

# North East Inventors and Inventions

What is an inventor? Inventors make or design things that help to solve problems.

The North East has been home to many inventors and inventions, and some objects telling these stories can be found in the Discovery Museum.

## Inventor Investigation: Joseph Swan

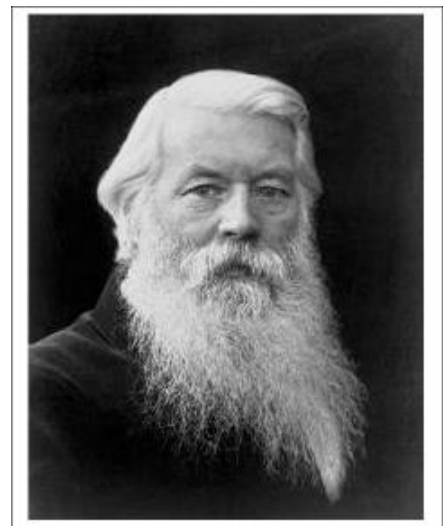
Use **Tyneside Challenge on the first floor** to find out information about Joseph Swan.

Name: Joseph Wilson Swan

Place of birth: Sunderland

Year of birth: .....

Year of death: .....



Joseph Swan's greatest invention was developing an incandescent light bulb however it was a challenge. Can you find out how many years it took him to develop?

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Swan was not the only person working on this invention. Can you find the name of his rival whom after a court battle formed a company with him called Ediswan?

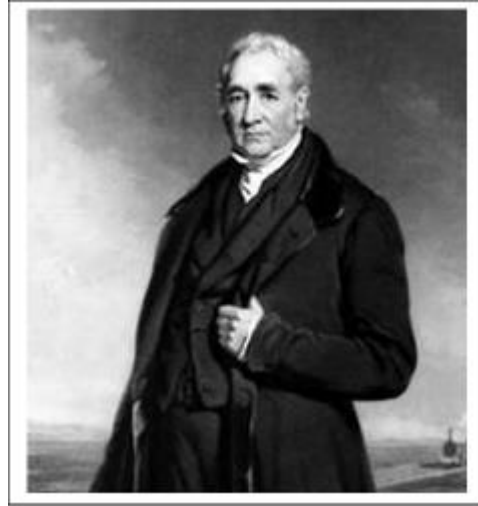
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Joseph Swan also made advances in other scientific areas. Can you find out what he accidentally invented when he was trying to make the filament for his light bulb? (Hint – his wife Hannah used it to crochet with).

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## Inventor Investigation: George and Robert Stephenson

Use **Tyneside Challenge on the first floor** to find out information about George and Robert Stephenson.



Name: George Stephenson Name: Robert Stephenson

Place of birth: Wylam Place of birth: Willington

Year of birth: .....Year of birth: .....

Year of death: ..... Year of death: .....

What was the relationship between George and Robert Stephenson?

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The first job George had was working in a mine with his father which inspired him to invent a safety lamp. Can you find out what a safety lamp is?

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Why do you think a safety lamp was such an important invention?

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Two other inventors also made successful safety lamps. Can you find out who they were?

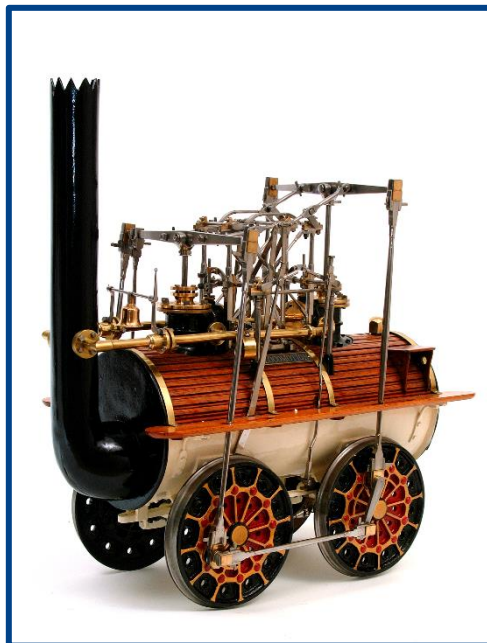
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George Stephenson was nicknamed 'Father of the Railways' and is best known for his use of steam power (with the help of his son Robert Stephenson).

Can you find out the names of some of the locomotives they designed?

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George and Robert Stephenson set up the 'Robert Stephenson and Company' to make locomotives in Newcastle in 1823. Can you find the model engine Locomotion?



What material was burnt in the engine to create the steam power?

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Robert Stephenson was also a successful civil engineer and built bridges including the High Level Bridge over the river Tyne. You can see a model of this bridge in the Story of the Tyne gallery on the first floor.

## Inventor Investigation: William Armstrong

Use **Tyneside Challenge on the first floor** to find out information about William Armstrong.

Name: William Armstrong

Place of birth: Shieldfield, Newcastle upon Tyne

Year of birth: .....

Year of death: .....



William Armstrong started his career as a lawyer but had a keen interest in engineering. One of the first machines he invented was the hydraulic crane. Can you find the model of this in the gallery?

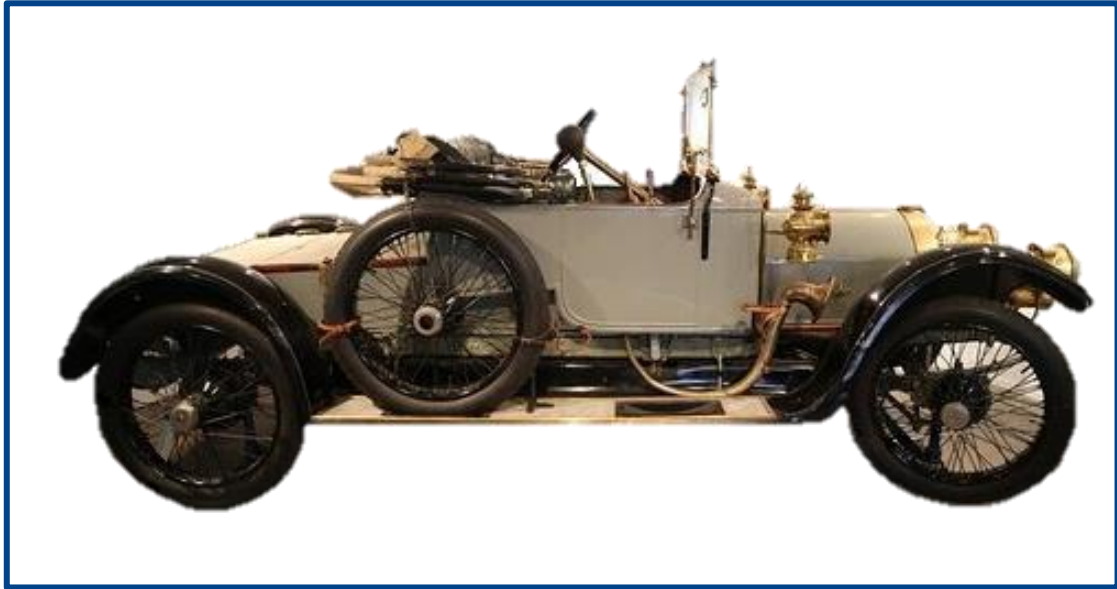
Why would a hydraulic crane be useful for traders along the Newcastle Quayside?

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Armstrong then went on to invent hydroelectric machines. Can you find the green one in the gallery?

Armstrong used hydro electricity to power the Swing Bridge on the River Tyne and his home at Craggside in Northumberland. You can see a model of the Swing Bridge in the Story of the Tyne gallery on the first floor.

Another invention which was made in one of Armstrong's factory was the Armstrong Whitworth car. It was created in 1906.



See how many differences and similarities you can find between cars used today and the Armstrong-Whitworth car

**Differences**

**Similarities**

## Inventor Investigation: Charles Parsons

Use **Tyneside Challenge on the first floor** to find out information about Charles Parsons.

Name: Charles Parsons

Place of birth: London

Year of birth: .....

Year of death: .....



Charles Parsons was born in London but moved up to Newcastle to work as an apprentice in a factory in Elswick. Can you find out the name of the factory's famous owner?

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Charles Parson is best known for his work developing steam turbines. It was his idea to put them inside ships to increase their speed. To show off how well this worked he put one inside Turbinia the ship in the museum's atrium.

He also put the turbines in Mauretania. Can you find a model of this ship in the gallery?

What do you think this ship was used for?

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Can you see the model of Turbinia at the front of the ship?

This is a scale model comparing the sizes of the two ships. Go out onto the balcony and look at Turbinia on the ground floor. Can you imagine how large Mauretania must have been?

Mauretania was built on the River Tyne and became the fastest ship in the world. Can you find out how many years it was the fastest for?

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