

Patents Take Time, Money, But Protect Inventor's Idea

BY SUSAN USHER

Obtaining a patent can be a time-consuming and costly process, but for the man who believes in the uniqueness of his invention, it can be worth the effort.

Necessity may be the mother of invention, but it provides no protection for the inventor, as does a patent.

Patenting refers to the granting to the inventor of useful product or process the privilege to exclude others from making his invention. In the U.S. any process or device may be patented if it is novel and useful and if plans and a working model are supplied. American patents are valid 17 years, a period intended to give the inventor time to make a profit, yet not permanently deprive others of the free use of the invention.

Two Brunswick County inventors, Roger Morton of Holden Beach and William R. Reinhold of Southport recently obtained patents after from two to 10 years of effort.

Morton has been making his collapsible trap for marine animals for two years at Morton Trap Company on Sand Dune Lane near Holden Beach and marketing

them in the U.S. and abroad. On Sept. 3 he finally received U.S. Patent No. 4,538,376.

"They're just catching on locally," Morton said of his traps, though they've sold well at exhibitions elsewhere. Meanwhile he continues to look at potential new and expanded markets for his traps—for deep water shrimping, the Canadian fishing industry, the East Coast crabbing industry and the South and Central American shrimping industry, which has captured nearly 100 percent of the American commercial market, he said.

If that trend continues, he said, he may have to concentrate more of his own marketing efforts on South and Central America.

Depending upon how the mouth is modified the versatile trap can be used to catch shrimp, crabs and lobster.

This isn't his first patent and may not be his last. In December 1979, Morton received his first patent, for a collapsible fish trap, after a similar amount of effort. He is now working on a crab trap, but said he thinks that design variation is covered under his first patent.

On March 26, William R. Reinhold of Southport obtained U.S. Patent, No. 4,506,637, for an idea he conceived in February 1975 and has yet to market—the "Rotorque" rotary internal combustion engine.

The engine uses two opposed rotors in place of pistons. Combustion takes place with alternating charges: the others are air charges.

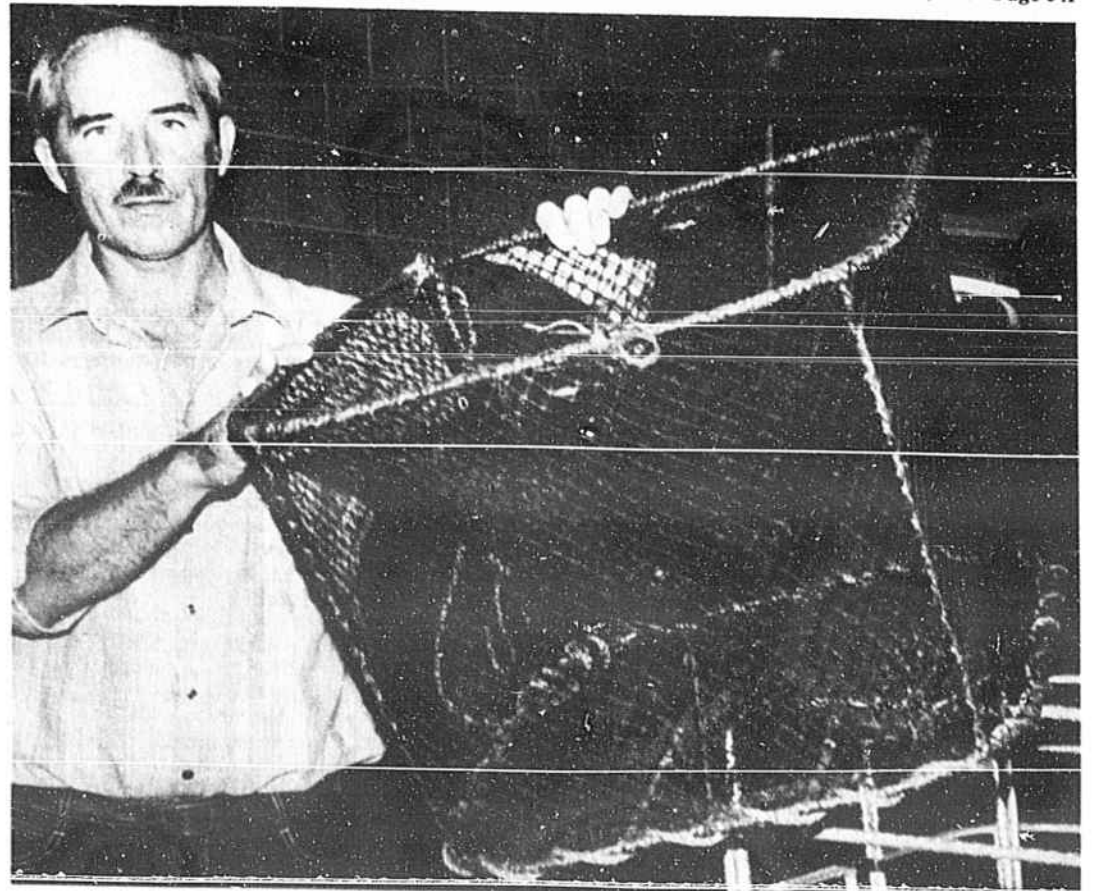
"It has a sling shot effect that means the power flow is trying to expand outward," he explained. "This will aid in PCV and American emission standards."

While it may be his first patent, the engine is not the mechanically-inclined Reinhold's first invention. Since his childhood in Portsmouth, Va., the military veteran has come up with a slide rule for addition and subtraction and a variation on a standard fish head leader.

In the 1970s he and investors Frank Langner of Boiling Spring Lakes and the late Malcolm McHose of Southport formed Rotorque Associates to finance the patenting process and to seek additional backing for the Rotorque engine.

Reinhold says his engine will idle at 1,500 revolutions per minute and turns up to 15,000 revolutions per minute. It is a smooth-running engine, as are most rotary engines, he said, and increases horsepower with increased revolutions per minute. It has less weight per horsepower than most engines, he said. An engine weighing less than 100 pounds would be sufficient to power a full-size car.

Reinhold said Rotorque also is a very low-friction engine, therefore both fuel-efficient and more durable than most engines. He predicted a longevity of 100,000 miles. Rotorque is well balanced and more symmetrical



ROGER MORTON'S latest invention is a nesting trap that can be adjusted to collect marine animals of different sizes.



WILLIAM REINHOLD'S next step is finding money to machine a working metal model of his Rotorque rotary engine. Here he displays a wooden prototype.

and has less vibration than most other rotary engines.

It would run on a variety of fuels, he predicted, from steam to low octane gas to even kerosene or white gasoline.

"The family lawn mower will cut the whole lawn with a cup of gas," he said. "At 15,000 revolutions per minute, a vehicle will cruise 180 mph."

"This engine will be like the sewing machine to the early garment business of the 1850s," he predicted.

But Reinhold, an unemployed machinist, has only a wooden prototype to show potential believers; a situation he hopes to rectify by attracting the \$45,000 to \$50,000 in capital needed to develop a working metal prototype.

"I can't think of any reason it won't go, but I still have to build a prototype," he said.

Morton's marine animal trap, like the fish trap before it, is lightweight, easy to manufacture and repair. It is nestable and can be carried in relatively large numbers on a small boat. It's suitable for use in large- and small-scale trapping operations.

The trap has numerous advantages over drag nets and other types of traps, Morton said.

It can be used in deep water and in areas where the sea floor is uneven or rocky—a hazard to traditional drag nets.

The traps have mouths that can be adjusted to allow selective trapping—long and narrow for shrimp, for instance. This eliminates most on-board sorting and provides a higher quality of seafood for market.

A funnel-shaped top working with the sides and bottom of the net-covered frame prevents most marine animals from leaving the trap. Optional opaque panels encourage shrimp to stay near the bottom of the trap in the dark and flexible strands around the mouth can discourage escape also.

But by simply releasing the cables that hold the mouth in place, the trap can be inverted for fast emptying and rebaiting.

While more expensive than traditional traps, Morton said, it also outfishes and outlasts them.

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