

Alberta Donkey and Mule Club News, January 2009

### Wheels Behind Your Mule

Submitted by Fred Godberson

Carriages, wagons, and carts suitable for all types of driving activities are available from manufacturers. Most are well designed and are competitively priced. Another way to obtain a lightweight-driving vehicle is to rebuild a buggy, democrat or buckboard. Pioneers between 1900 and 1940 brought thousands of these west. The remains of these are often sold as scrap iron at farm auction sales. The wood is usually missing and you may have to resort to books and museums for patterns. The metal is what you are buying. The old wheels are not important, as they will have to be totally replaced.

I have rebuilt two single seat "Barrie Ironworks" buggies and would like to share some ideas I have gained from this enjoyable experience. My ideas relate to the wheels, woodwork, metal parts, and upholstery.

The wheels are a major part of the vehicle. You have the choice of original type wooden wheels with either hard rubber or steel rims. Another option is to use air-inflated type wheels from motorcycles or cars.

The wooden buggy wheels can be rebuilt using the original hubs but I advise that you have a wheelwright supply new hubs, spindles, and rims. I had Ted at B&T Wagon Works make a set of wheels for one buggy. B&T are located near Evansburg. Ted has a supply of wood and metal parts for most horse vehicles. If you choose to rebuild a buggy, I recommend that you visit Wheel Works. Their phone number is 780-727-2129.

My wooden wheels have greasable roller bearings and solid rubber tires. The wheels cost about \$1200. I recommend solid rubber rims as the steel rims are noisy on gravel and pavement. I cut the original spindles off and welded the new spindles on. A jig is necessary to get the welding done at the correct angle as the wheels should slope in at the bottom. If the welding does warp out of alignment, correction can be made in a press. B & T recommends that the bottom spokes should be vertical. The dish of the wheel will then give the correct camber.

Rear wheels from front wheel drive cars are easily adapted to buggies. I again cut the spindles and welded on an adapter plate. The wheels I used are from a Chevette and are attached with 4 bolts. The sealed bearings on these wheels make them very suitable for fording rivers and creeks. The low center of gravity of this buggy makes it easy to enter and safe. I say safe as I had a "runaway" with this vehicle. Two miles and two 90 degree corners at full speed and there was no indication of rolling over. The cause of the "runaway" is another story.

Woodwork in original buggies built in Eastern Canada used pine or yellow poplar for the box and seats. I used local white poplar and birch. All joints should be glued and screwed. I like the natural wood grain and color so I used ultraviolet resistant clear varithane on one buggy. The other buggy is finished with black and red paint.

The old wood of one of my buggies had a removable floor for easy cleaning and I used this idea. My other buggy had enough of the metal and fabric from a folding top that I was able to use as a pattern. This buggy makes an excellent parade vehicle.

Metal parts can be cleaned by hand if a sandblaster is not available. If rust coat paint like Trimclad is used, it is not necessary to remove all rust.

Most buggies will have a broken fifth wheel. This is the part that allows the front axel to turn. This part is made of weldable steel cast and is easily repaired. To avoid future breakage, I added a one-inch square tube brace from the rear axed to the bottom of the king pin. This brace was also used as a base for a set of wheel brakes.

Shafts, tongues and single trees can be purchased in ready to assemble form from suppliers. These are usually made by Amish craftsmen in Eastern Canada. I found it more economical to purchase from B + T than direct from a manufacturer. Ted buys in large quantities and is able to get a discount for the wood as well as for freight.

For the seat upholstery, I chose to do the original style quilting squares with buttons in the centers on one buggy. I will not do this type again as it is a lot of work and the seats catch dirt and moisture. Original upholstery used leather. I have found high quality vinyl a suitable substitute. Basic type seats can be upholstered without a sewing machine as I did on my first buggy. Some household sewing machines will sew the vinyl material.

Rebuilt vehicles will last for years if they are stored out of the weather. They are easily transported as one mule and buggy usually fit in a stock trailer. I place my mule crossways in a 7-foot wide trailer behind a partition, remove the shafts and roll the buggy in. The shafts slide under the buggy.

Happy trails with your mule or donkey and your rebuilt buggy.  
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Fred's car wheel buggy hitched to a mammoth donkey.



When Fred and Janice aren't driving, they like to ride their mules too!



Fred's wooden wheel buggy.

