

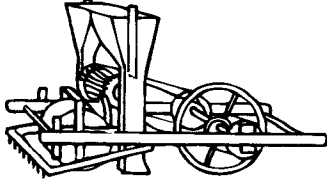
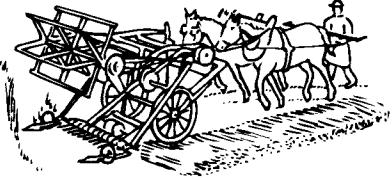
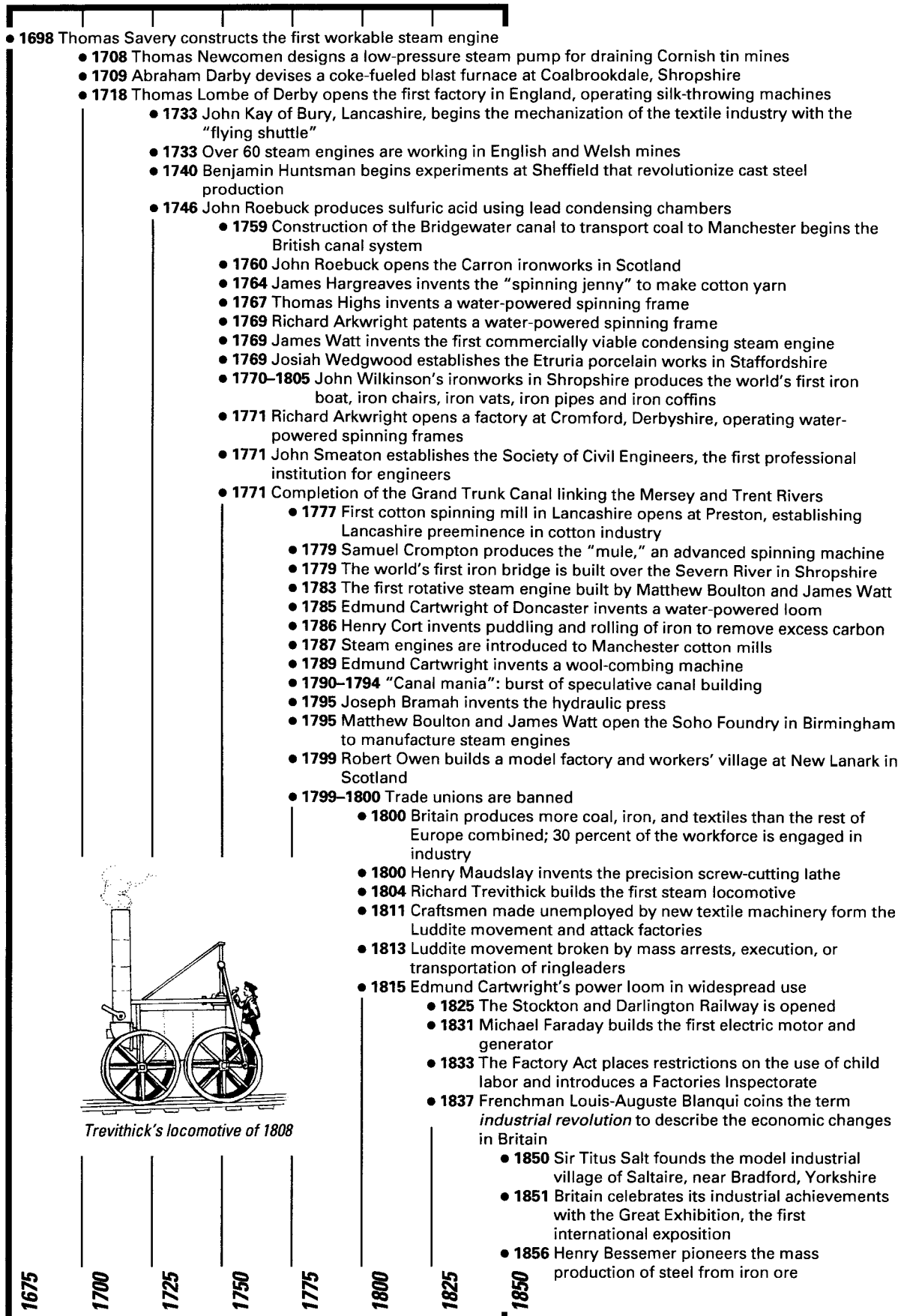


Agricultural Revolution in Britain 1700–1850

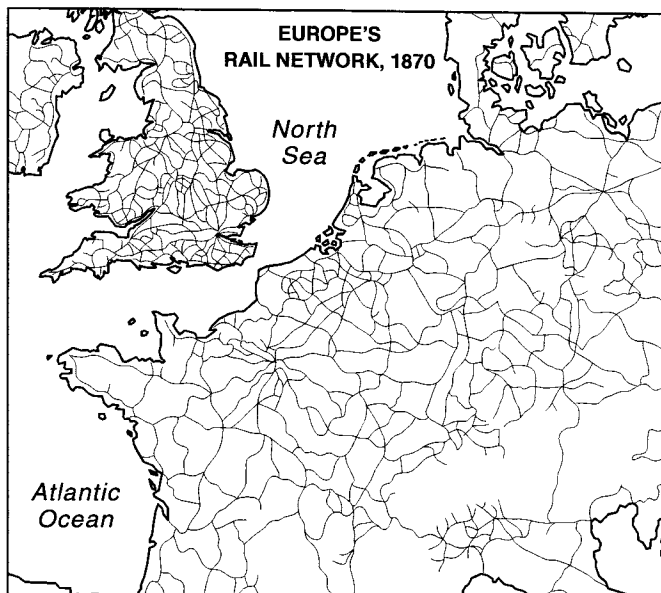
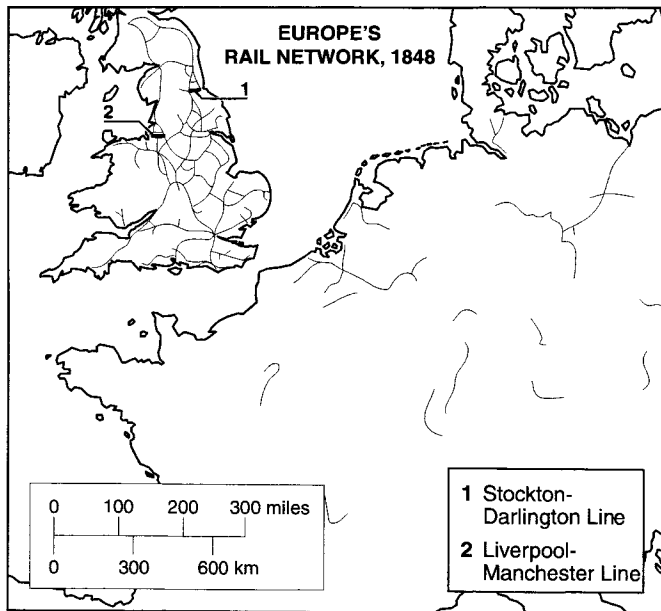
<p>CHANGES 1700–1850</p> <p>Enclosures</p> <ul style="list-style-type: none"> ● Land was fenced and reallocated under the Enclosure Acts, creating compact farms. This replaced the open field system of scattered strips of land in large, unfenced fields 	<p>IMPACT</p> <ul style="list-style-type: none"> ● Experimentation to increase productivity of the land ● Farms grew larger as wealthy landowners bought land from poor landowners who became tenant farmers. Those left with no land became farm laborers or moved to towns 	<p>INCREASE IN WEIGHT OF MARKET ANIMALS</p> <p>Cows (beef and milk)</p>  <p>1710 370 lb</p> <p>1795 800 lb</p> <p>Sheep (mutton and wool)</p>  <p>1710 38 lb</p> <p>1795 80 lb</p> <p>1 lb = 0.454 kg</p>
<p>Inventions</p> <ul style="list-style-type: none"> ● 1701 Seed drill, invented by Jethro Tull, allowed corn to be sown in regular rows ● 1703 The Rotherham plow, invented in village near Rotherham, Yorkshire ● 1786 Threshing machine, invented by Scotsman Andrew Meikle to separate ears of corn from stalks ● 1827 First reaping machine, invented by Scotsman Dr. Patrick Bell ● 1808 First all-iron plow, made by Robert Ransome ● 1850s Steam power was applied to plowing: fixed to long cables, plows were pulled across fields by stationary steam engines 	<ul style="list-style-type: none"> ● Less wasteful than scattering seed by hand; easier to kill weeds ● Easier to use; turned the soil more effectively ● Faster, more efficient, and requiring less labor (previously, this task was done by hand) ● Less labor intensive than cutting corn by hand (using a sickle or scythe) ● Stronger than wooden plows ● Steam plow could cut several furrows at once 	 <p>Jethro Tull's seed drill, 1701</p>  <p>Dr. Patrick Bell's reaping machine, 1827</p>
<p>Crop Rotation</p> <ul style="list-style-type: none"> ● Early 1700s, Viscount Charles "Turnip" Townshend used turnips (introduced from Holland) as part of a four-course rotation of crops to preserve soil fertility ● Clover, lucerne (alfalfa), and other leguminous plants were also used 	<ul style="list-style-type: none"> ● No longer necessary to leave a field fallow (unplanted) every two to three years to allow nutrients to replenish the soil 	<p>REASONS FOR CHANGES IN AGRICULTURE</p> <ul style="list-style-type: none"> ● Growing population, creating an increase in demand for food ● Increase in number of urban dwellers dependent on farmers for their food ● Improvement in transport (new roads, canals, and railways), making it easier to take food to the towns and to deliver coal and machinery to farmers ● Increase in corn prices resulting from reduced supply of corn to Britain from Europe during the Napoleonic Wars (1792–1815); higher prices provided an incentive to produce more ● Purchase of land by middle class who wanted to make profits from farming
<p>Use of Fertilizers</p> <ul style="list-style-type: none"> ● From the 1750s, farmers built dung pits (underground pits to hold and preserve animal manure) 	<ul style="list-style-type: none"> ● Manure added to the soil helped to produce better crops 	
<p>Drainage</p> <ul style="list-style-type: none"> ● Use of deep trenches for drainage and later (19th century) pipe drainage 	<ul style="list-style-type: none"> ● Less waterlogging of crops, resulting in higher productivity and profits 	
<p>Livestock Breeding</p> <ul style="list-style-type: none"> ● c. 1750, Robert Bakewell experimented with selective breeding (breeding from the finest animals) 	<ul style="list-style-type: none"> ● Better yields of milk and higher quality and quantity of meat and wool 	

Industrial Revolution in Britain 1675–1850



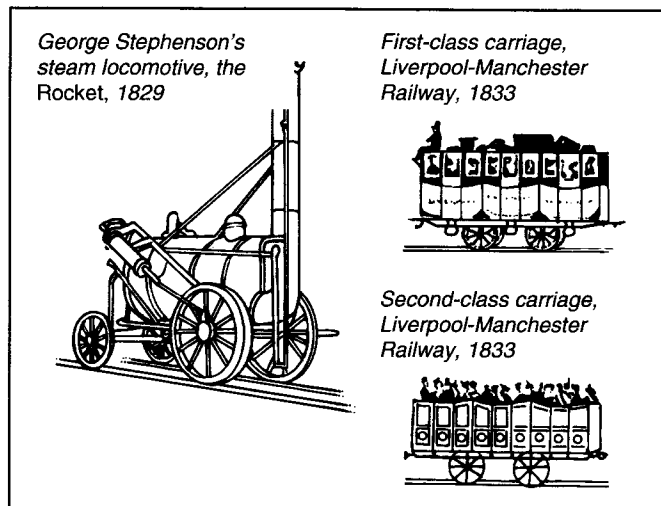
European Railways 1804–1880

Investment in transport before 1830 was directed into improving roads and building canals. The building of railways between 1830 and 1880 brought a transport revolution to Europe. Thousands of workers called navigators ("navvies") were employed to make cuttings, tunnels, and embankments and lay miles of railway lines (first iron and then steel) for steam locomotive transport. British railways, financed entirely by private investment, led the way in this development. The new railways stimulated the iron (and later steel) industries. They reduced the costs of transporting raw materials and finished goods and provided a new form of passenger transport.



EVENTS

- 1800
- 1804 Richard Trevithick builds the first commercial steam locomotive for an ironworks in south Wales, proving that locomotives with smooth wheels can run on rails and haul substantial loads
- 1810
- 1813–1820 First steam locomotives used by coal mines in northeast England
- 1820
- 1821–1825 Stephenson builds the Stockton-Darlington Line (northeast England)—carrying passengers as well as coal, it is the world's first public railway
- 1829 George Stephenson designs the *Rocket*, a locomotive that sets a record speed of 29 mph (47 km/h)
- 1830
- 1830 Liverpool-Manchester Railway opens in England—the first major railway. The *Rocket* is chosen to provide the motive power
- From 1834 The Belgian government provides state finance for railway development
- 1840
- By 1840 Britain, Belgium, France, Germany, Italy, and Russia start railway building. Austria, Holland, and Switzerland start railway building soon after
- 1850
- From 1842 French railway system combines state and private ownership
- 1860
- 1870
- By 1880 Europe has c. 65,000 miles (105,000 km) of railway
- 1880



Growth of the Labor Movement 1815–1917

