

# Inventor's bug repellent mitt proves to be a neat idea

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**NORTH ANDOVER** — Any parent who has struggled to apply mosquito repellent to a wiggling child can appreciate the inspiration behind George Peters's Mosquito Mitt.

Peters first dreamed up his oversized mitt-within-a-mitt bug repellent applicator five years ago while on a family camping trip in New Hampshire.

But thinking up the invention, now available for sale in hardware and sporting goods stores nationwide, was the easy part, said Peters, who is facilities manager at the Merrimack Valley YMCA.

As an independent inventor, Peters discovered his bigger hurdle would be convincing the US Patent Office that his invention was unique. Moving from concept to market took immeasurable amounts of persistence, he said, not to mention a \$10,000 investment in legal fees and other development costs.

"The more I got into this business of inventing, the more I realized getting a patent is all-important because it really opens a lot of doors to get a product like this in a consumer's hands," he said. "It qualified me for discounts with manufacturers, and distributors take you a lot more seriously. But getting it was slow and frustrating at times."

Peters got the idea for the Mosquito Mitt after he watched a mother inadvertently spray a full slug of mosquito repellent directly into her small child's eyes because



GLOBE STAFF PHOTOS/PAT GREENHOUSE

**George Peters demonstrates his Mosquito Mitt, a bug repellent applicator he dreamed up on a camping trip.**

the child moved her hands from her eyes too soon, he recalled.

"How many times had I almost done the same thing to my kids?" he said. "That got me thinking the proverbial 'There's got to be a better way.'"

Peters asked his mother to sew a prototype for his glove applicator. Dorothy Peters came up with a fuzzy mitt, which she sewed into a conventional plastic zip-lock bag so that the bag could be rolled back to expose the mitt. She then covered the plastic bag with lightweight denim to prevent it from tearing.

"What makes the Mosquito Mitt unique is that the glove you use to apply the mosquito repellent is sealed inside its own zip-lock bag," said Peters, demonstrating his invention. "My first thought was that if you could spray the repellent on a glove and

then apply it, you could control where you want it to go. You don't get the stickiness and smell of the repellent on your hands, but you can control exactly where you apply it. Once you're done, you pull the glove back into its own bag and seal it for next time."

Model in hand, Peters began searching for a manufacturer.

"Valley Forge Sports in Broomall, Pa., makes a line of golf gloves, so I contacted them to see if they were interested in my product idea," Peters said.

Indeed owner Richard Greene liked it enough to put Peters in touch with the folks at Hefty, a supplier of zip-lock closure bags headquartered in Lake Forest, Ill.

"We saw the prototype and immediately suggested replacing the plastic baggie with a new fabric we had just gotten from Millikin, a South Carolina textile manufac-

turer," said Larry Robodus, the head of Hefty's consumer brand division. "This fabric is the plastic bag and denim cover in one and includes our Slide-Rite closure."

Peters now had a viable consumer product he could present to a patent examiner for consideration. He sent in his initial application and a \$750 check in June of 1999 and waited.

Two rejections later, the patent office finally rewarded Peters for his creativity, issuing him US Patent No. 6,539,549B1 this past April. This certification ensures that Peters is the only person who can profit directly from his invention for the next 20 years, according to Brigid Quinn, a patent office spokeswoman.

Quinn explained in a telephone interview from her Washington office that the patent process is rigorous because the government has an obligation to ensure every invention it certifies is indeed unique in the world.

"Even though the patent protection only applies within the United States, our examiners must search the scientific and technical literature worldwide," she said.

The patent office receives about 350,000 applications a year, and just over half, or 180,000, receive certification, Quinn said. The vast majority, 75 to 80 percent, go to professional inventors, engaged by a major corporate research and development department, Quinn noted.

"The process of getting a patent takes on average about two years," Quinn said. "Our examiners have four broad criteria they use to measure each application: Is it new, is it unique, does it have a practical use, and has it been fully disclosed in writing?"

While an attorney isn't required, Quinn said the office recommends that independent inventors like Peters hire an agent since patent law is complex.

And that can get expensive, said Kevin Klughart, the Texas at-

torney who represented Peters during the patent examination process.

"I'm really happy for George because he stayed with his idea when it looked like it was more than dead," said Klughart, referring to Peters's two rejection letters. "He has the tenacity of a moray eel and had faith enough in his invention to invest the money it took to see the process through."

Since the Mosquito Mitt hit store shelves in June, Peters has sold 1,200.

Peters doesn't expect his invention to be a runaway best seller,

but he anticipates that it will eventually catch on, particularly among parents and those who enjoy the outdoors. He has already received inquiries from distributors of medical and pet supplies about modifying the mitt for other uses.

"The way I figure it is that once people see how it works, it will sell," he said. "It is sort of like an umbrella. You don't need it all the time, but when you do, it is a very useful thing."

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**During development, the mitt went through a number of design changes, from the earliest (left) plastic bag model to the "golden sample" (right) now in stores.**