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Farm-Built Livestock Beavertail Trailer

By Bruce Derksen, Contributing Editor

James McKeown, a Northern Ireland dairy farmer, was shocked when he priced out cattle-hauling transport bodies that would fit his beavertail, tractor-drawn trailer.

Rather than extending his finances, he decided to design and build his own.

"I already had the beavertail for hauling my digger and feed but thought it would be handy to have a livestock body that would fit for hauling cattle," McKeown says. "I thought I could make something that would work well."

The project took a few months to complete.

The result is a galvanized steel, removable 28-ft. long by 8-ft. wide body that pivots to kneel at the rear for easy cattle entry and exit. The secret to his design is the tough, triangular side plates that act as both a guide when the rear section moves and bridge the gap in the body when it's lowered. The trailer is divided into four compartments for the easy grouping and loading of animals.

"I lower the beavertail of the trailer, and then the rear door of the livestock body opens up further at a reduced angle to allow cattle to load more easily and quietly," McKeown says. "It offers a slope of 20 degrees or less. And it'll stand abuse as I usually go overboard when building something."

The floor is checker plate with a sprung section that expands and contracts when raised or lowered. He attached rubber sheets to deaden the sound when bolting the body in place.

The rear door and the raising and lowering of the beavertail are operated hydraulically for safety reasons. A small section slides to fill the gap when the beavertail is lowered. He added extra features such as an LED light bar, rear door rollers, rear mud flaps, a slurry trap, and magnets to secure the gates in the open position.

Removing the livestock body from the trailer is simple. McKeown turns down four jack legs, removes 10 pins and bolts, inserts four locking pins that connect the front and rear sections, jacks up the body, and it's ready to drive away. The entire process takes about 15 to 20 min. Reattaching the body takes slightly longer as the driver needs to be more precise in lining up the positioning.

McKeown patented the livestock body design and has offered it for sale to other farmers.

Engineers have expressed an interest in producing the bodies for McKeown to market.

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Mini Thresher Lives On Through Plans

John Howe's mini thresher is ideal for small-scale grain and bean production. In the words of its creator, it can thresh and winnow up to 20 lbs. of winter rye an hour so that it's "clean and ready for the pot."

Howe built his first prototype around 35 years ago and fine-tuned the design for decades as interest in local food production grew. Howe successfully sold across the country for years. He priced the thresher at $575, which included a 1/3-hp. motor, as he warned buyers not to fall for the claims of bicycle or treadle-powered machines, as it takes more power than they can generate to thresh, winnow and clean at a reasonable rate.

Howe has since passed away, but his invention lives on. Elizabeth Baumhoff met John around 2012. "I was still in college studying mechanical engineering, and my grandfather took me by to meet him," she says. "It was cool to see his space, but I wasn't really interested in agricultural engineering yet, so I didn't quite appreciate it."

In the years since, Baumhoff has become far more familiar with Howe's invention. "I didn't get my thresher plans from John directly; they came from a mutual friend who inherited his prototypes and paperwork. I received permission from his widow, Debbie, to share them. I recently grew interested in agricultural engineering and began working with the Farm Hack Project, so Howe's plans for the winnower/thresher got my attention," she says. "My interests relate to appropriate technology for community self-resilience. A winnower/thresher made from very basic materials was appealing."

Howe's thresher is made with quick-change curved screens, variable pulley ratios, and a degree of inclination, allowing infinite setups to handle any processing. Three rotating threshing functions separate seeds from chaff, allowing clean seeds to flow into the lower bin while the lighter chaff blows up and out. To use the thresher, hold a sheaf of grain by the stem and insert the grain heads into the hopper where the beaters thresh them. Grain flows into a bucket while the chaff blows out the other end. If chaff remains, you can run the grain through a second time.

Baumhoff has been working to compile all the necessary documentation required to fabricate one of these machines. "As written, the plans required users to assemble machines based on a kit he sent. Some of the key parts, such as the fan assemblies for the thresher and winnower functions, were included in the kits without fabrication details. I'm trying to track down the drawings specifying the fabrication details, but I haven't found a copy yet. I've been trying to avoid disassembling the thresher-winnower to recreate the drawings of those parts, but that'll be the next step if I'm unsuccessful. The assembly instructions that came with the kit, which include illustrations and dimensions for the body and the frame of the winnower-thresher, plus many photos, have been posted on the Farm Hack website.

For now, Baumhoff doesn't plan to sell instruction kits as Howe did. "If there's a big market for kits, I'd consider it, but for now, having the full set of instructions available on the internet is the goal."

Contact: FARM SHOW Followup, Elizabeth Baumhoff (farmhack@greenhorns.org; www.farmhack.org/tools/john-howe-winnower-and-thresher).

Howe's thresher has quick-change curved screens, variable pulley ratios, and a degree of inclination, allowing infinite setups to handle any processing.

Company Sells Tick Tape And Humane Mouse Traps

Billy-Bob Products specializes in creative items that improve your quality of life, including the company's clothing-safe Tick Tape. "I grew up in rural Illinois, on 36 acres—very humble beginnings," says Jonah White, founder and owner. "I had to hunt for food to help supplement our family's menu, and I was always plagued with ticks and chiggers when I walked out of the woods."

White's solution was to roll duct tape strips sticky-side-out around his ankles. "It was expensive for us and not very efficient, but it worked to reduce the number of ticks I would have to pull off."

Years later, White designed a superior alternative. "What can I say? Everything in life comes full circle. My Tick Tape is much less expensive and works so much better than what I used to use. I use it, especially when I mushroom hunt in the spring, and the seed tick nests are thick in the woods."

Billy-Bob's Tick Tape is good for hunters, hikers and campers. Just apply the double-sided tape around your ankles to prevent ticks from crawling up your clothing—any that try will get stuck partway. The tape is sold on the Billy-Bob Products website for $12.99 per 30-ft. roll.

Tick tape is sticky on the outside, trapping ticks as they try to crawl on pant legs.

Another of White's inventions is the Billy-Bob Mouse Trap, designed to humanely catch and remove large numbers of mice. It works without harmful poisons, sticky messes, or even killing the mice.

The included bottom tray is split into two compartments, one for bait and the other for an ice cube. Peanut butter, wild bird seed, nuts, cheese, and popcorn make great, shelf-stable mice bait. Mice will climb through the hole in the top and become trapped within the metal cage. The bait ensures the mice stay alive. That's ideal, as the caught mice will attract more over several days.

The trap works best when set in a secluded area away from light—garages, sheds, and barns are all ideal. Consider placing it underneath stairs, inside cabinets, or tucked back in closets within a house. After a couple of days, check the trap and empty it by releasing the bait tray at the bottom to free the mice into a more suitable habitat like the woods.

Each Mouse Trap costs $39.99 and can house a dozen-plus mice at a time.

Contact: FARM SHOW Followup, Official Billy Bob Teeth, Inc., P.O. Box 389, Hardin, Ill. 62047 (ph 618-576-8061; info@billybobproducts.com; www.billybobproducts.com).

Mouse trap is designed to catch large numbers of mice without poison or mess.