A. FERNANDEZ.

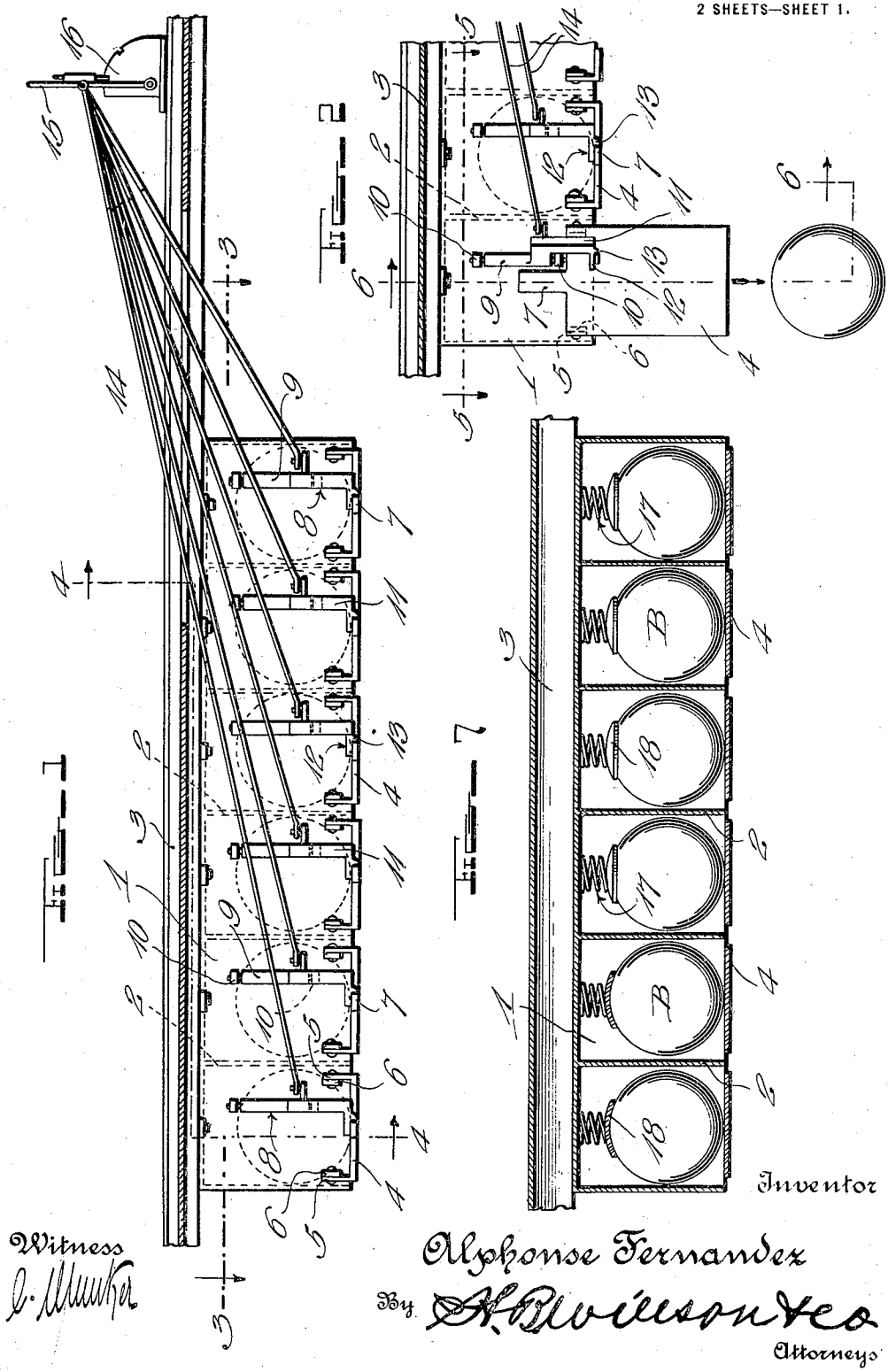
BOMB DROPPING MECHANISM.

APPLICATION FILED OCT. 14, 1916.

1,237,890.

Patented Aug. 21, 1917.

2 SHEETS—SHEET 1.



Witness

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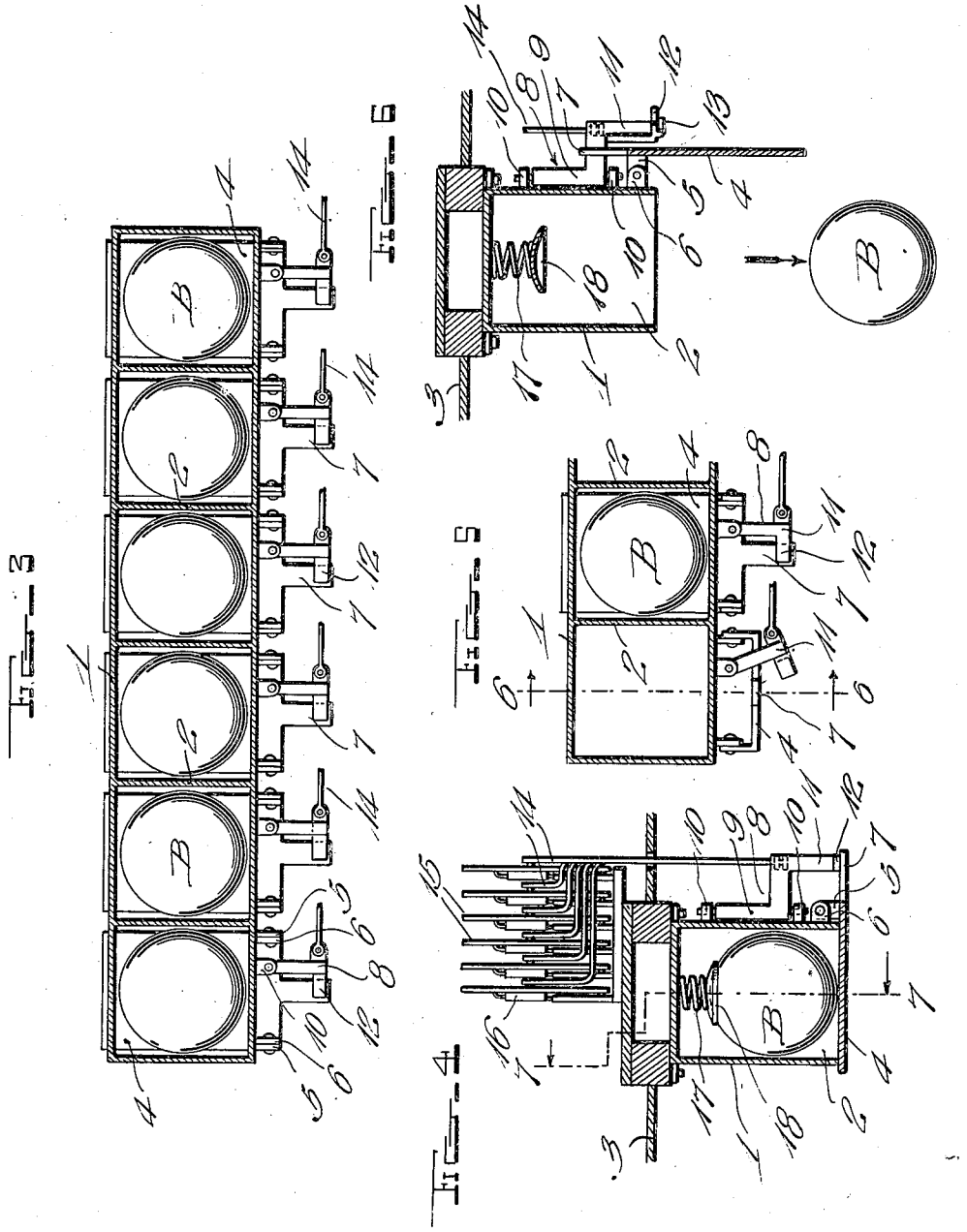
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Inventor

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UNITED STATES PATENT OFFICE.

ALPHONSE FERNANDEZ, OF WASHINGTON, DISTRICT OF COLUMBIA.

BOMB-DROPPING MECHANISM.

1,237,890. Specification of Letters Patent. Patented Aug. 21, 1917.

Application filed October 14, 1916. Serial No. 125,603.

To all whom it may concern:

Be it known that I, ALPHONSE FERNANDEZ, a subject of the King of Spain, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Bomb-Dropping Mechanisms; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide a comparatively simple yet highly efficient and positive device for dropping bombs from aeroplanes or any other types of air craft, means being employed whereby the bombs may be dropped singly, successively or a plurality simultaneously as occasion may demand.

With the foregoing general object in view the invention resides in certain novel features of construction and in unique combinations of parts to be hereinafter fully described and claimed, the descriptive matter being supplemented by the accompanying drawings which constitute a part of this application and in which:

Figure 1 is a side elevation of the improved mechanism with the releasable bottoms of all of the bomb pockets locked in closed position;

Fig. 2 is a fragmentary view similar to Fig. 1 showing one of said bottoms opened to release a bomb;

Fig. 3 is a horizontal section on the plane of the line 3—3 of Fig. 1;

Fig. 4 is a vertical transverse section on the line 4—4 of Fig. 1;

Fig. 5 is a detail horizontal section on the plane of line 5—5 of Fig. 2;

Fig. 6 is a vertical transverse section on the plane designated by the line 6—6 of Figs. 2 and 5;

Fig. 7 is a vertical longitudinal section on the line 7—7 of Fig 4.

In the drawings above briefly described, the numeral 1 has reference to a casing open at its lower side and divided into a number of bomb pockets by means of vertical partitions 2, said casing being adapted to be secured in any suitable manner to an aeroplane or other air craft, a portion of such a ship being indicated at 3 in the drawings.

Each bomb pocket is provided with a downwardly swinging bottom 4, said bottoms having upstanding ears 5 pivoted to other ears 6 which project laterally from one side of the casing 1, the hinged or pivoted ends of all of the bottoms being provided with rigid stop fingers 7 coöperating with laterally swinging locking members 8 for holding the bottoms 4 in closed position.

Each locking member 8 preferably comprises a vertical shaft 9 whose ends are reduced and rotatably mounted in bearings 10 carried by the side of the casing 1 to which the bottoms 4 are hinged, and an inverted L-shaped arm 11 joined integrally at its upper end to the lower end of said shaft 9, the lower end of said arm 11 having a horizontally extending finger 12 to overlie the finger 7, being preferably equipped with a stop 13 to limit its sliding movement over said finger.

The right-angular arms 11 of the numerous locking members 8 are connected by rods or the like 14 with a plurality of levers 15 which are normally locked against movement by suitable devices 16, it being intended that either the pilot of the ship or another person thereon shall man the levers 15 so that the bombs B in the bomb pockets may be released at will, it being understood that the weight of said bombs and the bottoms 4 will open the latter the moment the locking member 8 thereof is released as shown in Figs. 2, 5 and 6. By the arrangement of parts described, the bombs may be released one at a time, successively, or a number thereof may be dropped simultaneously as the operator may deem most expedient.

Preferably employed in connection with the features above described are cushioning springs 17 secured to the tops of the numerous bomb pockets, said springs carrying caps 18 on their lower ends which fit over the bombs as shown clearly in Figs. 4 and 7 to prevent them from jarring from vibration of the ship. The springs 17 also facilitate projection of the bombs when the bottoms are released as will be clear from Fig. 6.

The use of devices such as that above described is well known and need not be here described in detail but in conclusion I will state that although certain specific details of construction have been shown and described for illustrative purposes, numerous changes

may be made within the scope of the invention as claimed, without sacrificing the principal advantages.

I claim:

1. A bomb dropping device comprising a pocket open at its bottom, a downwardly swinging bottom for said pocket having a rigid locking finger at its hinged end, a vertical shaft mounted rockably on the exterior of the pocket above the hinged edge of the bottom, an arm joined at its upper end to the lower end of said shaft, and a stop finger projecting laterally from the lower end of said arm and normally overlying the aforesaid finger to hold the bottom in closed position.

2. A bomb dropping device comprising a pocket open at its bottom, a downwardly swinging bottom for said pocket having a rigid locking finger at its hinged end, a vertical shaft mounted rockably on the exterior of the pocket above the hinged edge of the bottom, an arm joined at its upper end to the lower end of said shaft, and a stop finger projecting laterally from the lower end of said arm and normally overlying the aforesaid finger to hold the bottom in closed position, said stop finger having formed thereon a stop to abut the aforesaid finger to limit the movement of the former in one direction.

3. A bomb dropping device comprising a casing, a downwardly swinging closure forming the bottom of said casing and hinged at one edge thereto, the hinged edge of said closure having a rigid horizontally extending finger, a horizontally swinging locking member mounted on one side of the casing and normally overlying said finger to prevent downward movement of the bottom, a rigid rod pivoted to said locking member for holding the same in operative position and releasing it when required, said rod extending to a remote point, and means at said point for normally holding said rod against movement and for shifting it when required.

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

ALPHONSE FERNANDEZ.

Witnesses:

J. A. GRIESBAUER,

T. A. NOONE.