

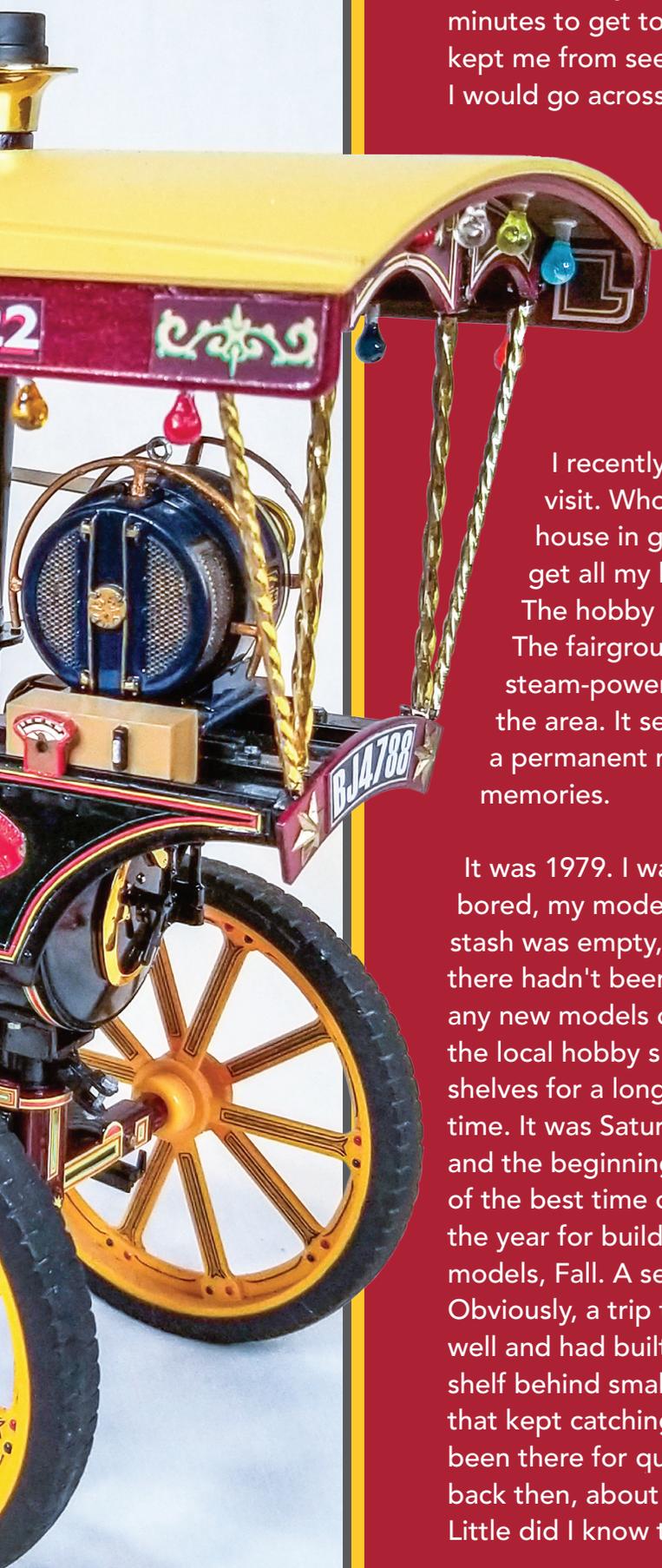
# Resurrection!



*Puddle Princess*



*By Ken Friend*



I feel fortunate to have been raised in a rural Midwestern town where the lifestyle was very laid back and casual. I could get to any part of town on my bicycle in about 10 minutes. But it only took about 5 minutes to get to the hobby shop; it was like an invisible fence that kept me from seeing the other side of town. Each summer, however, I would go across town to the County Fair at the fairgrounds, ride some rides, have a waffle, and watch the farm equipment demonstrations. The ground-shaking power and the shrieking whistle reports of the steam-powered tractors became a permanent part of my favorite memories. As I grew older, the simplest of triggers could take me back to my hometown and the fairgrounds that were just 10 minutes away.

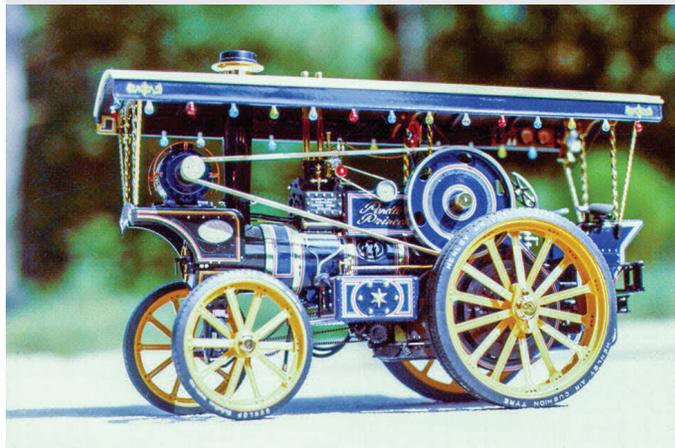
I recently took a virtual online trip to my hometown just to visit. Whoever is living in the house I grew up in has kept the house in great shape. The shoe repair shop, where I used to get all my bubble gum trading cards, is now someone's home. The hobby shop is still there, although housing another business. The fairgrounds still host the County Fair every summer. And, the steam-powered farm equipment still brings life to the heritage of the area. It seemed only fitting that a plastic model could establish a permanent memento to a past that was filled with such wonderful memories.

It was 1979. I was bored, my model stash was empty, and there hadn't been any new models on the local hobby shop shelves for a long time. It was Saturday and the beginning of the best time of the year for building models, Fall. A season when football and NASCAR rule the airwaves! Obviously, a trip to the hobby shop was in order. I knew the inventory well and had built just about everything available. Sitting on the top shelf behind smaller boxes was this Steam Tractor model from Entex that kept catching my eye. I had not built anything like it. The kit had been there for quite a while, probably because it was a bit pricey for back then, about \$25.00. I couldn't afford it, but I bought it anyhow. Little did I know the story it would tell.



Building the Pendle Princess, as it is named, was great fun. The kit quality and detail was fantastic, and the end result was a wonderful conversation piece. The model sat proudly on the fireplace mantel for about five years and even earned a spot in my employer's company newsletter. One night while my parents stayed with the kids and my wife and I went out for the evening, the Princess fell on hard times, literally. His name was Bingo, the family cat, and he decided to jump from the chair to the mantel to take a nap. The Princess fell to the brick hearth below and rapidly disassembled into so many parts that it could legitimately be called a kit once again. Upon our return home, my Dad stopped us at the door and delivered the bad news... Bingo was fine, but the Princess was not!

The original Pendle Princess in it's previous incarnation.



A suitable sarcophagus (actually, just a box) was used to gather parts from the carpet and surrounding area. Not all the parts were found, and even weeks later one or two could be heard climbing into the vacuum cleaner. The Princess was gone, hidden behind smaller boxes once again. Some 25 years after the burial, the same circumstances that lured me to the kit in the first place surfaced once again. While straightening up a closet, the box fell to the floor from the shelf as if to say "Remember me? I'm still here! Bingo is gone! Don't throw me away!" After once again picking

the parts from the carpet, a quick inventory showed the kit was about 90% complete. I still had the instructions and new modeling tools and processes available that would allow me to replicate any of the missing parts. It was obvious that a resurrection was in order.

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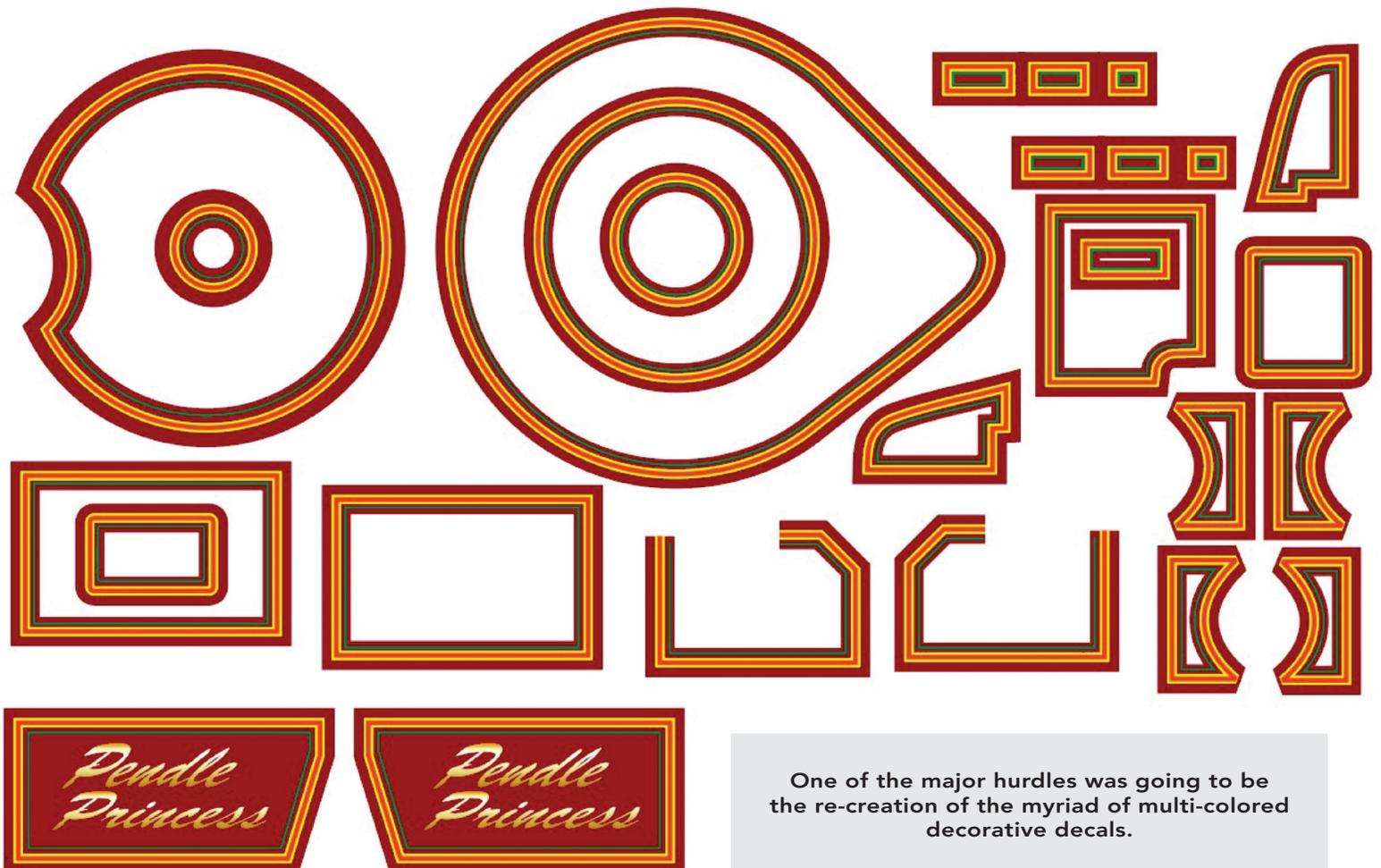
Originally, this kit was built as a model with little consideration for historical value. However, memories of the county fair made me realize the Princess was a genuine miniature snapshot of a piece of history. I think that is why the Princess attracted me. This time I would build it as a replica with a better appreciation of its place in time.

I finished disassembling what Bingo had missed and began documenting what would be needed for the restoration. One of the major hurdles was going to be the re-creation of the myriad of multi-colored decorative decals. One-by-one, parts were scanned or photographed to capture the original artwork. The images were opened in CorelDraw, scaled to their original size, and used to create new decals. Printing the decals on clear decal film could not generate the color density required, so the new decals were printed on white decal film with an inkjet printer.

Since the base color of this build was going to be different than that of the original, some color testing had to be done to make sure the decals would match the new color.

The missing parts were the next dilemma. Buying another kit to act as a donor for replacement parts and decals was not a realistic option. The Bandai/Entex Steam Tractor kit had become a very collectible antique, and parts and kits were hard to find and very high priced. The build was in jeopardy until I could come up with a solution. Then my friend Glenn Dailey in Australia provided a unique opportunity to solve the problem.

Glenn had been following my rebuild online and told me he was going to try to find a Princess kit for himself. I hadn't seen one for sale for a long time. Much to my chagrin, he was able to find one on eBay for a very reasonable price just



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a week later (sigh...). But, there was a catch; the owner wouldn't ship overseas. This actually provided a unique opportunity to recreate the missing parts in the kit. We had the seller ship it to me. While the kit was with me, I made molds of the parts I was missing, then I cast new duplicates. Problem(s) solved!

I used a two-part putty for copying the Princess parts.



**The molding and casting process:** I used a two-part putty (available at local hobby stores) for copying the Princess parts I needed to complete the kit. Equal portions of parts "A" and "B" were rolled together and pressed 1/2 way over

the part being duplicated. Once cured, a light application of mold release (also available at local hobby stores) was applied and a second ball of putty applied to the opposite side of the part. The alignment of the two parts of the mold was maintained by pushing toothpicks through the two mold parts before they were separated. Casting resin was used to make replicas of the original parts. Twenty-three of the forty kit lights were made this way, as well as several of the control levers. I put the kit back in the box, sent it to Glenn in Australia, and began the resurrection.

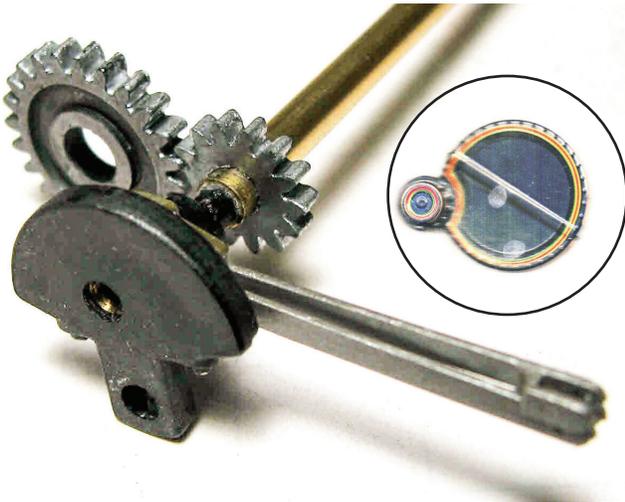
All the painted parts were stripped by soaking in DOT 3 brake fluid. They were then washed thoroughly with dishwashing liquid and repainted. Fortunately, there were only a couple of broken parts and the brake fluid had not softened the plastic.

The engine crankshaft and timing links had to be completely rebuilt. Brass tubing was used for all shafts to prevent the natural tendency of plastic parts to creep and bend under even the lightest of loads. In the original build, the main flywheel axle eventually bent so much that the belt slipped off. This happened before Bingo's wreck.

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Was rebuilding the Princess worth the time and effort? You bet!

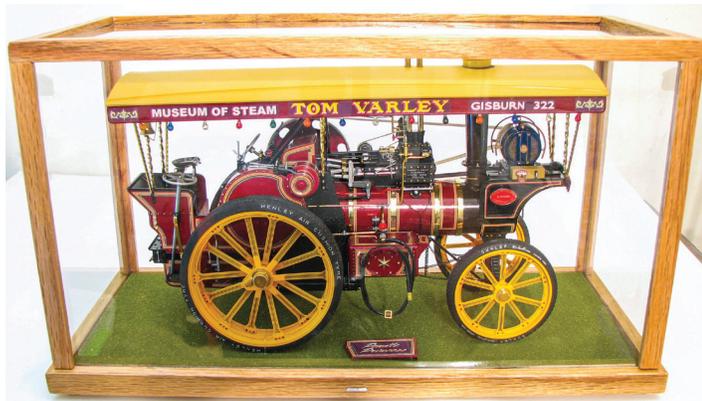


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The rest of the rebuild was a mixture of once again following the instructions after repairing broken parts, creating missing parts, fitting, building, and finishing. Reassembly was fun; getting to watch the evolution of such a wonderful model one more time.

This time the Princess will have her own display case and will be placed inside a model cabinet away from pets.





The model has been entered in numerous IPMS competitions and has earned first place, second place, and numerous "Best Of" awards including 2 "Best of Show" awards. All this from an Out-of-the-Box rebuild of a model that could have easily been deemed unrecoverable and discarded. Before I buy another new kit I will check my stash to see if any good kits are hiding in the closet on the top shelf behind smaller boxes.

The real artisans in this case are the tool makers at Bandai who replicated to perfection a part of Industrial Age history.

**Update:** In December of 2024, I had an email from Glenn Daley, and the discussion quickly turned to the Princess. Glenn was married, had moved, and was quite busy with business. "I really don't have time to work on modeling right now," he commented. I said, "If you ever want to part with the Princess, let me know." I thought that would be the last of our conversation about the kit. A week later I received another email from Glenn, this time he said, "...it's on the way!" I was shocked. I immediately wrote back and asked what he wanted for the kit. He said, "Consider it a gift for your 81st birthday." I have the kit now and don't know if I should build it, leave it as a collectible, or pass it on to my children. Whatever I do with it, I will always have the memories of a unique model kit, a cat named Bingo, the recognition, and the friendship I have experienced over the past 45 years with the Bandai/Entex Pendle Princess.





## BRIEF HISTORY

Steam traction engines were used for plowing, operating remote sawmills, towing heavy loads, and leveling roads.

The actual Pendle Princess was originally built for Stone Court Brick and Tile Works, Pembury, Kent as a tractor. She was converted to a showman's tractor through a complete restoration and preservation before being bought by Tom Varley, a collector of steam-powered vehicles. She now resides at the Bandai Museum in Mibu, Japan.

The Pendle Princess had one of the more glamorous tasks, providing electrical power to light and operate carnivals in places where electricity was not readily available (or at all), in addition to, towing most of the show wagons at up to 6 MPH.

Production of steam tractors virtually stopped in the mid-'30s except for the steam roller which was used widely in Europe for smoothing asphalt roads by using a heavy roller instead of wheels at the front.

## Specifications

Production date 1919

Type: Saturated steam, dual cylinder

HP: 4 (SAE)

Length 5060 mm, width 1850 mm, height 3000 mm

Weight: 7 tons

Generator: Drake and Corham - 100/145 volt D.C., 24 Amp

## BIOGRAPHY

Ken Friend is a retired CAD/CAM Systems Manager living in Statesboro, Georgia with his wife Sharon of 57 years. A dedicated modeler for 75 years, Ken transitioned from wood to plastic and now produces multimedia 3D-printed creations. His work has been shown in Car Model Magazine, Fine Scale Modeler, Scale Aviation Modeler, and the IPMS Journal.