

NOW TRAVEL UNDERWATER IN STYLE

Ever since Jacques Cousteau invented the Aqualung, forerunner to SCUBA (self-contained underwater breathing apparatus) equipment, in 1943 we have continually widened our knowledge of life beneath the waves.

Although scuba equipment allowed divers to move through the water with comparative ease, it still requires, even with the most efficient flippers, some considerable expenditure of human energy. Now one can travel underwater in fashion, propelled by a Hydrojet drive unit that utilizes the *pressure* of the air in the scuba tanks while still allowing the diver to use the air!

This air-powered driving mechanism mounts on the conventional air tank and uses the air pressure to drive a small 9 1/2" propeller. The air then routed through the mouthpiece (via a rebreathing accessory pack supplied by the Hydrojet manufacturer) is still pure for breathing.

The story behind this invention is in the classical mode of the independant inventor. The Hydrojet was created by Bob Hyde, a 78-year old youngster who kept watching every day as hundreds of people visited a scuba dive shop next door to his own operation just to get their tanks refilled. Hyde felt there must be a better way. He looked beyond what he was seeing, found that invisible connection and turned it to an advantage. Incidentally, this is not his first invention: While speaking to him earlier this week, I learned that this is just one of his 70 inventions, 64 of which were, or are, in major production. They cover 21 different fields.

But back to the unit itself. With the Hydrojet doing most of the work, the swimmer expends less energy and consumes less air, about two-thirds less. So more air is available for the propulsion unit. Unlike other underwater power systems, most of which

operate on expensive and heavy batteries with still heavier electric motors, this one weighs but four pounds in air and is slightly buoyant when under water! Nearly all materials are of high technology plastic, self-lubricating, nearly unbreakable and require little maintenance and no charging -- the air is already in the scuba tank. All parts that come in contact with air are made of hospital-approved plastic materials and since no lubricants are used there is no contamination as in other types of motors.

Even breathing is easier since the air is being fed continuously to the mouthpiece under a slight pressure so no diver suction is required to operate the breathing air valve. To turn one merely points a hand in the desired direction. To descend one arches back. With both hands free a diver can handle cameras or other gear. One can even "fly" doing loops, rolls and other acrobatic maneuvers under water. No wonder the Hydrojet won a Consumer Award prize from the International Society of Plastic Engineers.

The Hydrojet can operate in depths up to 100 feet. At 90 feet it can operate at normal swimming speed for 40 minutes, about half that time at top speed (about double normal swimming speed) with 500 lbs. of pressure remaining for ascent.

And Bob Hyde is still creating, his most recent inventions include an "Auto-Buoyancy Compensator (ABC) that adjusts for body weight when descending or ascending with traditional scuba gear, and a "Snorkel Buddy", a surfboard-like device that allows a non-swimmer to ride safely with his mask and snorkel underwater but holds his body above. It can also have a Hydrojet attached to the bottom of the board, with a pistol-grip throttle to control speed. It can also serve as a life-saving device and is just great as a means of travelling in water against currents or along a reef.

Now even the lazy can play with King Neptune.

Hydrojet cost: US\$295 for standard unit, US\$325 for Super 2, deluxe model. Both prices include the rebreathing accessory pack.

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