

The watch also appears to have an early example of a non-magnetic and auto temperature compensating balance and balance spring. It is likely that the real reason for the lack of commercial success of the submarine wristwatch was probably that very few people actually needed or wanted a waterproof wristwatch in 1917, when it was only military men who wore wristwatches, and few of them needed their watches to be waterproof and non-magnetic, perhaps only submarine commanders. The overwhelming fashion for civilian men was the pocket watch, and of course none of them would have contemplated tucking a pocket watch into their bathing costume—or at least the manufacturers thought so.

The launch of the Oyster waterproof wristwatch in 1927 was a transformational event for Rolex. But the successful promotion of a waterproof wristwatch with a modern style advertising campaign, as something that the average person should want or needed, was a particular vision of Hans Wilsdorf, similar to the way that Steve Jobs had a vision for the iPod, iPhone, and iPad and almost single-handedly created markets for portable MP3 players and tablet computers. Waterproof watches existed before the Rolex Oyster, but they needed advertising and promotion, such as the famous cross-Channel swim of Mercedes Gleitze carrying an Oyster, to make their very existence known and to capture the public imagination.

Without such a visionary to champion its cause, the revolutionary waterproof submarine wristwatch, like its eponymous creators and their submarines, disappeared beneath the waves of history.

Notes

1. David Boettcher, "The Rolex Screw Down Crown and Its Antecedents," *NAWCC Watch & Clock Bulletin*, No. 389 (December 2010): 677-688.

2. Dennis Harris, "The Early Wrist Watch in Times of War 1899-1920," *Horological Journal* (August 1998).

3. *The Horological Journal* (December 1917): 41. No named author.

4. Bruce Shawkey, "Tavannes: Rebuilding a Brand," *NAWCC Watch & Clock Bulletin*, No. 402 (March/April 2013): 175-179.

5. Compressible gaskets made of materials such as leather and this plaited material were used from the nineteenth century in silver screw back and bezel cases, because the silver threads could not stand a high force and the screws were closed by hand. In the late 1920s stainless steel screw back cases came into use. These were stronger and could be closed by spanners or keys, and lead gaskets began to be used.

6. From June 1, 1907, the cases of all gold and silver

watches imported into Britain were required to be assayed and hallmarked at a British assay office with hallmarks that were different from those on watches made in Britain to identify easily watches of foreign manufacture.

7. "La Classification Horlogère des calibres de montres et des fournitures d'horlogerie Suisse," A. F. Jobin, 1936.

8. In *Swiss Timepiece Makers* Kathleen Pritchard, apparently quoting from Haswell, says that Paul Perret was a precursor of Guillaume in inventing an autocompensating material for balance springs, but this appears to be incorrect. When Guillaume announced his discovery of Invar in 1896, Perret immediately asked him for a small piece, which he made into a balance spring. Perret found that a watch fitted with this spring gained in rate with increasing temperature, discovering that the temperature coefficient of elasticity of Invar was positive, something Guillaume hadn't tested for because he was principally interested in dimensional stability. Guillaume and Perret collaborated on researching materials for balance springs and balances until Perret died in 1903.

9. David Read, private communication with David Boettcher, June 19, 2013.

10. David Boettcher, "The Omega Watches Marine and Marine Standard: Two Unusual Waterproof Watches from the 1930s," *NAWCC Watch & Clock Bulletin*, No. 395 (January/February 2012): 34-45.

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