

In brief
January start to beauty classes

CANTERBURY: Beauty therapy courses at Canterbury Adult Education Centre have proved so popular that level 3 courses will start in January. Subjects include massage with aromatherapy oils, Indian head massage, stone therapy massage and reflexology. The courses run from 10 to 25 weeks and cost from £260 to £1,300, and financial help may be available. To enrol or for more information call 0845 606 5606 or visit www.kentadulteducation.co.uk

Cards for causes

CANTERBURY: Christmas cards and more will be available from a Cards for Good Causes shop opening in the city today, Thursday.

The shop will be in Nason's in the High Street and will stock wrapping paper, cards, decorations and napkins, with proceeds going to 300 charities. Over the last five years, charities have received more than £20 million from Cards for Good Causes. The shop will be open daily except Sundays until December 17.

For more or to buy online visit www.cardsforcharity.co.uk

Arts network

CANTERBURY: A new network connecting representatives from museums, galleries, archives and other arts and culture organisations has launched at the University of Kent. Created by the University's school of arts, the network will form a new group that can share its knowledge, skills and contacts.

Pioneering greats of our early railway networks

Way we were

Richard West
Founder, The Chaucer Education Project
vle.tcep.org.uk

NO LESS than four of the great 19th century figures in engineering were involved with the design and construction of the Canterbury and Whitstable Railway: William James; George and Robert Stephenson; and Thomas Telford. This was the first railway in Great Britain to regularly convey passengers by steam power.

In addition, in 1835, Isambard Kingdom Brunel and five colleagues travelled down to inspect the Canterbury and Whitstable Railway and demonstrated that it was safe to travel on a railway line with a one in 56 gradient through the Tyler Hill Tunnel.

When Brunel applied for an Act of Parliament to build the Great Western Railway, there was fierce opposition to the proposal to construct the Box Hill Tunnel in Wiltshire, between Chippenham and Bath, with a gradient of one in 100 through the tunnel.

One objector put forward the argument that there would be wholesale destruction of human life. Another objector tried to prove that



GOING UNDERGROUND: The Western Portal of the Box Hill Tunnel

a train with brake failure would lead the tunnel at 120 miles per hour, with the unfortunate passengers quite unable to breathe.

To prove the objectors were wrong, Brunel and his team of five people boarded a carriage outside the northern tunnel portal on the Whitstable side. The carriage was pushed to start it moving into the Tyler Hill Tunnel and was not attached to the stationary winding engine rope.

The carriage accelerated through the tunnel under its own momentum, increasingly gaining speed. As soon as the carriage exited from southern portal of the tunnel in St Stephens, after having travelled through the 828-yard length of the tunnel, Brunel applied the carriage handbrake and brought the carriage to a halt within 60 yards.

The experiment was repeated several times, with similar results obtained.

The Tyler Hill Tunnel on the Canterbury and Whitstable Railway was the world's first railway tunnel to be used for passenger services.

The tunnel subsequently became the prototype for railway tunnel design improvements, especially Isambard Kingdom Brunel's design for Box Hill Tunnel in Wiltshire, on the Great Western Railway mainline running from Paddington in London to Temple Meads in Bristol and on to the South West of England and Wales.

Construction of the Canterbury and Whitstable Railway began on October 31, 1825, when the chairman of the Canterbury and Whitstable Railway Company, John Brent, lifted the inaugural shovel of earth at the foot of Tyler Hill into a barrow, in a ceremony comprising a gathering of the directors, workmen and local residents.

It was calculated that two million four hundred thousand bricks would be required to build Tyler Hill Tunnel; 1,000 bricks for each foot of tunnel.

Six feet of tunnel brickwork was normally completed each day, while during the night, a second team of men excavated sufficient earth, using picks and shovels under pungent smelling tallow candle lighting, to enable the next day's construction to take place.

The completed tunnel was

opened with great ceremony on July 9, 1827 with a band playing as the company director's proceeded from their office in the City of Canterbury to the tunnel, to receive the acclamation of the miners and others. Following the opening ceremony, a dinner was provided for all the workers who built the



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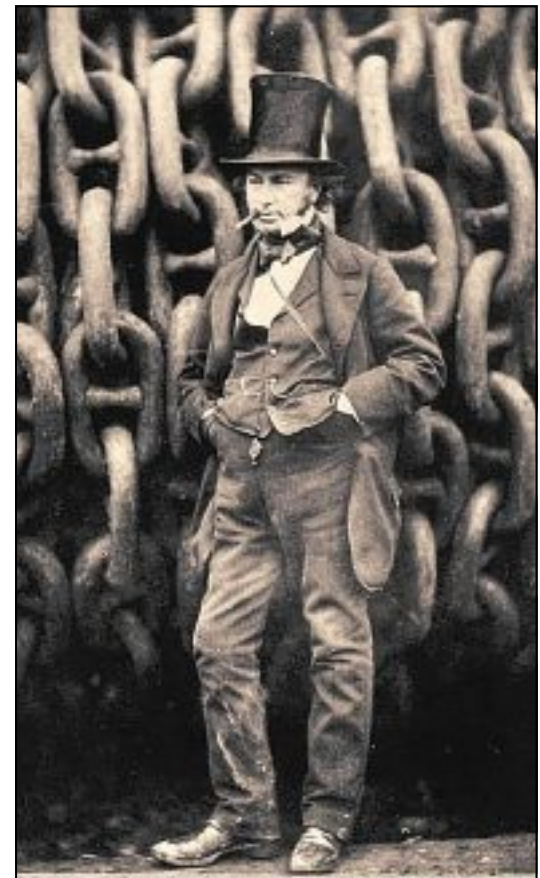
tunnel, by order of the Board of Works.

By 1836 and including the six miles of the Canterbury and Whitstable Railway, there was still only just 100 miles of railway line laid in the country. The dawn of the railway age had begun but it was still in its infancy.

The Stockton and Darlington Railway opened on September 17, 1825. However, all of its passenger carriages were hauled by horses until September 7, 1833. Horse power continued in use for hauling coaches on parts of the line until April 1834.

The Liverpool and Manchester Railway, for which the Rainhill Trials were held in 1829, did not open to the public until September 15, 1830.

Box Hill Tunnel still continues in daily use on the Great Western main line. The main contractor was George Burge of Herne Bay, responsible for constructing three-quarters of the tunnel commencing from the western end. Construction began in December 1838 and was completed in April 1841, with train services commencing through the tunnel two months later. One hundred navvies died during construction of Box Hill Tunnel.



ENGINEER: Isambard Kingdom Brunel

TIMES

Travel

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