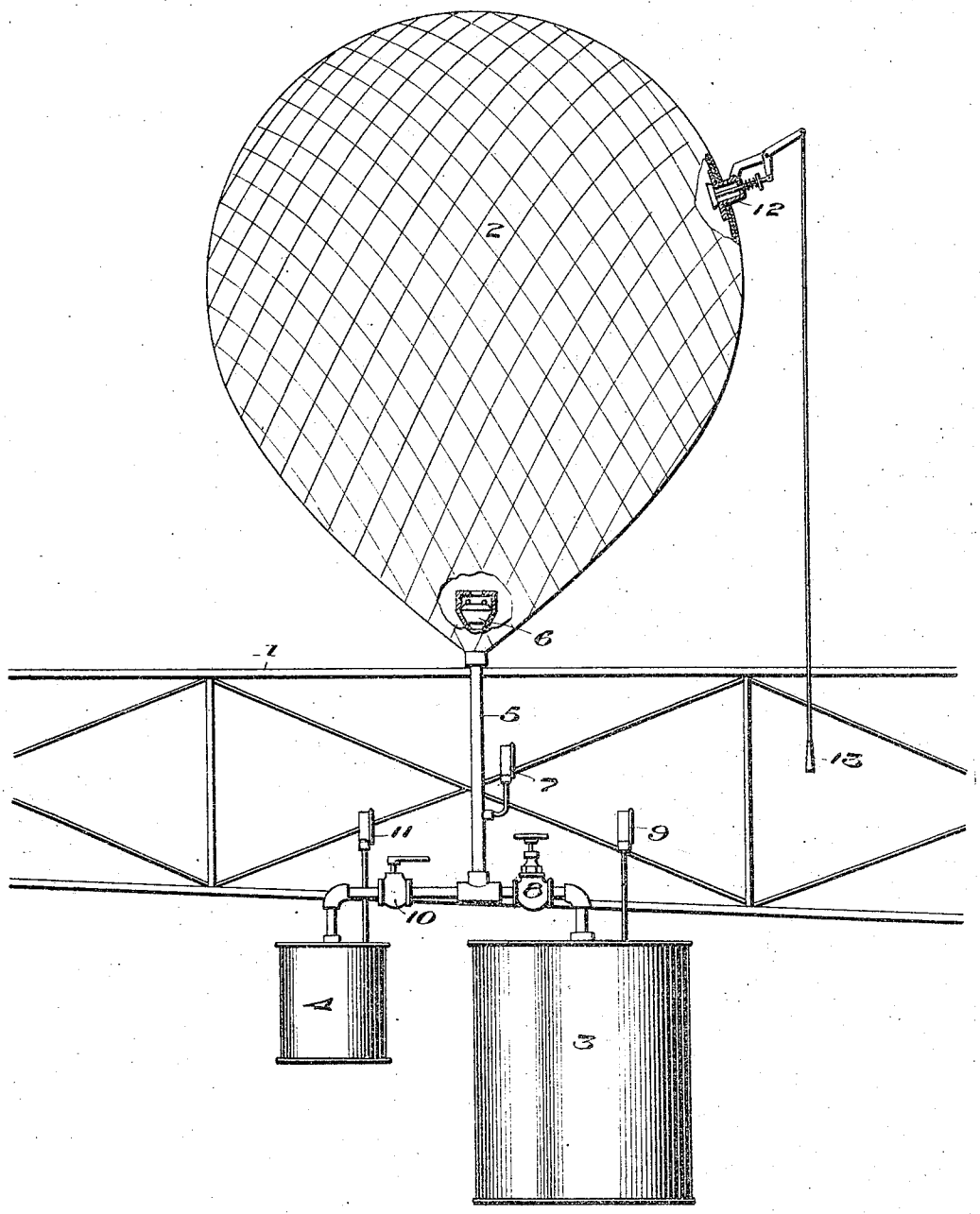
F. J. CHIONE.

SAFETY APPLIANCE FOR AEROPLANES

APPLICATION FILED OCT. 2, 1915.

1,190,376. Patented July 11, 1916.



Witnesses

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FRED J. CHIONE, OF LA SALLE, ILLINOIS.

SAFETY APPLIANCE FOR AEROPLANES.

1,190,376. Specification of Letters Patent. Patented July 11, 1916.

Application filed October 2, 1915. Serial No. 53,827.

To all whom it may concern:

Be it known that I, FRED J. CHIONE, a citizen of the United States, residing at La Salle, in the county of La Salle and State of Illinois, have invented new and useful Improvements in Safety Appliances for Aeroplanes, of which the following is a specification.

My present invention pertains to safety appliances for aeroplanes; and it consists in the peculiar and advantageous aeroplane equipment hereinafter described and definitely claimed.

In the drawing, accompanying and forming part of this specification: the figure is an elevation, partly in section, showing my novel equipment as properly arranged relative to a portion of an aeroplane.

The aeroplane 1 may be and preferably is of the ordinary construction, and in furtherance of my invention a balloon 2 is secured at the center of the top of the aeroplane. The said balloon is of such construction that when deflated it will occupy but a small compass and will offer but a slight projection above the upper plane of the aeroplane. As will be readily observed the balloon is provided with an escape valve 12, held normally closed by a spring and designed to be opened against the action of the spring through the medium of a handle 13.

Connected through a pipe 5 with the interior of the balloon is a tank 3, designed to contain compressible gas in sufficient quantity to fully inflate the balloon. The pipe 5 is equipped with a gage 7, and communication between said pipe and the interior of the balloon is subject to a non-return valve 6, arranged to seat downwardly and therefore adapted in the event of a break in the pipe-system to prevent the escape of gas from the balloon. Gas is held in the tank 3 by a valve 8 which may be of any type compatible with the purpose of my invention without involving departure from the scope of the same as claimed. By preference the tank 3 is provided with a suitable gage 9.

Connected through a valved-pipe 10 with the pipe 5 is an auxiliary tank 4 designed to contain compressible gas, which tank 4 is equipped with a gage 11. I would here have it understood that all of the valves and all of the gages comprised in my novel equipment are arranged in close proximity to the driver's seat (not shown) of the aeroplane.

In the practical use of my improvement, the tanks 3 and 4 are charged with a suitable compressible gas that is lighter than air, precedent to the making of an ascent.

In the event of an accident and any tendency of the aeroplane 1 to fall, the aviator opens the valve 8 whereupon gas will pass from the comparatively large tank 3 to the balloon which is normally in a deflated state on the top of the aeroplane. Such passage of gas will inflate the balloon to its full extent, whereupon the fall of the aeroplane will be arrested. With this accomplished, the aviator has but to pull on the handle 13, whereupon gas will be permitted to escape from the balloon, and the aeroplane and balloon will be caused to gradually descend. If, incidental to the descent, the aeroplane and balloon move too rapidly, or if there is likelihood of the landing being made in an unsafe place, the aviator has but to release the handle 13 and open the valve 10 whereupon the balloon will be inflated by gas from the tank 4 and the fall of the apparatus as a whole will be checked, and the apparatus will be maintained in the air until a safe landing place is reached whereupon by closing the valve 10 and again opening the valve 12, a safe landing may be effected.

In the preferred embodiment of my invention, all of the metallic parts of the equipment are made of aluminum.

The gage 7 complementary to the pipe 5 is to enable the aviator to avoid too great pressure in the balloon and the consequent liability of the balloon to explode.

Manifestly the valve 8 is of a character adapted to be opened the full width or size of the pipe so as to permit quick passage of the gas from the tank 3 to the balloon.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

The combination with an aeroplane, of a normally-deflated balloon connected to the top of the aeroplane at the center thereof, a tank for compressed gas connected with and pendent from the aeroplane, a conduit intermediate said tank and the interior of the balloon and extending within the balloon, a controlling valve in said conduit, a

downwardly-seating non-return valve arranged in the portion of the conduit within the balloon, an escape valve carried by the balloon, means for opening said valve connected with and pendent from the same, and an auxiliary tank for compressed gas connected through a valved conduit with and pendent from the first-named conduit.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRED J. CHIONE.

Witnesses:
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