



## Handy clamp

No Bunsen burners poured out black smoke. No glass beakers frothed over with mysterious liquids. No wild-haired scientist with burning eyes laughed crazily to himself.

Instead, there was a boat in the backyard, tools on the ground and a freelance artist building a small boat when the problem occurred and the idea was born.

The problem was that Joe Sorensen needed a third hand.

In one hand, he held the pieces of wood he had glued. With his other hand, he reached for a clamp to hold the pieces in place while the glue dried. With his third hand, he would tighten the large screw on the clamp.

But Sorensen had no third hand. Instead of becoming frustrated and angry, he looked at the situation as a problem to be solved and thought a clamp that could be held and tightened with one hand would be a convenient solution.

Sorensen said he went to see Dwight Gatzemeyer, a friend from high school and a machinist for 17 years, about his idea. Gatzemeyer, a tool-and-die maker, owns Custom Machine & Design Inc. in Lincoln.

"Joe's suggestion came out of the blue," Gatzemeyer said. "But as soon as he mentioned it, I thought of the mechanics of it, how it could be made."

Working together over the next six months, he and Sorensen developed a pistol-shaped bar clamp that could be operated with one hand, Gatzemeyer said.

When the two began work on the clamp, they were looking for a design that would function like a C-clamp.

"We were more concerned with the function than the design. We were originally not concerned whether it was a C-clamp or not, but how to make something that was easy to operate one-handed," Gatzemeyer said.

"As time went by, the design got changed into a pistol shape."

The rearrangement of familiar bar-clamp components resulted in the overall pistol shape of the new clamp, he said.

The final design of what is now the Quick-Grip bar clamp consists of a pistol-grip handle attached to a metal bar. Two arms, controlled by the handle, move along the bar to clamp onto the item to be held.

The clamp user squeezes the handle, bringing the two jaws of the clamp together to hold the items to be clamped in place.

A mechanism, or tab, in the handle prevents slippage as the arms advance to tighten, Gatzemeyer said. Another small metal tab, located in front of the handle, releases the clamp's grip.

"The clamp bar and the advancing and locking tab mechanism are new," Gatzemeyer says. "What sets it aside from the other bar-type clamps, or clamps in general, is that it's one-handed operable."

One of the hardest tasks in developing the prototype clamp for its inventors was finding time between their regular full-time jobs to work on it, Gatzemeyer said. Lack of time was the reason it took the two men about six months to complete the prototype.

When it was completed, they discovered they didn't have to perform much testing.

"It surprised me at first that it worked as well as it did," Gatzemeyer said.

So, in the summer of 1987, an artist and a machinist in their late 30s became inventors. But to become successful inventors, Sorensen and Gatzemeyer still had to sell their invention.

Gatzemeyer said he and Sorensen decided not to manufacture the clamp themselves because they both had full-time careers and no marketing experience or potential customer base.

They realized that a company which made other hand tools would be the logical place to take their invention.

Sorensen said they wanted to offer the clamp to a Nebraska company rather than to a company headquartered in another state because of the travel expenses. They also knew that the company that makes Vise-Grip tools is located in Nebraska.

So, Sorensen and Gatzemeyer brought their invention to American Tool Company in DeWitt, about 40 miles southwest of Lincoln.

"They had the (customer) base and expertise" to market the invention and to obtain patents, which can cost more than \$1,000, Gatzemeyer said.

When the two inventors approached American Tool in July 1987, Sorensen said, the company was "very interested."

"The new clamp fit right in with their marketing plans. It was something they knew they could do well with. . . . It opens up a new area for them and enlarges their niche area."

After the initial contact, a year

elapsed before the newly named "Quick-Grip Bar Clamp" was in production.

"This is a very short time," Sorensen said. "The company really wanted to see it on the market, so they hurried. The average time is a couple of years from acceptance by the firm to production."

The Quick-Grip clamp hit the market about a year later, in July 1989, and was chosen as one of the "100 best inventions of 1989" by Popular Science magazine, Sorensen said.

Bob Brady, executive vice president of sales and marketing for American Tool, said sales in the United States, Canada, Europe and other foreign markets are going well, considering that the Quick-Grip is a new product.

Gatzemeyer said the Quick-Grip aroused a lot of interest in the hand-tool and woodworking industries.

Sorensen, who joined American Tool in 1988 to assist in the production of the Quick-Grip, said ads for the clamp began appearing nationally on cable television Sept. 1, 1990. The clamp had been advertised primarily in trade magazines prior to September, but not on an extensive basis.

"The company wanted to hold advertising until they were sure they could meet the production levels," Sorensen said.

Brady said the clamp is "meeting with tremendous consumer acceptance. It looks like it's going to be a popular gift item this Christmas. It's had a very positive effect on American Tool's overall sales."

The Quick-Grip has been well received by woodworkers and cabinetmakers, its primary customers, Gatzemeyer said.

Although the invention has become successful, Sorensen and Gatzemeyer said, they haven't gotten extremely rich from it.

But "we both drive newer cars now, and I have bought a nicer home recently," Sorensen said.

Gatzemeyer said, "We had some idea that it (the invention) was different enough to warrant attention, but it surprised us that it has succeeded as well as it has."

Still, there's more than one way to judge success, Gatzemeyer said.

"It's a source of constant satisfaction to see people buying and using it," he said.

— Pat Dinslage  
Staff Reporter