

Oct. 20, 1925.

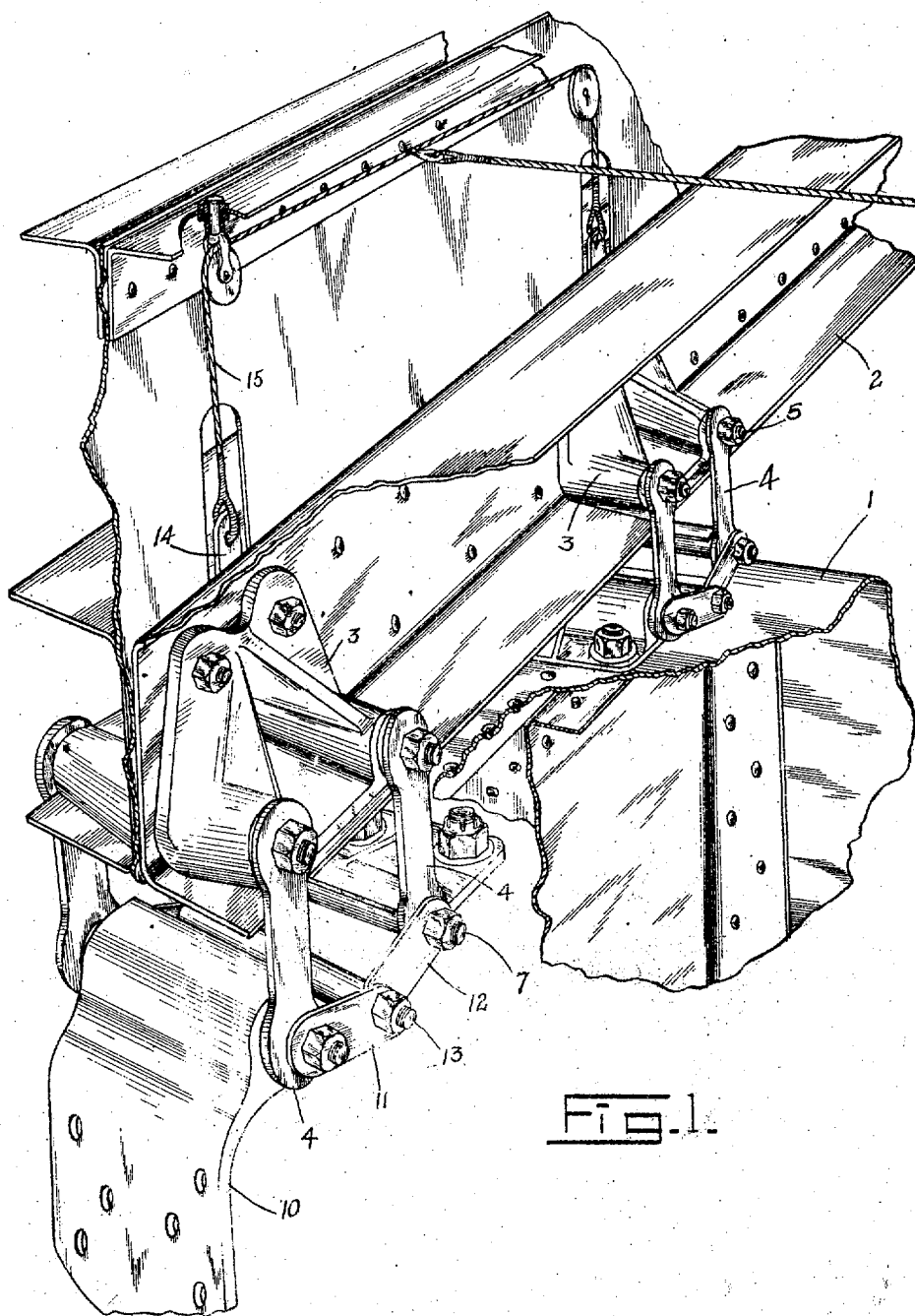
1,557,795

J. F. BOLGIANO

RELEASE DEVICE

Filed March 29, 1923

2 Sheets-Sheet 1



INVENTOR

JOHN F. BOLGIANO.

BY

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ATTORNEY

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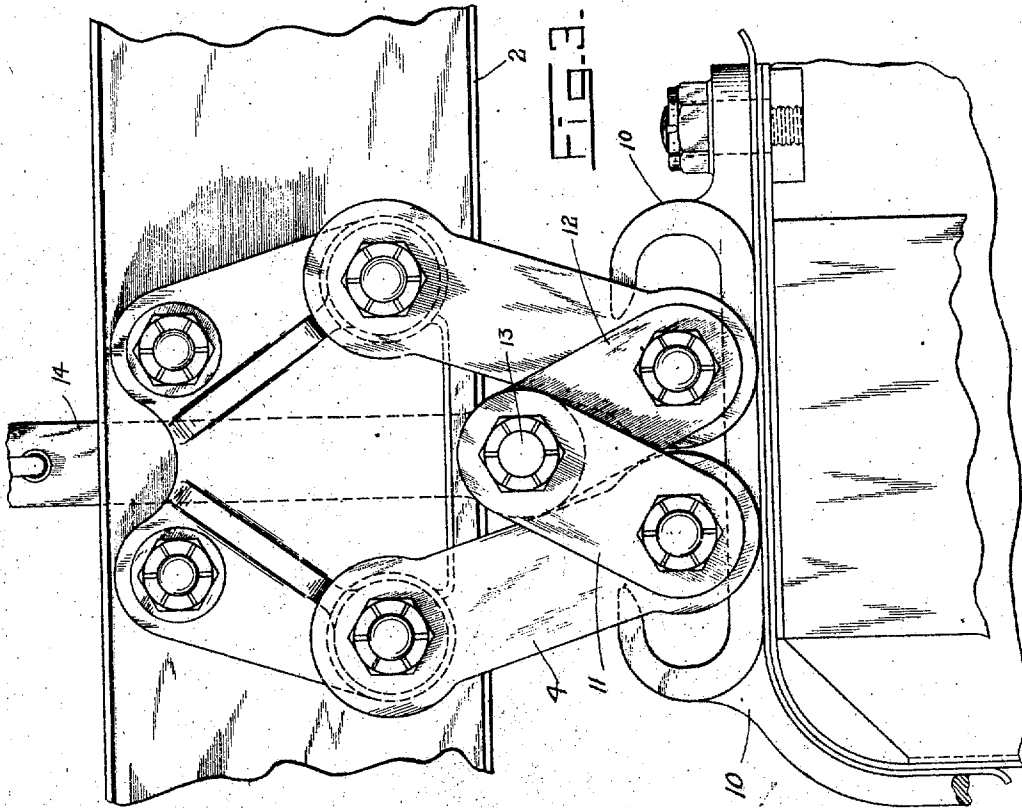
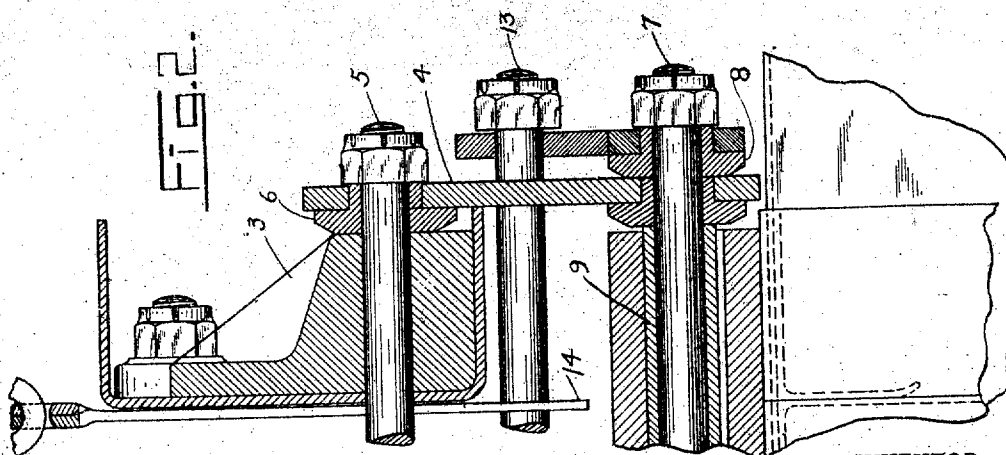
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INVENTOR

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UNITED STATES PATENT OFFICE.

JOHN F. BOLGIANO, OF DAYTON, OHIO.

RELEASE DEVICE

Application filed March 29, 1923. Serial No. 626,528.

To all whom it may concern:

Be it known that I, JOHN F. BOLGIANO, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in Release Devices, of which the following is a specification.

This invention relates to a release device particularly adapted for the release of an article from an aircraft.

The object of this invention is to provide a release device which will be positive in operation and which will be operated without the application of great force by the operator, but which will be rugged in construction and capable of securely holding the object to be released.

Further objects will be more fully set forth in the annexed specification and claim.

Referring to the drawings:

Fig. 1 is a perspective view of my device.

Fig. 2 is a vertical section of one end of the same, parts being broken away.

Fig. 3 is a side elevation of one of the releasing toggles in the released position.

The particular embodiment of my invention illustrated in the drawings shows a gas tank 1 of an airplane, suspended from a girder 2 which may form part of the rigid construction of the fuselage or wings, by means of two toggle release devices hereinafter described.

Secured to the girder 2 are brackets 3 upon the bolts 5 of which are freely supported the links 4, washers 6 being provided between the links 4 and brackets 3. The links 4 are connected in pairs as shown by bolts 7, washers 8 and spacers 9 being provided to permit the free movement of these links.

The rods 7 are interconnected to provide a toggle by means of the straps 11 and 12, and bolts 13 which tie together both sets of straps. Connected to each bolt 13 is a releasing strap 14 which operates in a slot cut in the beam 2 when pulled by the cables or other operating means 15. These cables are led over suitable pulleys and connected together for simultaneous operation from the aviator's seat.

Rigidly constructed with the gas tank 1 are four hooks 10 which extend part way over the bolts 7 when these bolts are in

their spread position as shown in Fig. 1. The greatest distance between the curved portions of the hooks 10 is slightly greater than the combined effective links of the straps 11 and 12. This is to provide sufficient space for the straps to pass through their straight line position in suspending and releasing the tank. The tank is mounted in its suspended position by moving the links and straps into the position shown in Figure 3, lifting the tank so that its hooks are in position and then spreading the toggle and moving the member 14 downwardly until the toggle is in a position shown in Figure 1. Subsequent release of the weight of the tank results in a tendency of the straps 11 and 12 to move pivotally downwardly, the members 13 being limited in their downward movement by the base of the hooks 10. In this position it will be noted that bolt 13 is below the level of bolts 7 and the weight of the tank holds the toggle in this position until positively operated by the cables 15. When the releasing strap 14 is pulled the member 13 is moved upwardly, first moving the bolts 7 outwardly almost to the limits of the dimensions of the hooks and then as the straps 11 and 12 move upwardly drawing the rod 7 out of the engagement with the hooks and releasing the tanks.

My invention is particularly adapted for the release of articles such as a gas tank or mail container from aircraft, but it is contemplated that my device may be used for the quick release of an article of any description.

I claim:

A device for releasing an article adapted to be suspended from an airplane, comprising, a plurality of rods interconnected by toggle links for supporting the article, a plurality of hook members on the article adapted to engage the rods, the weight of the article maintaining the hook members and rods in engaged relation, and a single positively actuated means for simultaneously actuating the toggle links to simultaneously cause the rods to approach each other whereby the rods are quickly released from the hook members.

In testimony whereof I affix my signature.

JOHN F. BOLGIANO.