

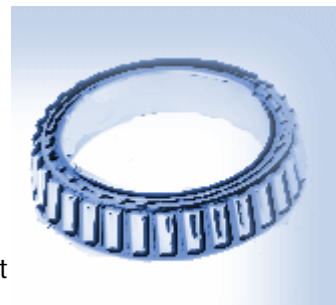


Manufacturing

From Price Tags to Process Control

Roller Bearings

In 1895, at age 67, Henry Timken, an inventor from Canton, invented a better bearing. This bearing was a rotating support placed between moving parts to reduce friction, now known as the "roller bearing." Conventional bearings in the 19th century worked well on wheel shafts until the wheels had to bear heavy loads from the sides. This was a problem, because turning a corner would shift the weight to one side and cause wear.



In 1887, Timken retired from a successful career as a carriage builder. But, retirement wasn't for Timken. He decided to return to the carriage business in 1891, and in 1892 had earned three new patents on carriage springs. Then, he moved onto bearings, and was 67 years old when his two tapered roller bearing patents were granted in 1898.



What is a Roller Bearing?

A rolling-element bearing is a bearing which carries a load by placing round elements between the two pieces. The relative motion of the pieces causes the round elements to roll (tumble) with little sliding. One of the earliest and best-known rolling-element bearings are sets of logs laid on the ground with a large stone block on top. As the stone is pulled, the logs roll along the ground with little sliding friction. As each log comes out the back, it is moved to the front where the block then rolls on to it.

Did You Know?

- After over 100 years, The Timken Company continues to serve every major manufacturing industry.
- Timken has produced more than six billion bearings since 1899.
- Timken's steelmelting capacity is 1.4 million tons annually.

Find out more...

- [Timken](http://www.timken.com) (www.timken.com)
- [Timken: From Missouri to Mars -- A Century of Leadership in Manufacturing \(PDF\)](http://www.timken.com/aboutus/history/pdf/history.pdf) (www.timken.com/aboutus/history/pdf/history.pdf)