



US005660135A

United States Patent [19]

[11] Patent Number: 5,660,135

Gomes, Jr. et al.

[45] Date of Patent: Aug. 26, 1997

[54] UNDERWATER APPARATUS RELEASE MECHANISM

4,252,467 2/1981 Amrhein 114/322
4,300,254 11/1981 Prior 114/331

[75] Inventors: Walter J. Gomes, Jr. Little Compton; Thomas D. Barron. Portsmouth, both of R.I.

Primary Examiner—Stephen Avila
Attorney, Agent, or Firm—Michael J. McGowan; James M. Kasischke; Prithvi C. Lall

[73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.

[57] ABSTRACT

An underwater apparatus release mechanism disposed on an unmanned underwater vehicle. A launcher body is joined to the underwater vehicle with a fixed release guide thereon. A shroud is positioned over the front of the underwater apparatus which is disposed on the fixed release guide. A holddown strap is fastened about the shroud, underwater apparatus, and fixed release guide assembly and releasably joined to the launcher body by to release pins. The release pins are joined to a sliding plunger. The plunger is in turn connected to a solenoid which can cause movement of the plunger to release the holddown strap. Hydrodynamic forces cause the shroud and underwater apparatus to slide along the fixed release guide until they are free of the underwater vehicle.

[21] Appl. No.: 759,358

[22] Filed: Nov. 18, 1996

[51] Int. Cl.⁶ B63G 8/00

[52] U.S. Cl. 114/312; 114/322

[58] Field of Search 114/312, 313, 114/321, 322, 330, 331, 333, 337, 338

[56] References Cited

U.S. PATENT DOCUMENTS

3,702,597 11/1972 Odum et al. 114/322
3,724,410 4/1973 Lok 114/322

4 Claims, 3 Drawing Sheets

