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## Patent Approval for GRS Whole-Plane Rescue Systems

*North Little Rock Municipal Airport (KORK)* May 31, 2012: SportairUSA, LC, the American distributor of rocket-assisted GRS airframe rescue systems manufactured by Galaxy High Technology, announced the award of a U.S. patent for the unique deployment system incorporated in GRS parachute devices.

“Galaxy builds the world’s fastest deploying whole-plane parachute in either high-speed or low-speed events,” said Bill Canino, President of SportairUSA. “The GRS system for light sport aircraft opens in less than 5 seconds, at maximum speed or at stall speed, enabling deployment as low as 270’ AGL.”

Canino noted that GRS rescue systems are standard equipment in the TL-2000 Sting and TL-3000 Sirius aircraft distributed by SportairUSA, and optionally available in the Savage line of iCub, Cub, Cruiser and Classic.

U.S. patent #7 997 535 B2 obtained by GRS applies to the canopy, fitted with pole opening and inside air discharge chutes, and the slider installed on the suspension parachute cords. This system enables reliable deployment and minimizes opening shock to the aircraft and suspension.

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GRS rescue systems are rocket-powered rather than ballistic. Rocket power is smooth and continuous, while ballistic systems depend on an initial bang to fire the chute and un-powered momentum to carry it clear of the aircraft. The GRS system instead powers the unpacked chute to the end of its tether and continues under power to draw the chute from its soft pack, providing reliable deployment and rapid clearance from the aircraft and any debris field.

The rocket assembly then departs the main chute and continues on its way, deploying its own smaller chute to carry it safely to the ground.

A 9-year repack life is made possible by the method of packing the main chute. Very high packing pressure used in some competitive products, up to 20,000 psi, can result in fusion of the chute material, with friction-stripping and burning when the chute is deployed. GRS chutes are packed at 2,000 psi, enabling a much longer repack life. A new rocket is included in the 9-year repack.

SportairUSA also markets and distributes several sport aircraft, the TL-2000 Sting and the TL-3000 Sirius by TL-Ultralight, the Savage Cub, iCub and Bobber by Zlin Aviation, the SeaRey amphibian by Progressive Aerodyne and the Snap! sport aerobat from Dallair USA. The company is located at the North Little Rock, Arkansas, Municipal Airport (KORK). Web site: [sportair.aero](http://sportair.aero)

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### **About SportairUSA**

Based in central Arkansas, SportairUSA, LC, is an FAA certificated, CFR Part 145 Avionics Repair Station. The company also manufactures and distributes the ForeSight® EVS, and is the North American distributor for Sting and Sirius aircraft from TL-Ultralight, the Savage Cub, iCub & Bobber from Zlin Aviation, the Snap! from Dallair USA, DUC propellers and Woodcomp propellers. For more information visit [www.sportair.aero](http://www.sportair.aero).

### **About Galaxy High Technology**

Galaxy High Technology, s.r.o., is the world's second largest producer of aircraft rescue systems. The new 6<sup>th</sup> generation of GRS, with the recent U.S. canopy patent, combines the original, reliable rocket powered deployment systems with the newest generation of quick opening parachutes, enabling rescue of crew and aircraft in extreme situations.

Galaxy has built whole-plane rescue systems in the Czech Republic since 1984, and is a principal supplier to builders of experimental, light-sport and certificated aircraft. For more information, visit the Web site at [www.galaxysky.cz/?lng=en](http://www.galaxysky.cz/?lng=en).

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(12) **United States Patent**  
**Babovka**

(10) **Patent No.:** **US 7,997,535 B2**  
(45) **Date of Patent:** **Aug. 16, 2011**

(54) **LIFE PARACHUTE ESPECIALLY FOR  
ULTRA-LIGHTWEIGHT AIRCRAFTS**

(76) **Inventor:** **Milan Babovka, Liberec (CZ)**

(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 797 days.

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**B64D 17/62** (2006.01)

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(58) **Field of Classification Search** ..... 244/142,  
244/145, 138 A, 152, 149  
See application file for complete search history.

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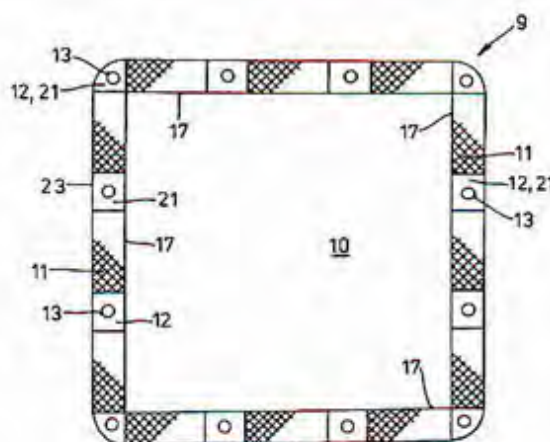
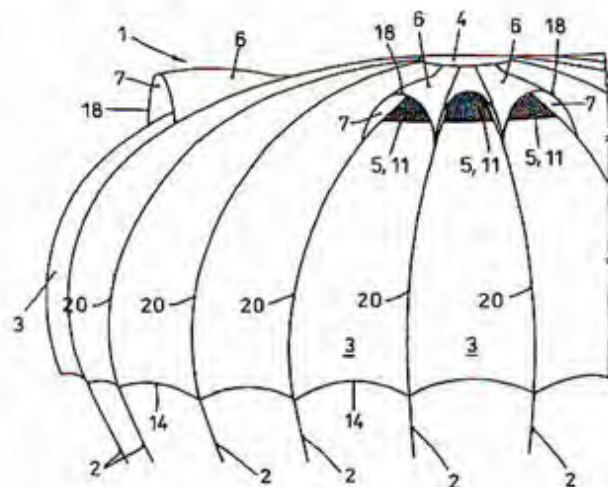
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#### (57) **ABSTRACT**

A life parachute for ultra-lightweight aircrafts or for lightweight aircrafts includes a canopy of the parachute fitted with a pole opening and at least some wedge-shaped section of the canopy at the top half of its height is fitted with a discharge valve of air from the inside space of the canopy and a slider is installed at suspension parachute cords. The slider is formed in a ring fitted with a central opening surrounded with netting having, at least in peripheral edges, a local stiffener. Through openings are formed for the suspension parachute cords. The discharge valves are in the width of the single wedge-shaped sections, overlapped with parachute material, with a bottom open end. The discharge valves of the air are formed either with loose vents or at the open end of the parachute material. The slider is, advantageously, in the form of a regular polygon composed of single tetrahedral parts of the netting which are connected to one another through the local stiffeners. The through openings are for the suspension parachute cords.

**8 Claims, 9 Drawing Sheets**



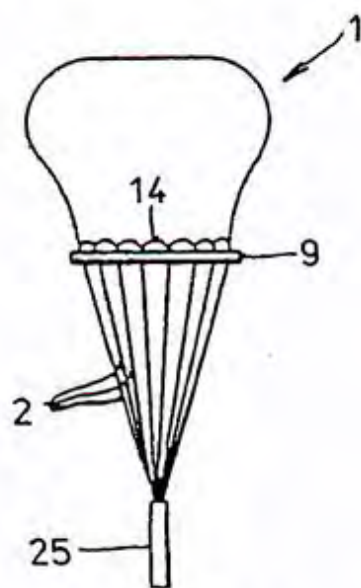


FIG. 8

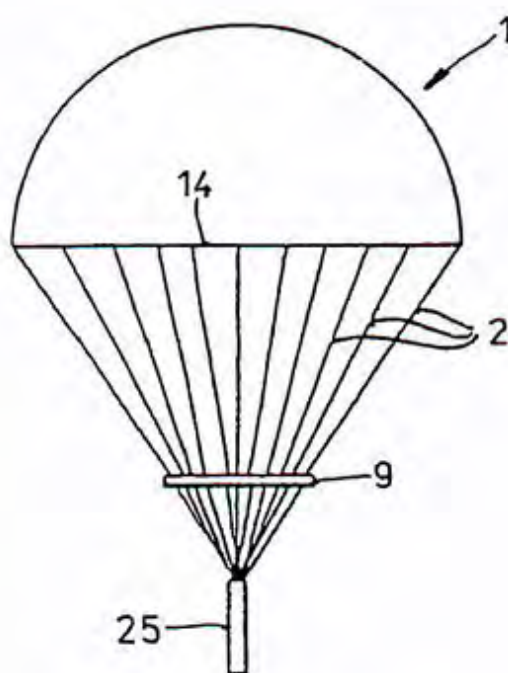


FIG. 9