

# WE'VE ALWAYS DONE IT THAT WAY (Or Have You Ever Wondered...)

In the United States, and in some Australian states, the standard railway gauge is 4 feet 8.5 inches.

- That's an exceedingly odd number, so why was that gauge used?

Because that was the way they built them in England and English expatriates built the American railroads.

- Why did the English build them like that?

Because the first railway lines were built by the same people who built the pre-railway tramlines.

- But why did they use this gauge?

Because the people who built the trams used the same jigs and tools that they used for building wagons, which used that spacing.

- Okay! Why did the wagons have that particular odd wheel spacing?

Well, if they had tried to use any other spacing the wagon wheels would have broken up on some of the old long distance roads in England, because that is the spacing of the wheel ruts.

- So, who built those old rutted roads?

Imperial Rome built the first long distance roads in Europe, including England, for their legions. These roads have been in use ever since.

- And the ruts in the roads?

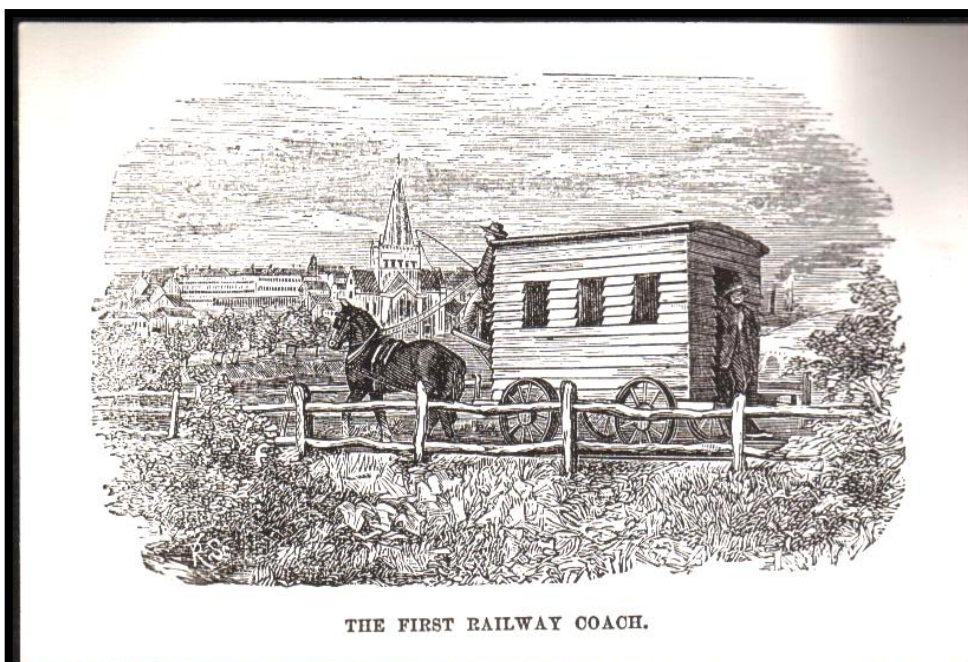
Roman war chariots formed the first ruts, which everyone else had to match for fear of destroying the wagon wheels. Since the chariots were made in Imperial Rome they were all alike in wheel spacing.

So the American standard railway gauge of 4 feet 8.5 inches was derived from the original specifications for a Roman war chariot. So the next time you ponder this question and wonder who came up with it, it is because the Imperial Roman chariots were made just wide enough to accommodate the back ends of two warhorses.

*Now for the best part.* When you see a Space Shuttle sitting on a launch pad, there are two big booster rockets attached two the sides of the main fuel tank. These are solid rocket boosters, or SRB's. These SRB's are made by Thiokol at their factory in Utah. The engineers who designed the SRB's would have preferred to make them a bit fatter, but the SRB's had to be shipped by train from the factory to the launch site. The railway line from the factory happens to run through a tunnel in the mountains. The SRB's had to fit through the tunnel. The tunnel is slightly wider than the railway line, and the railway line, as you now know, is about as wide as the rear end of two horses.

So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago *by the width of a horse's backside.*

From the Laboratories Harvey Advanced Institute of Research.



Postcard and story  
submitted by David Harvey.  
Western Australia.