Why You're History

Q: Why are the Space Shuttle's solid fuel boosters built to a size somewhat thinner than the manufacturer preferred?
A: The rear ends of two war horses. Morton Thiokol, the rocket booster manufacturer, which ships shuttle components by rail, was constrained by the size of railroad tunnels. The tunnels are based on the a standard U.S. distance between rails of 4 feet 8 1/2 inches.

Q: This is an odd measure. Why is it the standard?
A: It's the British standard rail gauge, and U.S. railroads were originally built by English expatriates working in the United States.

Q: Why did England establish such an odd measure?
A: the measure was based on the tramway system which preceded railroads.

Q: Why did tramways use that peculiar measurement?
A: Tramway builders relied on the same tools and forms they used for building wagons. The wagons used that standard wheel spacing.

Q: So why were wagon wheels spaced at that measure?
A: No other spacing would match the wheel ruts in old English roads. If the spacing and ruts did not match, the wheels would break in the ruts.

Q: Well, who built those first rutted roads?
A: The first extensive road network in Europe was built by the ancient Romans. They relied on the system for military transport throughout their huge empire.

Q: And the ruts?
A: All Roman chariots were built alike, with standardized wheel spacing. Specifications were based on the measure of hindquarters of two Roman imperial war horses.

Q: And that spacing was?
A: Guess.

(Adapted from John M. Hotchner, "Horse, Train and Shuttle Are All Connected," *Linn's Stamp News*, Jan. 24, 2000, 6.)

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