## Missouri Man Has Largest Sleigh Collection In U.S.

Sleigh bells ring, are you listening?

The Christmas song is familiar, but how many people have actually heard sleigh bells, ridden in a sleigh, or even touched one, asks Bill Engel? To make the song a reality for more people, the Missouri farmer collects sleighs that can be seen and touched by visitors to his private museum.

Just as unique as the 170 sleighs he's collected in the past 17 years are the buildings where he stores them

"I house them in buildings that originally made up most of the town of Denver, Missouri," he laughs. Stores that once housed businesses like a hardware store, funeral parlor, drug store and movie theater, have been repurposed with larger doors and pallet racks to store the sleighs and bells, carriage lights, horse blankets, ice skates and other sleigh-related items that Engel collects.

"I hated to see these sleighs junked or torn up to make coffee tables," he explains. The former university teacher taught accounting, but had an appreciation for history and started buying sleighs at sales. The more he purchased, the more people contacted him. And though he hasn't found a lot of documentation or written history, Engel says he's gathering stories from people grateful that he's preserving part of their family history. For example, recently an older woman with cancer contacted him about her sleigh that no one in the family wanted. She died before he could thank her after he received the sleigh.

The sleighs themselves reveal a bit of

world history and how their design evolved.

"I have two that date back to the 1700's they're seen in old paintings," Engel says. One is a Russian hunting sleigh in which the driver sat in the back on a bicycle seat, and the hunter sat up front and center so he could shoot. The other antique sleigh has windmill and skating paintings on it, indicating it was made in Holland or Belgium.

Engel recognizes many sleighs from the Civil War era because of their square nails blacksmith welding, and thick wood planks. Sleighs in the late 1800's reflect a time of climate change - a mini Ice Age - and deep snow. The sleigh bodies were built higher off the ground to accommodate the snow depth.

Another detail he has noticed is size. The older sleigh seats are smaller because people were smaller, even up to the turn of the 19th Century, when there were about 5,000 manufacturers of different types of sleighs. As companies such as Ford and Studebaker started to build automobiles, they used the same names on auto parts that had been used on sleighs - dash, glove compartment, and wings, for example,

Sleigh manufacturing gradually shifted from the Northeast to Michigan and Wisconsin, and Engel has found most of his sleighs in Iowa, Minnesota and Canada, U.S. and Canadian styles also vary.

"U.S. sleighs run in the snow. Canadians run on the snow. The runners aren't very tall, they just stabilize and run on the belly of the sleigh," he explains.

When sleighs were no longer needed, many



Photos coutesy of Benjamin Herrold and Missouri Farmer Today

Bill Engel collects sleighs that can be seen and touched by visitors to his private museum. "I hated to see these sleighs get junked out," he says.

were put up in barn rafters or left outside with other old equipment. Engel, who believes he has the largest collection in the U.S., wants to provide a home for as many of them as he can. He doesn't restore them, but "stabilizes them like Grandma would have them" by fixing broken boards, livening up the wood with linseed oil, etc.

On his website for his Denver Sleigh Works. Engel invites people to contact him about renting for display, buying, selling (to museums only) and refurbishing horse-drawn sleighs of all types. Since he is also busy farming, he requests that people interested in a tour email or call ahead to set up a time.

Besides collecting sleighs, Engel collects

stories and invites anyone with sleigh-related memories to contact him. For people who still have a sleigh tucked away in a building somewhere, he suggests that they write down everything they know about the sleigh and keep it with the sleigh - even written on the bottom.

"Keep the story alive, so people know where it came from," he says.

Contact: FARM SHOW Followup, Bill Engel, Denver Sleigh Works, P.O. Box 67, Denver, Mo. 64441 (ph 660 786-2305; www.livingthecountrylife.com/ videos/v/85281253/denver-sleigh-works. htm; hesper43@unitedwb.coop).

## He Built His Own Cat 22 Mini Dozer

"I've always liked the look of old Caterpillar dozers so I built a half-scale Cat 22 entirely from scratch. This little dozer was supposed to be only a toy when I first decided to build it. However, I've found that it can do a lot more than I ever thought possible," says Ryan Mueller, Roselle, Ill.

The mini dozer measures 5 1/2 ft. long, 3 ft. wide, and 30 in. tall and is equipped with a 4-ft. blade on front. Mueller modeled it after a 1930's Cat 22 dozer.

"It took me almost 3 years to build, but I'm happy with how it turned out," he says. "I built it out of my 2-car garage and my dad painted it in his garage. I relied on a machine shop for very few parts, and that was mainly to save time. I found that you don't always need high-tech equipment to build a machine like this. I made several different benders to form the dozer's frame, grill, and battery box.

Mueller says he built the mini dozer because he wanted to give his 2 young sons "something unique that would last a long time; something they could pass onto their own kids some day. Many people think I built it from a Struck do-it-yourself dozer kit. However, my machine is more beefy and built with thicker steel plates."

He looked at photos online and measured a somewhat similar Cat 28 model at a local Cat dealer

The mini dozer is powered by an 18 1/2 hp Briggs & Stratton single cyl. gas engine off an old riding mower. "The real model 22 was powered by a bigger 4-cyl. engine, and it had steel tracks," says Mueller. "I built mine with rubber tracks because they're easier on my driveway and yard. The tracks measure 48 in. long and were designed for the Ditch Witch SK series of walk-behind equipment. Because of the rubber tracks, I also had to make significant changes to the dozer's undercarriage."

He says he tried to make the dozer simple to operate and drive. "It's built with hydrostatic transmissions so the dozer stops when you let go of a lever, which makes it safer for children as opposed to clutch-operated levers. The operator pushes a pair of levers to steer it, much like an old fashioned dozer.

"After I finished building the dozer, my dad painted the body and a local shop powder coated the undercarriage parts. Then I put everything back together. I wanted a record of how I had built the dozer, so I put a camera



Ryan Mueller built this half-scale Cat 22 mini dozer entirely from scratch. It measures 5 1/2 ft. long, 3 ft. wide, and has a 4-ft. blade on front.

in the corner of my garage to make a time lapse video. The camera automatically took a photo every couple of seconds.'

The time lapse video is on YouTube and can be viewed by going to http://youtube. com/watch?v=ectq\_ec5woA.

So far, he has put the little dozer to good use plowing snow and completing various landscaping projects.

"Overall, it was a fun project. It's something my kids will enjoy for a long time. I'd also like to thank my wife for letting me tackle such an ambitious project," says Mueller.

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## He Uses Motorcycle To Do Farm Chores

Instead of using a tractor or pickup, Steve Hassett prefers to start up his Triumph Tiger motorcycle for light hauling chores when he helps out at the Manatawna 4-H club farm in Philadelphia, where his step-daughter is a member.

He built a mini "truck" bed out of a 20by 20-in. piece of 3/4-in. plywood drilled with holes large enough to secure it over the motorcycle's side cases with an anchor strap. He tightens down the anchor strap with four more motorcycle straps connected to the back handle of the seat and the side bags bar. Hassett also uses orange Paracord to secure the bed.

"It helps to have side cases to give better stability, but you could always make two platforms to simulate side cases for any motorcycle. It easily carries a bale of hay or straw or packaged wood shavings," he says.

Running a little extra feed or bedding out to a pen or pasture with his motorcycle is fast

and economical. He is able to ride it most of the year - as long as weather conditions

Besides getting the job done, using a motorcycle for chores has a "cool" factor for the 4-H club members he works with.

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Plywood bed mounted on front of motorcycle carries bales of hay or straw.

