Castle Class 4 - 6 – 0

Photo - Dave Stick

Photo - Aster Hobby

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A History of the Castle Class

The origins of this highly successful design date back to Mr. G. J. Churchward's famous 'Star' Class of 1907. These 4 cylinder 4-6-0s with long travel valves, and belpaire fireboxes were an immediate success on the GWR's top-link express duties to the west of England. However, with increasing loads the Stars had little in reserve to maintain the restored pre- World War One timings. Mr. C.B. Collett succeeded Churchward as Chief Mechanical Engineer in 1922 and faced an immediate task of providing more power with little ability to increase axle weight. Thus, the Castle class was born. When introduced they were heralded as Britain's most powerful express

passenger locomotive being some 10% more powerful than the Stars. The Castle class locomotives had a larger boiler and cylinders bores were increased from the 15 to 16 inch diameter. The first, No 4073 'Caerphilly Castle', made its debut at Paddington station on August 23, 1923.

During 1924, 'Caerphilly Castle' was exhibited at The British Empire Exhibition, Wembley alongside Sir Nigel Gresley's 'Flying Scotsman'. The Great Western engine was declared to be more powerful than its bigger LNER rival. During the subsequent 'Locomotive Interchange Trials' between the GWR and LNER No. 4079 'Pendenis Castle' operated on the East Coast Main line alongside Gresley Pacifics; while LNER 4474 'Victor Wild' was sent to work between Paddington and Plymouth alongside No. 4074 'Caldicot Castle'. All locomotives acquitted themselves well but the compact Castle class demonstrated their superior fuel and water efficiency.

So successful was the Castle class design that construction continued at intervals until 1950 by which time 171 has been built. This included 15 converted from the Stars class plus the rebuilding of the 'The Great Bear', the Great Western's only Pacific locomotive.

In 1946 Mr. F. W. Hawksworth, Charles Collett's successor, introduced a higher degree of superheat to the Castle boiler with resulting increased economy in water consumption. From 1956, the fitting of double chimneys to selected engines, combined with larger superheaters further enhanced their capacity to sustained high speed performance. In 1958, No. 7018 'Drysllyan Castle' fitted with a double chimney and a four row superheater ran 'The Bristolian' express reaching 100 mph. at Somerford.

The Castles handled all but the heaviest loads, these being entrusted to the thirty strong 'King' class (modeled by Aster in 1990). The King class were themselves a development of the Castle class with a larger boiler and slightly smaller wheels for increased tractive effort.

The final Castle to be run in British Railways service was No. 7029 'Clun Castle', which worked the last steam train out of Paddington in 1965. However, that was not the end of the story for this long lived and popular class of express locomotives.

Preservation

Eight Castles have been preserved. The pioneer No. 4073 'Caerphilly Castle' lies at the Swindon GWR Museum. No.7029 'Clun Castle' built in 1950 and fitted with a double chimney represents the final development of the class. No. 4079 'Pendennis Castle', which scored a triumph for the GWR in the locomotive interchange trials of 1925, is still with us having been repatriated in 2000 from a 23 year sojourn in Australia by the Great Western Society. Five others were rescued after languishing for years in a South Wales scrapyard and four have already been restored to working condition including the popular 5029 'Nunney Castle'.

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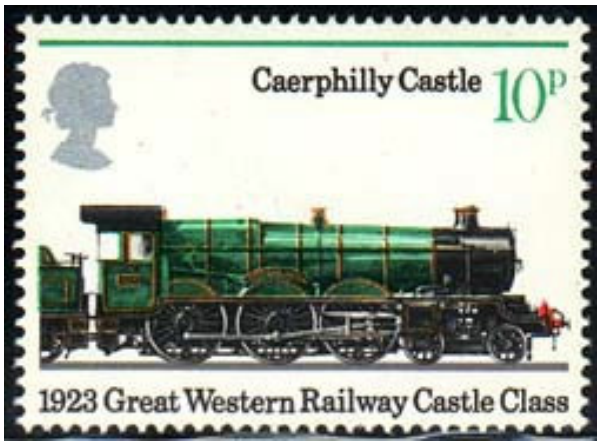

The Aster Model

No. 5015 'Kingswear Castle' was named after the fortification built in 1502 to assist in the protection of Dartmouth harbor, the locomotive entered service in 1932 as one of the first of the '5013' Castle series. Furthermore, Kingswear Castle was one of just a few to retain its tapered front buffers, inside cab sandbox fillers and tall chimney into British Railway days. It was withdrawn in April 1963.

So today Great Western Castle class locomotives with their beautiful green lined orange / black livery and polished brass and copper fittings delight and thrill enthusiasts with their majestic beauty and exhilarating performance! Long may they steam

!

Specification

Scale/Gauge	1/32 scale, Gauge One (45 mm)
Weight	5.38 kg (locomotive 3.74 kg + tender 1.64 kg) (11.86 lbs)
Length	628 mm (24.72 inches)
Width	91 mm (3.58 inches)
Height	128 mm (5.03 inches)
Wheel Arrangement	4-6-0
Driving Wheel	dia 62.0 mm
Pilot Truck Wheels	28.0 mm
Tender Truck Wheels	dia 39.0 mm
Axle Driven Pump	bore 5 mm ×stroke 6 mm - fitted to loco with by pass valve
Cylinder	4 cylinders bore 10 mm × stroke 20 mm with slide valve Valve travel 6 mm. Cut-off at full gear: 75%
Valve Gear	Walschaert with screw type reverser
Boiler Type	modified "C" type with 4 flue tubes
	(dia 16 mm smoke tubes x 2. dia 5.35 mm water tubes x 2)
Water Capacity	254 cc (at 80% full)
Normal Working Pressure	4 kg / cm2
Burner	3 tube alcohol burner
Boiler Fittings	Water Gauge, Pressure Gauge, Safety Valve, Check Valve, By-Pass Valve, Regulator Valve, Blower Valve
Lubricator	Roscoe Displacement Type in cab under footplate
Tender	Lift out fuel tank. Water tank with hand pump
Water Tank Capacity	250 cc
Fuel	Methylated alcohol
Fuel Capacity	258 cc
Minimum Radius	2 Meters (6 ½ feet)

Please note: specifications are subject to change without notice