

Title (en)  
AN AUTOMATIC SYSTEM TO SEPARATE, AND, THRUST THE PLANE'S BLACK BOX AWAY FROM THE FUSELAGE IN CASE OF DROWNING

Title (de)  
AUTOMATISCHES SYSTEM ZUM TRENNEN UND SCHIEBEN DER BLACKBOX EINES FLUGZEUGS WEG VOM RUMPF IM FALLE EINES UNTERGANGS

Title (fr)  
SYSTÈME AUTOMATIQUE POUR SÉPARER ET EXPULSER LA BOÎTE NOIRE DE L'AVION LOIN DU FUSELAGE EN CAS DE NOYADE

Publication  
**EP 3515824 A1 20190731 (EN)**

Application  
**EP 16834059 A 20161128**

Priority  
• TN 2016000345 A 20160829  
• TN 2016000005 W 20161128

Abstract (en)  
[origin: WO2018044243A1] This invention is system designed in particular to separate the plane's black box (data recording box) in case of being exposed to an accident that causes its drowning in the sea, ocean, or, elsewhere waters, yet in a following step to the accident the system would separate, and, thrust the black box away from the fuselage by the use of a motive charge (similar to those used in warplanes to thrust the pilot in case of being shot down), thus the invention would carry out the last step by blowing air, or, a gas into a fixed balloon to inflate it to help floating, and, buoying the black box facilitate being identified, and, located, and, thus being caught, so this invention is composed of the following summarized, and, described systems: 1st. System: Which is a electromechanical one, responsible for Sensing the plane's drowning, along with its black box, then it Separates the black box from the fuselage through releasing, or, unlocking the mechanical fixtures with the fuselage, where we have indicated in the detailed explanation that, yet this system is called ( System A1 ). 2nd, System: Which is responsible for thrusting the black box away from the fuselage by the use of electro-motivated charge, after separation of the black box from the fuselage. Yet this system is called ( System A2 ). 3rd, System: Which is responsible for filling a rubber balloon, attached to the black box to help it float, and, buoy near water surface, or, close to it, to facilitate locating, identifying, and, catching it, whereas thrusting the box away from the fuselage causes the separation of the electric cable, or, socket responsible for feeding the box with both data, and, electricity from the plane, so such separation results in starting the work of filling the balloon system with air, or, gas to elevate the box close to the sea level, yet this system is called (System B ). Such invention could be used in all types of planes including warplanes, and, as well it may cause the discarding of the old types of black boxes, which are still in use, or, could be left as they are, and, connected in parallel with the new ones, which will record all the same data, recorded by the old ones at the same time, whereas it's preferred to fix the new one under the plane's belly bellow the tail piece, and, becomes a part of the outer fuselage, to facilitate separation, and, elevation of it up to the sea level, or, close to it, case of an accident.

IPC 8 full level  
**B64D 45/00** (2006.01); **B64D 1/02** (2006.01)

CPC (source: EP)  
**B64D 1/02** (2013.01); **B64D 45/00** (2013.01); **B64D 2045/0065** (2013.01)

Citation (search report)  
See references of WO 2018044243A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**WO 2018044243 A1 20180308; WO 2018044243 A8 20180607; EP 3515824 A1 20190731**

DOCDB simple family (application)  
**TN 2016000005 W 20161128; EP 16834059 A 20161128**