A PHOENIX RISING FROM THE ASHES…

RESTORING AN 1800'S WOODEN FARM WAGON

PART 1 - BACKGROUND & HISTORY

When Terry and I purchased the property adjacent to Hiddencroft Vineyards in 2011, I was surprised to find the remnants of an old farm wagon beneath a Virginia white pine tree. The remnants were sparse, consisting of the front and rear axles with wooden spoked wheels and hubs supporting mid-1900's metal rims. Old truck and tractor tires had been mounted on the rims, and two still held air.

Original Front Axle with Tongue

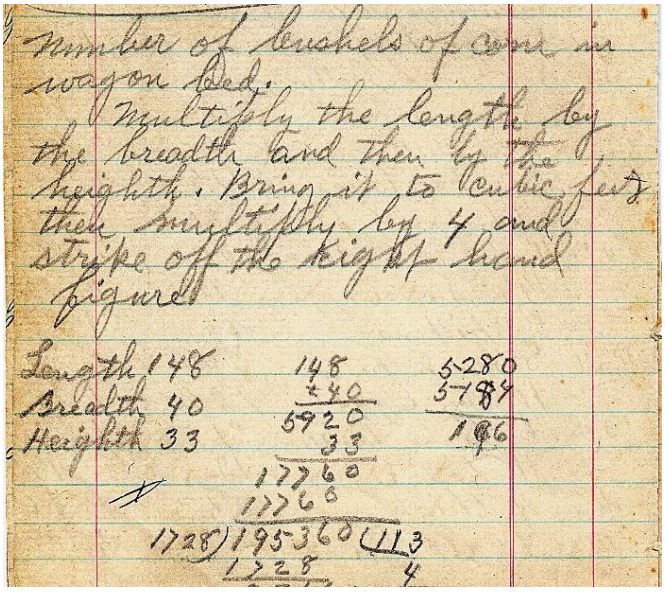
Original Rear Axle with Reach Plate

My mind was flooded with questions: How old was the wagon? What had it looked like? How big was its original bed? Were the wheels commercially made or retrofitted? I was fairly certain the wagon had been there since the Comphers, a family of German descendants, had owned the property from the early 1830s to 1968. My questions weren't forgotten, but did take a backseat to the daily chores of winery life, so I set them aside.

It was several years later that I was showing Billy Compher around his great-grandparents home place. He told a story that was passed down through his family's generations. During the Civil

War, a Confederate unit was camped in the farm orchard. As an aside, the Comphers appear to have been Union sympathizers, so they couldn't have been happy. When the unit moved on, they left behind a wooden wagon. The wagon was not operational but the wooden wheels were sound, so the Comphers, with their German ingenuity, removed the wooden wheels and rehydrated them by soaking them in Dutchman's Creek. Could these wooden wheels be the ones repurposed on the remnants of the wagon parts under the Virginia white pine? I knew then that I would try to restore this old wagon, even though there were still many unanswered questions.

Billy Compher returned a few months later with his family's farm ledger in hand. The ledger records everything sold and purchased, and in some cases stolen, between 1875 and the 1950's. Billy's great-grandfather, John W. Compher, began the ledger. I spent many hours poring over it and eventually found, at the bottom of page ten titled "Property bought 1875", a formula that John W. Compher wrote to compute the number of bushels of corn in a wagon (his wagon). The formula multiplies the length of the wagon by the width and height of the wagon bed. Eureka! I had an idea of how big to build the wagon bed.


Number of bushels of corn in wagon bed.
Multiply the length by the breadth and then by the height. Bring it to cubic feet then multiply by 4 and strike off the right hand figure.

Length 148
Breadth 40
Height 33

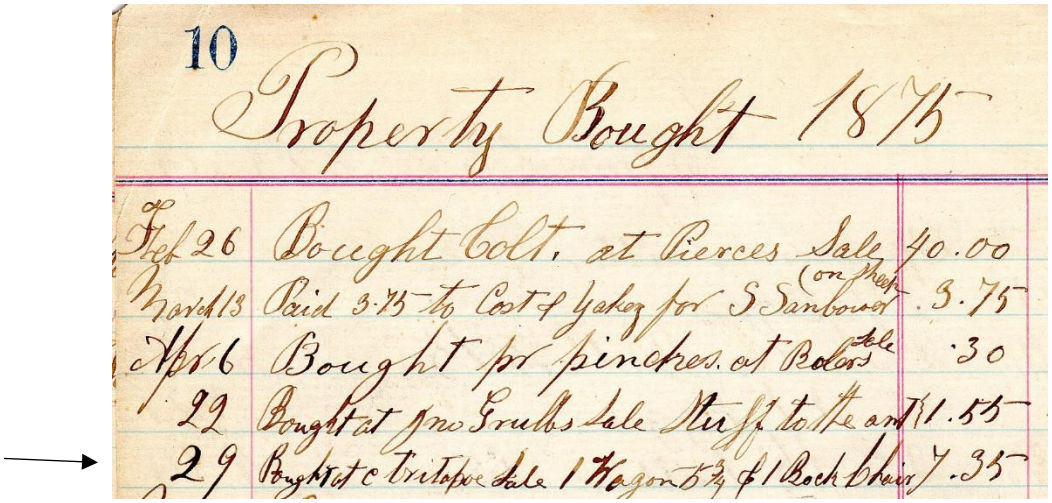
148
×40
5920
33
17760
17760
1728) 195360 (113
1728
4

5280
5784
1056

John W. Compher's formula, in his hand, 1875.

At the top of that same page is a record of a wagon purchased at the "C. Tritapoe sale". Logic would dictate this was a neighbor living in the general area. While researching Civil War history in the Lovettsville area, I came across a book entitled "History of the Independent Loudoun Virginia Rangers" by Briscoe Goodhart. Mr Goodhart was a Loudoun Ranger, the only Union Army unit out of Virginia. After the Civil War, he wrote the book which documents the names of each of the rangers, where they were enlisted, their fate during the war, and how the

survivors spent the remainder of their lives. The book identified Charles Tritapoe as a Loudoun Ranger from Lovettsville, VA who moved to Illinois in 1875. He was married to an Ann Elizabeth Compher. I realized it was possible the wagon parts under the pine tree were purchased at his moving sale, and would therefore be Civil War era.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Property Bought 1875

Feb 26	Bought Colt. at Pierces Sale	40.00
March 13	Paid 3.75 to Cost & Yoke for S Sanbower (on Prey	3.75
Apr 6	Bought pr pinchers. at Bolers Sale	.30
22	Bought at Jno Grubbs Sale Stuff to Tie on	1.55
29	Bought at C Tritapoe Sale 1 Wagon 5¾ & 1 Rock Chain	7.35

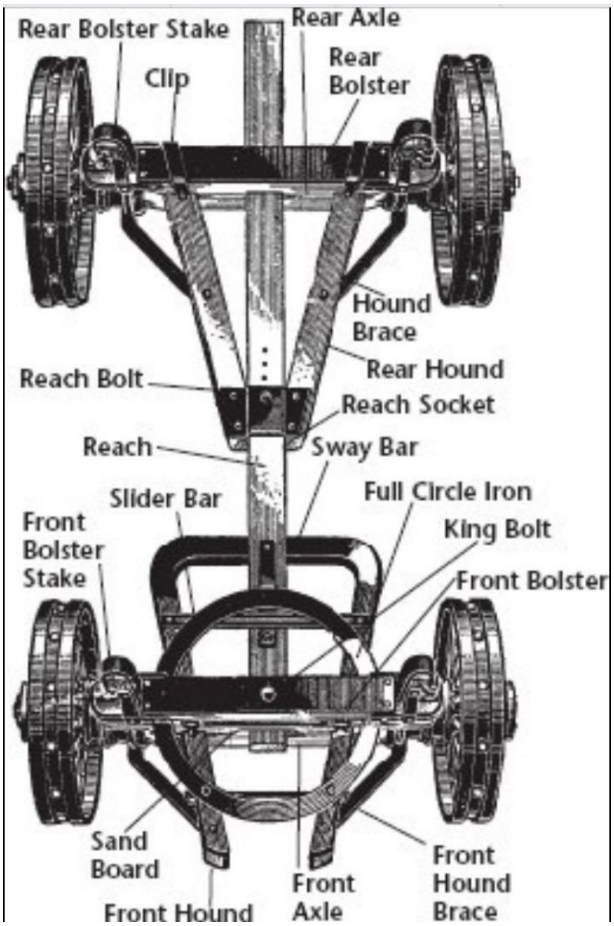
April 29, 1875 Bought at C. Tritapoe Sale 1 Wagon.

With this information in hand, I was now resolved to reconstruct the wagon to the state when last used on the Compher farm.

PART 2 - RESEARCH & PROCESS

I disassembled the remaining fragments of the wagon and began searching the Internet for old or antique wooden wagons. I began with the spoked wheels to discern their age and see I they were produced commercially. I found wooden wheels with wooden spokes and hubs…wooden spoked wheels with metal hub…but no wooden hub, wooden spoked wheels mounted on metal automobile rims. I hypothesized my wooden hub, metal wheels with rubber tires configuration was fabricated by the Compher Family, a blacksmith, or wheel right. I removed a deflated tire from the rim and hub, and learned the spokes were actually cut off and screwed to the rim from the inside with old-style, flat-head screws. A retrofit! I realized reconstruction would be a challenge in terms of determining which parts were missing and finding them to buy. I searched the Internet for pictures of old wooden wagon chassis and beds to educate myself on what was missing. I found numerous pictures and diagrams of wooden wagons from the 1800s made by Studebaker, Western Wagon, and Wagner Wagon.

After studying those diagrams, I understood the basic components and construction of such wagons: wheels, axles, front and rear hounds, front and rear bolsters, bolster stakes, the reach, reach plate, hound braces, the tongue, assorted hardware, and the wagon bed.



Basic Wooden Wagon Chassis Diagram.

I had 4 good wheels with hubs, one good axle, and a reach socket with two good hound braces. All remaining parts would have to be purchased or fabricated.

While searching online for old parts, I hit on a post for two bolsters with stakes and an axle from an antique dealer, just 45 miles away. However, the post was dated 2017. Since that was almost three years ago, I doubted the parts would still be available. I abandoned that search, saved the URL tab on my tablet and continued to look elsewhere to no avail. A few weeks later I came across the saved tab and thought “what the heck, nothing ventured, nothing gained”. I emailed asking if the parts were still available and they were!

The next day I spent a pleasant afternoon browsing the barns, sheds, and woods of American Antiques in Taneytown, MD. I returned with a truckload of parts. The bolsters were too long to fit my axles. However, the stakes and hardware were serviceable if I could fabricate new wooden bolsters.

I fired up my chainsaw and began cutting wooden blanks for new bolsters from a log of green ash I had been saving because, as my wife would say, that's what I do. After considerable sawing, plaining, jointing, and mortising I had constructed two new bolsters and attached to them the salvaged bolster stakes and hardware.

New Front Bolster with reused bolster stakes and hardware attached.

The next step was to construct a new wagon tongue. Since the old wagon wheels were fitted with rubber tires, I new the wagon's most recent use was being pulled, not by horses, but by a tractor. This use required a short tongue, so by using the remnants of the old tongue I was able to come up with a plan for a refabrication. Once again with chainsaw, I cut blanks from the green ash log. After shaping the wood and a thorough cleaning and painting of the old hardware I was able to re-attatch it to my new wood tongue.

New tongue with hardware attached.

My next task was to fabricate a new sand-board, a wooden component attached to the front axle, on which the floating front bolster rests. This component allows the front axle assembly to pivot while the wagon bed remains stationary, permitting the wagon to be steered. Once again I cut a blank from my green ash log and shaped it to replace the rotten sand-board.

The floating front bolster is attached to the sand-board and axle assembly by a kingpin. The kingpin is a heavy steel rod with a flat flange on top which keeps it from slipping through a hole in the center of the front bolster. After a trip to Ace Hardware, I returned with a three foot section of 3/4 inch steel which I cut to the proper length, and after considerable heating and hammering, was able to fashion a flat flange on the top edge.

The next issue was the old U-bolts that attach the front sand-board and rear bolster to their axels, had stripped threads and could no longer be tightened securely. I found a company online that made custom U-bolts primarily for automobiles. I was able to order the correct size and shape. After receiving the U-bolts, I was able to assemble all the fabricated, repaired, and painted components to form the wagon chassis.

Cleaned and repainted wheel and hub.

The wheel hubs and spokes were in good shape. A coating of linseed oil on the wooden parts, and a coat of paint on the rims and metal hub bands prettied them up. They were ready to accept new tires. The next challenge was to locate 900 x 16 bias ply antique tires. This size tire is no longer used on modern automobiles, but can be purchased at a few locations that provide tires for antique and military vehicles

Chasis fully assembled.

With the wagon chassis now assembled I turned my attention to constructing the bed. From the formula found in the Compher farm ledger, I knew the dimensions. I purchased enough 12 foot lengths of 6” wide tongue and groove spruce and 1” x 10” twelve foot long boards to build the bed. From a company in Ohio that builds parts for Amish buggies, I purchased eight metal stays to support the outside of the wagon sideboards.

The wooden components of the original wagon bed would have been fastened together with nails, lag bolts, and rivets. I chose to use deck screws and lag bolts for ease of construction. I chose a dark walnut wood stain to give it a weathered look.

As of this writing I have received one 700x16 tube type tire. However, the tube was lost in transit by a national delivery company. I ordered a second tube. When it arrives, I will remove the temporary iron wheels on the rear and mount the last two original wheels on the wagon. At this point, the job will be complete.

Wagon bed assembled and stained with temporary iron wheels still on the back.

By Clyde Housel

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