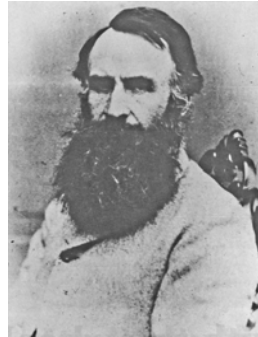


## The two fathers of the pneumatic tire

It's rare that two men invent the same thing decades apart. Yet that's what happened with the pneumatic tire. John Boyd Dunlop developed it in Ireland in 1888 only to learn two years later that Robert W. Thomson of England had patented it 43 years earlier in 1845.



John Boyd Dunlop  
1840 - 1921



Robert W Thomson  
1822 - 1873

Necessity may have mothered its inventions, but the pneumatic tire had at least two fathers: The first was Robert William Thomson, of Middlesex, England, who invented and patented the air-inflated tire in 1845. The second was John Boyd Dunlop of Belfast, Ireland, who reinvented it in 1888 – launching today's worldwide tire industry in the process.

Unlike many inventions whose origins are shrouded in uncertainty, the birth of the air-inflated tire was carefully recorded in history. Yet the story of the pneumatic tire is by no means lacking in excitement, poetic irony or its share of unsolved mysteries.

To begin with, the air-inflated tire was invented twice over a period of 43 years, the first event apparently having been all but forgotten by the time the second took place.

Largely because of his success in selling the pneumatic tire, Dunlop – actually the re-inventor of the air-inflated tire – has come to hold the more prominent place in history.

Thomson – the true inventor – had the misfortune of introducing the pneumatic tire too far ahead of its time. Unable to establish a commercial market for it in that horse-and-buggy era, Thomson's name is little known by the general public and often appears as a mere footnote on the pages of history.

Perhaps even more ironic is the fact that Thomson – while more confident than Dunlop in the future of the air-inflated tire – saw his hopes for the pneumatic dashed by an unresponsive buying public and his invention forgotten.

On the other hand, Dunlop – who had less faith in the pneumatic as the optimum means of dampening road vibration – saw his invention sweep the world and has since been honored as one of the world’s great benefactors.

Unquestionably, both of the pneumatic tire’s inventors deserve credit for one of history’s most important and far-reaching technical achievements.

Thomson dubbed his invention the “aerial wheel,” describing in his patent “the application of elastic bearings round the tires of wheels of carriages, rendering their motion easier and diminishing the noise they make while in motion.”

To accomplish this purpose, Thomson suggested using “a hollow belt (made from) India rubber and gutta percha and inflated with air. (Thus) the wheels will, at every part of their revolution, present a cushion of air to the ground, rail, or track on which they run.”

This elastic belt, as Thomson called his air tube, was made with several layers of canvas saturated with a rubber solution, after which the tire was vulcanized. Leather was used as a protective cover or outer casing, and the tire was inflated with a “condenser,” known today as a tire pump.

Thomson’s version of the air-inflated tire was successfully tested on horse-drawn vehicles but failed as a commercial proposition.

Thomson died in 1873 – the concept of the air-inflated tire being temporarily set aside only to be reborn at the hands of Dunlop 15 years later.

Though contemporaries, born approximately 60 miles apart in the northeast part of Scotland, apparently neither inventor was aware of the other’s work. In fact, had Dunlop known of Thomson’s previous patent, he undoubtedly would have selected a potentially more successful strategy when filing his patent application.

Instead of unsuccessfully hitching his fortune to the principle of the air-inflated tire itself, Dunlop might have been better off to base his patent claim on some method of attaching the tire to the wheel.

But since the Belfast veterinarian was unaware that the pneumatic tire had been previously patented, his attempt ultimately proved unsuccessful, depriving Dunlop of a monopoly on one of the most explosive markets in the history of mankind.

Matters were made worse when Thomson’s patent didn’t come to light until after Dunlop and several financial backers had floated a corporation to exploit his presumed monopoly of the air-inflated tire.

Discovery of the Thomson patent in 1890 meant that Dunlop had no patent. And so his company – known then as the Pneumatic Tyre and Booth's Cycle Agency and many years later as Dunlop Rubber Co. – suddenly was without the monopoly on which it had been founded.

This obviously disappointed the venture's participants and contributed to strained relations between Dunlop and corporate officials. Dunlop left the firm in 1895, selling his company stock in the process.

In addition to inventing the first "practical" (commercially successful) air-inflated tire, Dunlop also contributed the words "pneumatic tire" to the world's vocabulary.