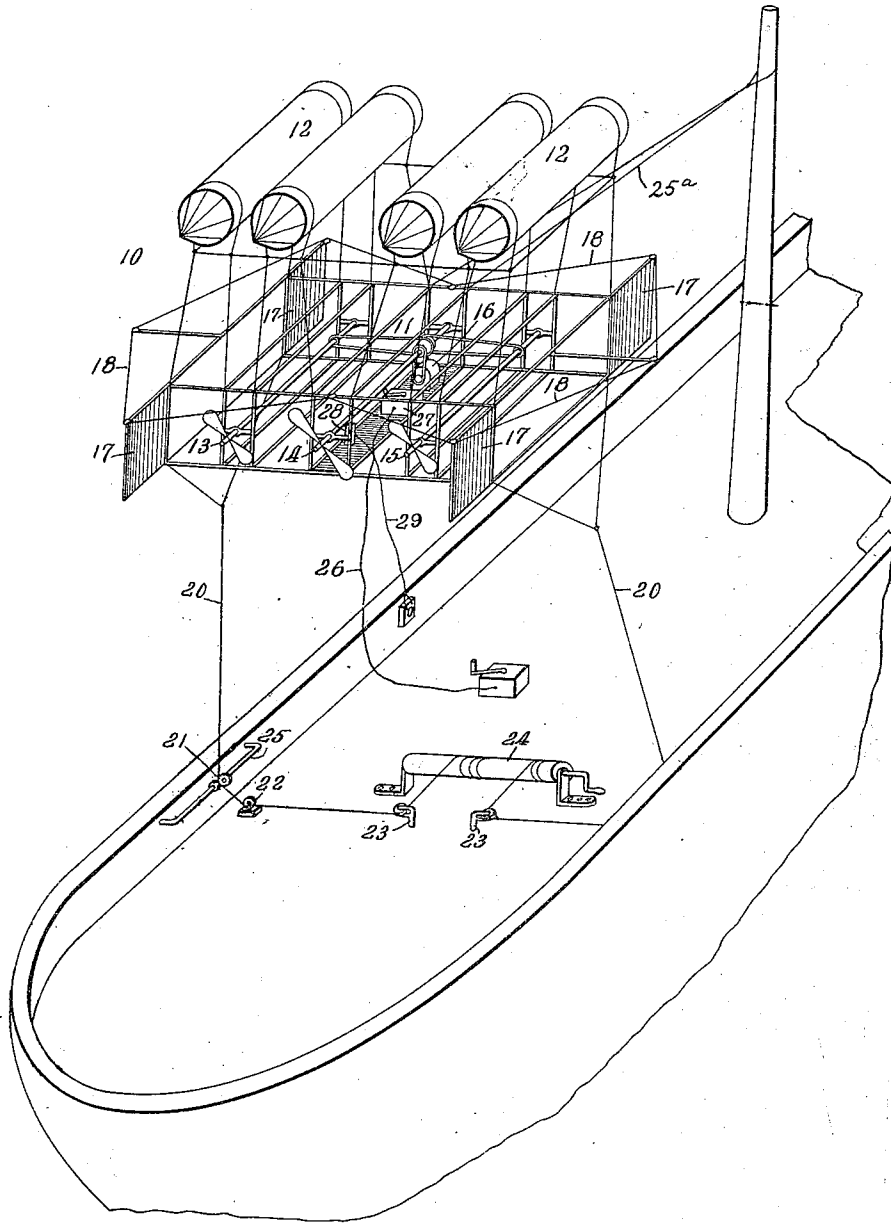


F. BRACKETT.
CAPTIVE LOOKOUT FOR USE ON BOARD SHIPS.
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1,017,200.

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Witnesses
H. C. Polietto
L. H. Bickerton

Inventor
Frederick Brackett

By *Meyers, Luskman & Co*

Attorney

UNITED STATES PATENT OFFICE.

FREDERICK BRACKETT, OF WASHINGTON, DISTRICT OF COLUMBIA.

CAPTIVE LOOKOUT FOR USE ON BOARD SHIPS.

1,017,200.

Specification of Letters Patent. Patented Feb. 13, 1912.

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To all whom it may concern:

Be it known that I, FREDERICK BRACKETT, a citizen of the United States, residing at Washington, in the District of Columbia, have invented new and useful Improvements in Captive Lookouts for Use on Board Ships, of which the following is a specification.

My invention consists of a captive air craft used as a lookout for ships. Heretofore captive balloons have been used on land as lookouts, the balloon being guyed to a fixed point after having been elevated to the desired height with its passenger.

My invention, however, is a lookout for ships, and my captive air craft which I use is of a type especially adapted for the purpose intended, and specially equipped and guyed to the ship in such a manner that it serves the purpose most efficiently.

The air craft I prefer to employ is of the lighter than air type, being a dirigible equipped with a plurality of gas containers which, when filled with gas, buoy the craft up in the air. This craft I propose to have carried by a ship, the draft being of such construction that it may be readily taken down and stored away, and is as readily put together and gotten in shape for use. The craft is a power craft, and is to be propelled by its own motive power at such a speed as to keep pace with the vessel. Preferably, I supply the craft with power from the ship in connection with which it is used, using electric power for this purpose, and transmitting it to a driving motor on the craft by a suitably arranged cable. Means for the control of the craft is provided in the car of the craft, and also means of communication with the deck of a ship, so that the man on the lookout may direct the craft at will and communicate to the deck of the ship any information which he may desire.

The particular arrangement of my lookout, and the particular means for its control will be clear from the following description taken in connection with the accompanying sheet of drawing. This sheet of drawing shows a ship equipped with my improved lookout, in perspective.

10 is a power air craft which I use, the

car 11 of which constitutes a lookout platform. The car is supported by four gas containers 12 grouped in pairs spaced somewhat widely apart. This wide spacing is for the purpose of increasing the stability of the craft, the four spread apart gas containers in the same plane giving greater stability than would be given by a single gas container. The car 11 is supported from these containers 12 by a special arrangement of guy wires and braces which form a steady or rigid structure. The craft has three driving propellers mounted on the ends of shafts 13, 14 and 15. The center one of these which is in the center of the machine, drives a propeller somewhat larger in diameter than the other two, which are placed one on each side of it. All of the shafts are driven by an electric motor 16 connecting with the shafts by suitable sprockets and chains, as shown. The craft is equipped with four rudders 17 one at each corner of the car. These rudders are controlled by cables 18 which pass over outriggers on each side of the car, and are connected to the main frame structure of the craft at each end thereof. By employing outriggers for the cables on each side of the craft, the angle between the operating cables and the rudders in normal position, is increased and their operation made easier and more reliable. This power air craft is guyed to the vessel by means of cables 20 which pass through blocks 21, 22, and 23 on the deck of a vessel, and to a hoisting winch 24. The hoisting winch, which may be either hand or power operated, is located at a suitable point on deck, and from it the cables are led along the deck, one to each side of the ship where they pass through the corner blocks 22 and the gunwale blocks 21, which spread the cables apart a maximum distance equal to the beam of the vessel. This gives a most stable arrangement of guy wires. In case it is desired to increase this stability, the blocks 21 may be mounted on outriggers extending from opposite sides of the ship, and the cables thus spread apart the desired distance. As shown, the blocks 21 are hinged and slidably mounted on guide rods 25 attached to the upper edge of the gunwale.

This gives a freedom of movement to the cables 20 which they would not have otherwise, and thus prevents any tendency of the cable to run out of the blocks 21 or to jam or rub in them. Preferably, the cables 20 are branched near their upper ends, as shown, one branch cable running to each corner of the frame of the air craft. Running from the front end of the air craft to a mast of the ship, as shown, is a cable 25^a which may be used with advantage when it is desired to take the air craft in tow, or when the air craft is elevated to a moderate height, and it is desired to prevent it from falling behind the vessel more than a certain distance. This cable also helps to increase the stability of the air craft. In some instances, I may find it desirable to run it to the prow of the ship, thus making it a greater length to reach a greater elevation.

By means of the retaining cables 20 and the winch 24, the air craft may be elevated any desired height and held there. When the air craft is elevated the man on the lookout platform has a field of observation which may be extended to the limit of his ken. This elevation, however, is too great for his voice to reach in case he were to attempt to shout from the lookout to the deck of a ship, and likewise too great for those on deck to communicate by shouts with him. This difficulty is still further increased when the air craft is allowed to lag behind the ship, thus increasing the distance from the deck for a given elevation and making it necessary for shouts from the lookout to travel forward and overtake the ship, and in case the ship happens to be moving against a head wind, it is impossible for any communication to be had by direct word of mouth from the lookout to the deck. Moreover the air craft when it is towed by a ship is a dead drag and very naturally decreases the speed of the ship. In order to overcome these difficulties, I have made the air craft a power craft as above stated, and in addition I have provided a telephone connection between the air craft and the deck of a vessel.

26 is a power cable which transmits power from a source on board the ship to the electric motor 16 on the air craft. A control 27 located in the car of the air craft enables the man on the lookout to control the speed of the craft and thus the craft may be made to keep pace with the ship by varying its speed as the speed of the ship is varied. Preferably I employ an additional controller on the deck of the ship, so that the air craft may be controlled from the deck if desired. This may be very desirable in some instances, particularly in case the man on the lookout should lose control of the power craft or should be himself disabled.

28 indicates a telephone connected to a telephone on the deck of a ship by a cable 29. Communication with the deck may thus be had with all ease.

As thus described, my invention fulfils admirably the requirements of a ship's lookout. The fact that the air craft is so constructed and so guyed to the deck of a ship that it is very stable; the fact that it is power driven to keep pace with the ship; the fact that it may be elevated to any height while preserving this relation, and the fact that ready means of communication from the lookout to the deck are always at hand, especially fit my invention to fulfil the conditions of good service. That the invention is of great value will be readily apparent. It is frequently the case that ships are caught in fogs, and oftentimes these fogs are not deep, but shallow, the height to which they reach being very small. In such case my lookout may be readily elevated above the fog, and in case any other ships also have an elevated lookout, or in case the fog is not mast deep, the one ship may be sighted from the other and collision avoided. In time of war my invention will likewise be of value, it being possible to elevate the lookout so that ships may be seen far beyond the horizon as seen from the deck of a ship, telescopes being used from the lookout. My invention may also be used for elevating the antennæ of a wireless apparatus carried by a ship. Many other uses will suggest themselves to the skilled engineer, and many modifications may be made by him in order to adapt my invention to specific conditions without departing in any wise from its generic spirit. All such modifications I desire to cover by the annexed claims.

What I claim is:

1. A lookout for ships comprising an air craft, a cable guying said craft to each side of the ship, and a centrally located windlass common to both of said cables for controlling the elevation of said craft.
2. A lookout for ships comprising an air-craft, a cable guying said craft to each side of the ship, a centrally located windlass common to both of said cables for controlling the elevation of said craft, and longitudinal movable sheaves through which said cables run secured to the opposite gunwales of the vessel.
3. A lookout for ships comprising an air craft, a cable guying said craft to each side of the ship, a centrally located windlass common to both of said cables for controlling the elevation of said craft, sheaves at the deck on opposite sides and adjacent the gunwales through which said cables run, and longitudinal movable sheaves above the first named sheaves and secured to the gunwales of the ship.

4. A lookout for ships comprising an air
craft, adjustable side cables depending from
the air craft and guying the same to a ship,
a tow cable connecting the forward end of
the air craft to the mast of the ship, and in-
dependent propelling means for the air craft
controllable from the craft and the ship.

In testimony whereof I have hereunto set
my hand in presence of two subscribing wit-
nesses.

FREDERICK BRACKETT.

Witnesses:

ARTHUR L. BRYANT,
GEO. W. REA.