

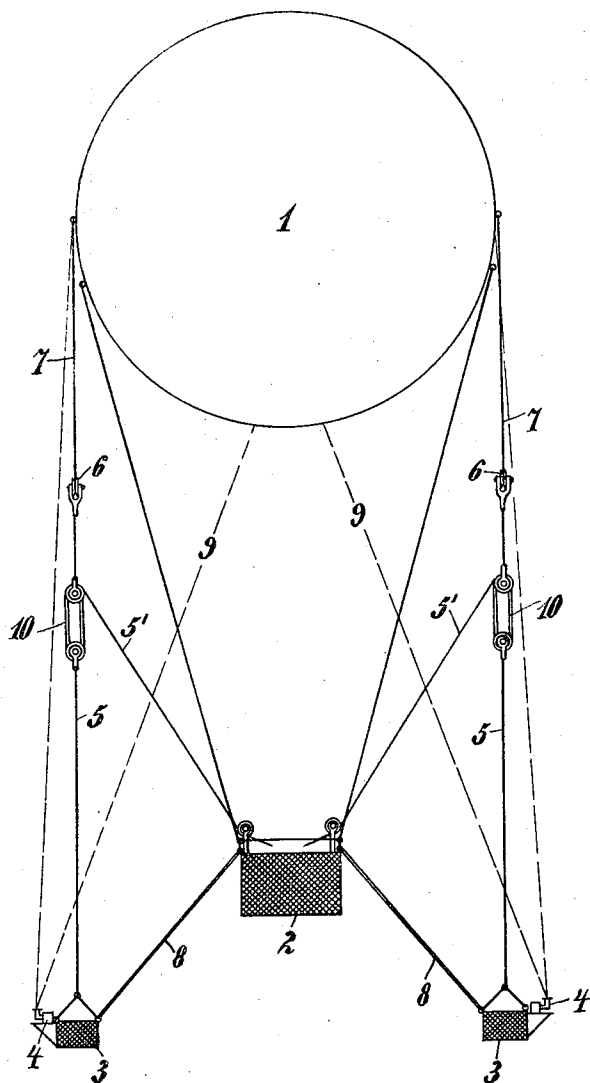
R. WANKMÜLLER.
AIRSHIP.
APPLICATION FILED FEB. 9, 1911.

1,000,865.

Patented Aug. 15, 1911.

2 SHEETS—SHEET 1.

Fig. 1



Witnesses:

Bent H. Wahl
Edward N. Sartor

Inventor:

Romeo Wankmüller.

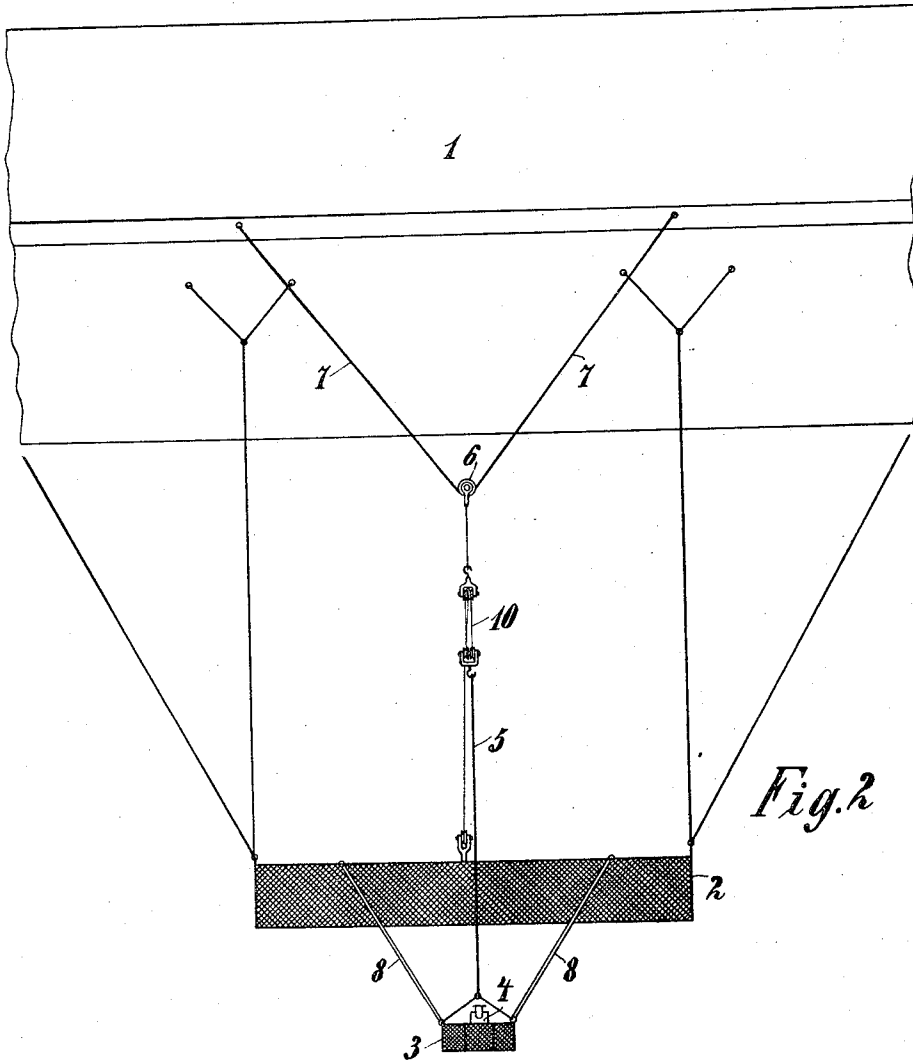
by Spear, Middleton, Donaldson & Spear
ATTY'S.

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2 SHEETS—SHEET 2.



Witnesses:

Bent M. Stahl.

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UNITED STATES PATENT OFFICE.

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AIRSHIP.

1,000,865.

Specification of Letters Patent. Patented Aug. 15, 1911.

Application filed February 9, 1911. Serial No. 607,469.

To all whom it may concern:

Be it known that I, ROMEO WANKMÜLLER, a citizen of the German Empire, and residing at Charlottenburg, near Berlin, German Empire, have invented certain new and useful Improvements in Airships, of which the following is a full, clear, and exact description.

The present invention relates to balloons of all descriptions but more particularly to dirigible balloons and consists in suspending from the balloon auxiliary cars in addition to the main cars.

The main car of a balloon is, as is well known, suspended vertically beneath the balloon. In the present case it is proposed to provide auxiliary cars at either side of the main car, which hang approximately tangentially from the body of the balloon and which are to a certain extent independent of the main car. Certain advantages are derived from these auxiliary cars, for instance, in the case of warfare the space above the balloon may be watched from the auxiliary cars, while this would be impossible from the main car owing to the fact that the balloon itself would obscure the view.

If the balloon is to be employed for advertising or for signaling purposes, the lateral suspension of the auxiliary cars enables the light to be more directly distributed on to the lower part of the body of the balloon, so that the signal or advertisement displayed on the same will be more directly visible from the earth.

In certain cases the main car might be omitted altogether and two lateral cars provided, which may be rigidly connected together and as it were saddled on the balloon.

In order to render the present specification easily intelligible reference is had to the accompanying diagrams, of which—

Figure 1 illustrates a front view of a balloon having a main car and two auxiliary cars, and Fig. 2 is a side elevation of the same.

Referring first to Figs. 1 and 2, Fig. 1 represents the body or envelop of the balloon, to which is attached in the usual manner the main car 2. The auxiliary cars 3 are suspended at either side of the main car by means of suitable wires or ropes 5 and upper pulleys 6, from which branch ropes or wires 7 are attached to different points of

the envelop netting in the usual manner. Between the wires or ropes 5 and the pulleys 6 blocks are arranged, over which the lines 10 run, which extend by means of lines 5¹ to the car, so that the height of the auxiliary cars may be varied as regards the main car by shortening or lengthening the lines 5¹. The auxiliary cars 3 are advantageously linked to the main car 2 by means of rigid arms 8, so that on being raised they will also be spread away from the main car, and their lowest position is advantageously such that a line drawn vertically through the center of the auxiliary cars upward will meet the sides of the envelop at a tangent, as will be readily understood from the drawings.

The auxiliary cars 3 are advantageously employed for carrying the light projecting apparatus 4 and the dotted lines 9 show how the light is projected on to the lower surface of the envelop more advantageously from these points than it could be from the main car. These cars may however be made sufficiently large to carry persons when this is necessary for purposes of observation. For purposes of war the auxiliary cars may be employed to carry explosives which would then be well out of the way of the motors in the main car, so that there would be no danger of inadvertent explosions taking place.

In some cases the auxiliary cars 3 may be adapted to carry the motor and propellers, after the manner of a twin screw vessel, so that the main car 2 would be relieved of the vibrations of these parts and could serve for the reception of the passengers. In this case also the steering of the balloon would be rendered more efficient, in that it could be effected by means of the propellers.

When the balloon is employed for advertising purposes it may be advantageous to provide more than one auxiliary car at each side, for instance two or three, one behind the other, in order to more equally distribute the light over the whole length of the envelop.

Instead of employing rigid bars 8 to connect the auxiliary cars with the main car, light bridges might be employed by means of which the passage of persons from the main car to the auxiliary cars might be rendered possible while the balloon is traveling.

I claim as my invention:—

1. In a balloon the combination of a main car, auxiliary cars suspended at each side of the same from the body of the balloon and means for varying the height of the auxiliary cars as regards that of the main car from the latter, substantially as described.
2. In a balloon the combination of a main car and auxiliary cars suspended from the envelop at each side of the same and a rigid arm to link each of the auxiliary cars to the main car, substantially as described.

3. In a balloon the combination of a main car and auxiliary cars suspended at each side of the same, a rigid link to connect the auxiliary cars to the main car, and means for raising and lowering the auxiliary cars from the main car, substantially as described.

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

ROMEO WANKMÜLLER.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.