

Invention blossoms at World Ag Expo

By David Castellon, dcastell@visaliatimesdelta.com

Some great inventions are the result of painstaking research, but for Mike Murphy, inspiration came when the engine of a boat he was building caught fire nearly 20 years ago.

It could have been avoided if there was some way to quickly disconnect the battery and stop the flow of electricity to the engine. But, in those days vehicles didn't have devices that would have allowed him to do that.

That's no longer the case.

Murphy, who owns a Visalia auto mechanic and smog shop and recently started a tool-making business with his family, has invented a device to quickly unhook car batteries, and it has been named one of the top 10 new products featured at this year's World Ag Expo.

The top products include a tool that makes it easier to put up tension-wiring, a heavy equipment attachment that can load 20 sandbags in seconds and software that lets dairy operators know when their cows are ready to breed based on their bodies' temperatures.

A panel of farmers, Ag Expo officials and agriculture industry experts pick the top ten products every year and each of the selected businesses gets a large, green "winner" banner placed next to its booth during the three-day event that began today.

As the largest trade show in the world for agriculture products and services, with 1,499 vendors hawking their wares, the designation of being a top-ten new product can give each of these businesses a leg up on drawing people interested in buying or distributing their products.

That certainly seemed the case for Murphy, whose Visalia-based company, Hammer Works Manufacturing, LLC, sold about 300 of his Quick Release Battery Connectors halfway through the first day of the Expo.

His company sold them for \$25 each Tuesday, about 30 percent less than their normal prices.

Normally, terminals are placed around a vehicle battery, and screws are tightened or loosened to hold them in place or remove them, a process that can become difficult if the battery is corroded, making it hard to unscrew and pull off the terminal.

Murphy said his device has a latched terminal that can be locked onto the poles by pushing down on a terminal level, and pulled off by lifting the lever without the use of a wrench or pliers.



Jeffrey Nazaroff, left, of Kerman, gets information from Mike Murphy, about the Quick Release Battery Connectors, by Hammer Works Manufacturing in Visalia. The Quick Release Battery Connectors were named one of the top 10 new products of the year by the World Ag Expo in Tulare. Murphy is the inventor of the product. STEVE R. FUJIMOTO

"It seems like a good idea," said Jared Nazaroff, a vineyard supervisor from Clovis who stopped to watch Murphy demonstrate his device on Tuesday.

And Salvador Gujardo, a ranch worker from Kerman, said it looked to be an easy way to get a battery out where a wrench or pliers couldn't easily fit.

Murphy's daughter, Megan, president of Hammer Works — started by the family two years ago to manufacture automotive hammers and other hand tools designed by her father — said the Quick Release could be particularly appealing to farmers, who often move batteries from one vehicle or piece of power equipment to another and can do so more quickly with her company's product.

Nazaroff agreed, noting that "time is money, so you want to save as much time as you can."

Mike Murphy said he invented his quick-release device back in the 1980s and tried to distribute it through Pep Boys auto parts stores, but the company had too many requirements.

Murphy, who has spent about \$500,000 to develop and patent his invention, said it was finally time to put it on the market once he could manufacture it himself.

Among his clients is a company that supplies generators to the Defense Department, and Carquest Auto Parts Stores.

He added that his company is in negotiations to supply quick release devices for AutoZone and O'Reilly Auto Parts stores.

And Murphy said he has no plans to sell his device, explaining that "we're looking at the big picture," and figures Hammer Works can manufacture them even if the demand increases.

Here are some of the other top 10 products at the Ag Expo:

» Dura Bilt Calf Stall — This is a case of taking an existing product and improving upon it.

Iowa-based ADA Enterprises, Inc., took a calf stall and coated the galvanized steel frame with 1/8 inch coating of Plastisol, a liquid vinyl that makes the pen more comfortable for calves because it doesn't get as cold as steel pens on cold days or get as hot on hot days, said Jake Stenzel, the company's sales manager.

The company also makes coated calf flooring and a coated goat-milking platforms.

» TempTrack RePro Software — You can tell a lot by a cow's temperature, from when it's sick to when it's ready to breed or give birth.

Colorado-based DVM Systems, LLC, has developed software that lets dairy operators do all this through computers.

Key to this is a "bolus," about a three-inch long plastic capsules that cows can take like they would livestock pills.

But this capsule doesn't come out of the animals. Instead, the boluses sit in their second stomachs.

Technology inside the bolus monitors the cow's internal temperature, and a small radio with a

battery transmits this information to a receiver in the dairy which then relays the data to computers.

DVM Chief Executive Officer Kevin Wild said the bolus has been around for years to monitor cows' temperatures for illness, but his company spent three-and-a-half years modifying the bolus and developing software to read internal temperatures in a different way to determine if a cow is ready to breed, and it can give up to 12 hours advance notice when a cow is ready to give birth.

» Barrier Systems — Tragedy is what inspired Joe Hartley, a contractor from the island of Maui, to create his invention.

Watching on television people filling sandbags as a river in Fargo, N.D., reached flood levels, Hartley figured there should be a better, quicker way to do that.

So he created a scoop attachment for a front loader or excavator with 20 holes in it. He also altered standard, propylene sandbags and ran strings through their opening so they could be cinched closed.

Circular rods around each hold allows each bag to be suspended open under the scoop, and then all the driver has to do is scoop up a pile of sand, letting it fill up each bag.

The loader can roll to the back of a truck or wherever the sandbags need to be piled and press a button that releases them — each cinching closed as they fall.

Hartley actually showed his invention here at last year's Ag Expo, but he didn't enter it for top ten consideration, because he didn't know about it.

He said his Barrier System is made more for cities and emergency agencies, not for farms, but he's getting a lot of exposure here to potential buyers and distributors.

The device sells for \$13,600.

Hartley said some people in the nut industry have expressed interest in using his device to bag walnut and almond shells, grains and even dairy manure.



Manuel Pereire of Los Banos examines a Buffalo Border Blocker during the World Ag Expo at the International Agri-Center in Tulare on Tuesday.
RON HOLMAN



Rene Puga, of Caruthers, left, Paul Hernandez, of Caruthers, and Gilbert Valencia, of Reedley, check out a New Holland rake trailer Tuesday at the World Ag Expo in Tulare. STEVE R. FUJIMOTO



Volunteer Mark Ribeiro keeps an eye on the rib eye steaks for their steak sandwich at Sundale School's booth Tuesday at the World Ag Expo in Tulare. STEVE R. FUJIMOTO



Rebecca Schultz, right, and her grandson, Jagger Lefler, 17 months, of Porterville interact with "Aggie" on Median Street during the World Ag Expo at the International Agri-Center in Tulare on Tuesday. RON HOLMAN