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(54) **SELF-DEPLOYING RUDDER FOR HIGH SPEED MANEUVERABILITY OF JET-POWERED WATERCRAFT**

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(57) **ABSTRACT**

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 22 days.

A rudder assembly is attached to the nozzle of a jet-powered watercraft by a spring-loaded pivot so as to turn with the nozzle when the craft is steered. The rudder assembly has two flat plate rudders with a baffle plate attached perpendicularly between the rudders. The baffle plate partially covers the nozzle when the watercraft is at rest and is held in position by the spring-loaded pivot. At slow speeds the rudders are parallel to the water jet flow from the nozzle to aid in steering the watercraft. At higher speeds, the force of the water jet against the baffle plate overcomes the spring force to pivot the rudder assembly up and away from the nozzle such that steering is provided by directing the nozzle. In an imminent high-speed collision situation, the panic reaction is to shut off the throttle, which abruptly ends the jet flow from the nozzle. The spring-loaded pivot forces the baffle plate back over the nozzle and the rudders are again positioned parallel with the nozzle to provide steering without any flow from the nozzle.

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(58) Field of Search 114/162; 440/38,
440/40, 41, 42, 43

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5 Claims, 2 Drawing Sheets

