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- [54] WATER-ARMED/AIR-SAFED RELEASE APPARATUS
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[57] ABSTRACT

An improved release apparatus, including an actuator device, a release device and a firing device, releases the firing device in a water environment and not in an air environment when the actuator device is remotely actuated. When in a water environment, a predetermined gas pressure from the actuator device drives forward a pusher piston and valve sleeve arrangement, disposed in a water chamber of the release device, initially to close off lower entry/exit orifices in the water chamber by action of the valve sleeve, and then to compress an entrapped column of water to a predetermined water pressure sufficiently to cause shearing off of an annular lip of a ball lock piston thereby separating the firing device from the release device. When in an air environment, the pressure from a compressed entrapped air column is not sufficient to cause shearing off or folding down of the annular lip of the ball lock piston, and, accordingly, the release apparatus is safed.

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9 Claims, 2 Drawing Figures

