

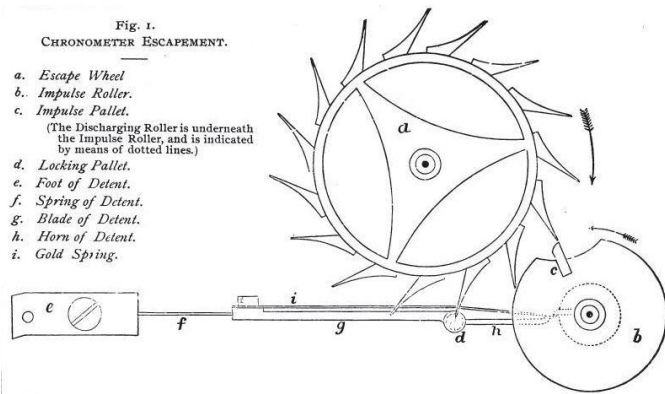
# History on Your Doorstep

## Tameside Inventors & Inventions

### Thomas Earnshaw 1749-1829



- Thomas Earnshaw was born on 4 February 1749 in Ashton-under-Lyne. At the age of 14 he was apprenticed to the watchmaker William Hughes of 119 High Holborn in London.
- He quickly gained a first class reputation, but made little money. Debts forced him to abscond to Dublin. When he returned, he spent time in the Fleet debtors' prison.
- In 1780 he devised a modification to a marine chronometer to replace a pivot with a specially designed spring. This was the chronometer escarpment. It was patented by Thomas Wright (for whom he worked) in 1783.



- A rival, John Arnold, had sight of Earnshaw's designs and patented a similar device in 1782. This caused much bitterness on Earnshaw's part.
- On 1 July 1789 Earnshaw was introduced to Nevil Maskelyne, Astronomer Royal at Greenwich. He tested an Earnshaw chronometer for six weeks and encouraged him to continue to make them.

- In July, 1791, Captain William Bligh purchased Earnshaw's chronometer no. 503 at a price of 40 Guineas for a voyage in HMS Providence from Tahiti to the West Indies.
- Earnshaw and Arnold were granted awards by the Board of Longitude for their improvements to chronometers in 1805. Earnshaw's design has been used universally in marine chronometers ever since.



*Earnshaw's Chronometer*

- Earnshaw died in 1829.
- Between 1831 and 1836, chronometer no. 509 was carried on HMS Beagle on a voyage to circumnavigate the globe and establish, for the first time, a chain of points around the world of accurately-known longitude.

