

Self-winding wrist watch clocks up 80 year anniversary

4 June 2003 - British watch repairer, John Harwood patented the self-winding wrist watch 80 years ago on 7 July 1923.

Although other self-winding watches had been made prior to Harwood's invention they were fob watches, which were bulky and expensive. Conversely, most wrist watches of the day used an exterior winding crown to wind-up the watch. These were often inaccurate because dirt got into the movement and damaged the watch. John Harwood wanted to design a watch that had its winding mechanism inside which would be impervious to grit and safe from the human error of overwinding.

In 1923, Harwood from the Isle of Man, developed a wrist watch that had enough power to wind itself. It was based on a 'hammer winding system', where the mechanism had a semi-circular weight that pivoted at the centre of the movement through a 300 degree arc. The swinging weight was actuated by the movement of the wearer. A friction plate was fixed in the mechanism, which prevented overwinding. Having no crown, the hands of the watch could be reset by rotating the bezel round the clock.

Harwood and his backer Harry Cutts from Cheshire were the first to mass produce the self-winding wrist watch when they formed the Harwood Self-Winding Watch Company which commissioned the Swiss firms, Fortis and A. Schild to make the watches. The watches went on sale in 1928 and 30,000 were made before the company went under due to the depression in 1931.

The Rolex Watch Company in 1930 developed a variation on Harwood's patented invention where the central rotor swung in a full 360 degree circle. Sold as the 'Rolex Oyster Perpetual' it continued to accurately keep the time 35 hours after the wearer removed the watch. The Rolex watch was a significant improvement on Harwood's wrist watch which kept ticking accurately for only 12 hours after the wearer removed the watch.

Harwood's patent for the self-winding wrist watch (GB218487) can be viewed in the esp@cenet patent database.

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