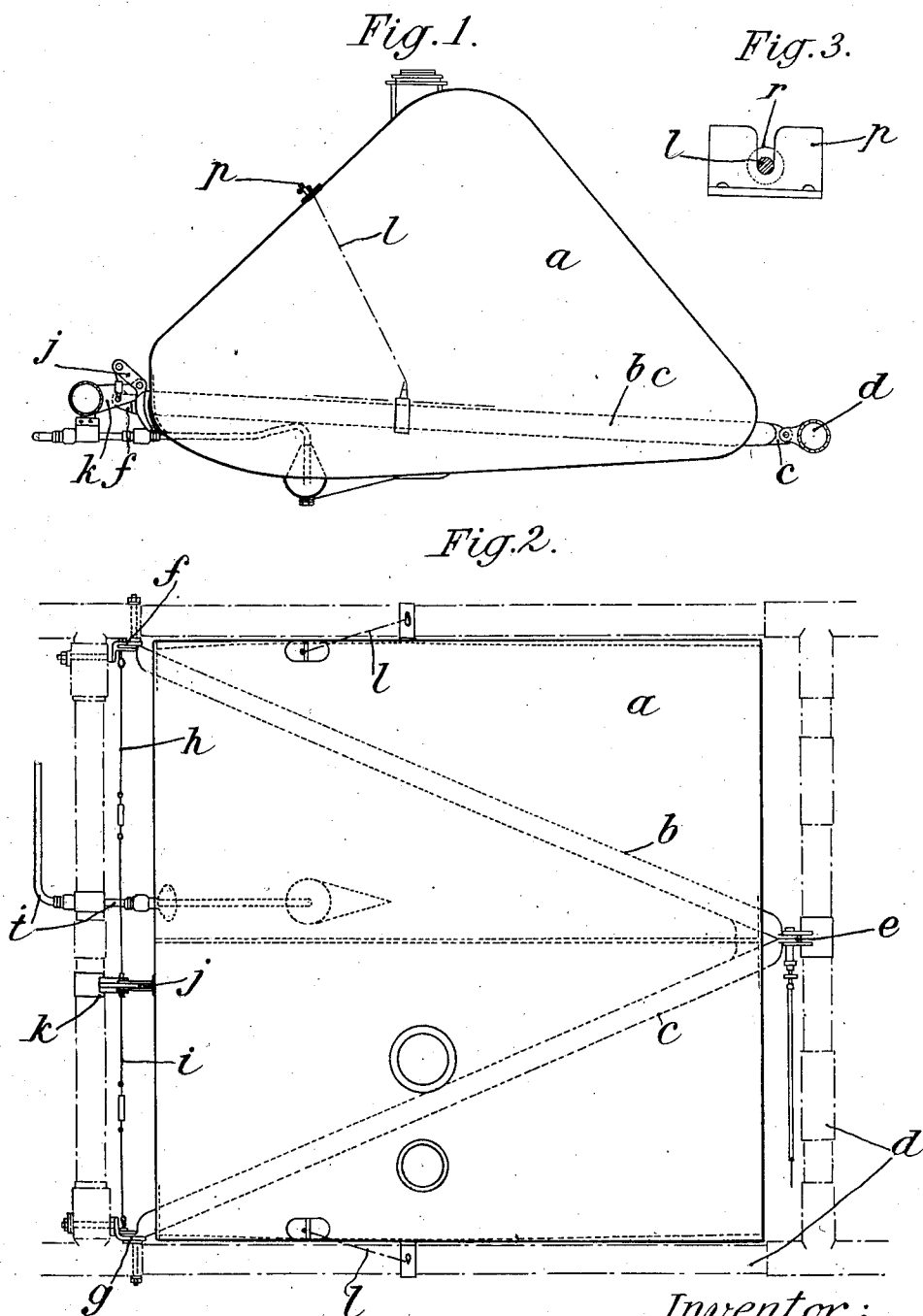


L. BREGUET.
MEANS FOR SUPPORTING AND RELEASING TANKS OR RESERVOIRS EMPLOYED IN CONNECTION
WITH AIRCRAFT.

1,322,160.

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UNITED STATES PATENT OFFICE.

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MEANS FOR SUPPORTING AND RELEASING TANKS OR RESERVOIRS EMPLOYED IN CONNECTION WITH AIRCRAFT.

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Specification of Letters Patent.

Patented Nov. 18, 1919.

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To all whom it may concern:

Be it known that I, LOUIS BREGUET, a citizen of the Republic of France, residing in Velizy, Villacoublay, Seine and Oise, France, have invented certain new and useful Improvements in Means for Supporting and Releasing Tanks or Reservoirs Employed in Connection with Aircraft, of which the following is a specification.

10 This invention has for its object to provide means by which the tanks, or reservoirs, of air-craft are efficiently supported so that they can be readily released, while the part of the aeroplane, or the like, to which the tank, or reservoir, is secured, is triangulated in an efficient manner which the presence of the tank, or reservoir, has hitherto prevented from being effected in the usual way.

20 The device, in accordance with this invention, is especially intended for use with the tanks, or reservoirs, of aircraft; such as aeroplanes, air-ships, dirigible balloons and the like, and comprises a triangular frame, made of metal bars, or tubes, of any suitable form in cross section, passing through the tank, or reservoir, and the ends and apex thereof projecting therefrom and being provided with fastenings, such as pins, or bolts, which carry the frame, and consequently the tank, or reservoir, in the part of the aircraft which supports it.

35 We will describe the invention more particularly with reference to the accompanying drawing, the invention, of course, not being limited to the precise details shown in these drawings.

Figure 1 is an elevation, and

40 Fig. 2, a plan of so much of an aeroplane as is necessary to illustrate the application of this invention thereto.

Fig. 3 is a detail, hereinafter referred to.

50 The tank, or reservoir, *a*, is traversed by the bars, or tubes, *b* and *c* forming two sides of a triangle and connected at one end to form the apex of the triangle, this apex protruding from one side of the tank, or reservoir, while the other ends of the said bars, or tubes, protrude, at *f* and *g*, from the opposite side of the tank, or reservoir.

The said bars, or tubes, *b* and *c*, and consequently the tank, or reservoir, which they carry are secured in place in the part *d*

which is to support the said tank, or reservoir, this securing being effected by means of pins; or bolts, the said bars, or tubes, furthermore insuring the rigidity, or indeformability, of the supports *d*, which is shown as being of quadrangular shape, the space inclosed by its sides being divided by the bars, or tubes, *b* and *c* into triangles.

60 The fastenings at *e*, *f* and *g* comprises pins, or bolts, the pin, or bolt, at *e* being withdrawable from a distance, by the pilot, or other person, by means, for example, of a flexible cord, or rope, inclosed in a sheath (Bowden type). The pins, or bolts, at *f* and *g* are controlled by cords, or ropes, *h* and *i* transversely disposed and connected, at their inner ends, to one of the arms of a lever *j* of the first order which can turn on its fixed fulcrum *k* when acted upon by the tank, or reservoir, and cause a pull to be exerted upon the cords, or ropes, *h*, *i*, to withdraw the pins, or bolts *f*, *g*.

75 Elastic ties *l* (preferably of the kind used in what is known as the "Sandow" apparatus) are connected at one end to the tank, or reservoir, and at the other end to the support *d* so as to tend to draw the tank, or reservoir *a*, toward the ground. The release of the tank, or reservoir, is semi-automatic being effected as follows:—

80 The operator by pulling upon the cord, or rope, connected with the pin, or bolt, at *e*, liberates the tank, or reservoir, at that side, and the tank, or reservoir, begins to rotate about the points *f*, *g*, under the influence both of gravity and of the elastic ties *l*, until the tank, or reservoir bears upon the free arm of the lever *j* which then turns upon its fulcrum and the cords, or ropes, *h* and *i* are pulled so as to withdraw the pins, or bolts, at, and release, the extremities *f* and *g* of the tubes *b*, *c* when the tank, or reservoir, is released and falls away from the aeroplane, or the like.

90 In order that the elastic ties *l* shall not impede the fall of the tank, or reservoir, it is advisable that their ends shall rigidly connect the tank, or reservoir, and support *d* only when the said ties are under tension. This result can be obtained by passing the ends of the said ties through slits in plates *p*, maintaining them in position by stops *r* (Fig. 3).

The feed-pipe *t* (Fig. 2), comprises a fragile portion, or glass connection, or other suitable device, which will be ruptured at the time of the displacement of the tank, or reservoir.

What I claim is:—

1. In connection with aircraft, a detachable tank, or reservoir, carried by a triangular frame constituted by bars, or tubes, forming two sides of a triangle, the two connected ends forming the apex of the triangle, the said apex and the other ends of the said bars, or tubes, being provided with fastenings, that at the apex being controlled by a connection by which the fastening can be withdrawn to cause the tank, or reservoir, to turn upon the points of connection of the other ends of the bars, or tubes, and effect the withdrawal of the fastenings at those two points, and the release of the tank, or reservoir; substantially as hereinbefore explained.

2. In connection with an aeroplane, a detachable tank or reservoir and means for supporting said tank on the aeroplane, said tank having connected thereto a triangular frame, and said frame having connections to said support and acting to brace said support when said frame and support are connected, said triangular frame having a connection to said support at its apex and at its side opposite said apex, means for releasing the connections at one side of said tank, and means automatically releasing said connections at the other side of the tank after the first-named connections are released.

3. In connection with an aeroplane, a detachable tank or reservoir and means for supporting said tank on the aeroplane, said tank having connected thereto a triangular frame, and said frame having connections to said support and acting to brace said support when said frame and support are con-

ected, said triangular frame having a connection to said support at its apex and at its side opposite said apex, means for releasing the connections at one side of said tank, and means automatically releasing said connections at the other side of the tank after the first-named connections are released, and means normally tending to press said tank out of said support, and acting to so press said tank when said connections are released.

4. In connection with an aeroplane, a detachable tank or reservoir and means for supporting said tank on the aeroplane, said tank having connected thereto a triangular frame, and said frame having connections to said support and acting to brace said support when said frame and support are connected, said triangular frame having a connection to said support at its apex and at its side opposite said apex, means for releasing the connections at the apex, and means automatically releasing said connections at the other side of the tank after the first-named connections are released, and means normally tending to press said tank out of said support, and acting to so press said tank when said connections are released.

5. In connection with an aeroplane, a detachable tank or reservoir, and connections for detachably supporting said tank at two sides thereof, means for releasing the connections at one side of said tank, and means automatically releasing said connections at the other side of the tank after the first-named connections are released, and means normally tending to press said tank out of said supporting connections, and acting to so press said tank when said connections are released.

In witness whereof I have hereunto signed my name.

LOUIS BREGUET.