

## Screw corvettes (2nd class, 220-260 nhp)

CHAPTAL (220 nhp, launched 1845)

CATON (260 nhp, launched 1847)

### CHAPTAL screw corvette (2nd class)

Displacement:	1007t
Dimensions:	178ft 2in wl x 31ft 3in x 12ft 4in mean. Depth 11ft 2in
Same, meters:	<u>54.30 x 9.53 x 3.76m. 3.40m</u>
Machinery:	220nhp (Cavé). Direct, 9.8kts. Coal 260t
Hull material:	Iron
Armament:	(1846) 1-22cm No.1 shell, 1-22cm No.2 shell, 2-30p No.1. (1847) 1-22cm No.2 shell, 1-30p No.1. (1860) 4-16cm shell
Complement:	123

<u>Name</u>	<u>Builder</u>	<u>Laid down</u>	<u>Launched</u>	<u>Commiss.</u>	<u>Fate</u>
CHAPTAL	Cavé	7.44	9.12 45	1.8.46	Lost 25.10.62

**Class.** This ship was originally one of three 220nhp paddle corvettes scheduled to be begun in 1842. Two of these were built as wooden-hulled paddle steamers in which conventional side-lever engines in Cassini were compared with the new type of oscillating-cylinder direct-acting engines in Titan. To extend the experiment, Chaptal was ordered to be built exactly as Titan but with an iron hull and a screw propellor. Boucher's plans for the hull were approved in 7.42, and an engine identical to that in Titan was ordered in 9.42, the expectation being that it could be connected to a screw through gearing. Before ordering the propellor and gearing, however, the navy sponsored experiments with various forms of screw propulsion which Cavé carried out on the Seine between 2.43 and 12.43 in his own steamer Oise. Cavé concluded that direct drive and a different machinery layout were preferable, and received a contract for new engines in 10.44. (The original engines were used in Newton.) He also found it necessary to depart from Titan's hull plans and lengthen the stern 4ft 7in to provide finer lines for the screw. (The hull retained the slab sides of a paddle steamer, however.) The ship was to have had only two masts, but she was completed with an experimental 3-masted rig which she retained. Chaptal was the first screw ship with direct drive in either France or Britain. By 1859 this pioneering machinery was requiring excessive care, and new engines were ordered for the ship from FCM on 30.1.60 and installed in 1861.

**Disposal.** Chaptal was blown ashore in a storm near Vera Cruz during the Mexican operation. Her machinery was salvaged and reused in Linois (1867). Her wreck was sold 14.3.63.

### CATON screw corvette (2nd class)

Displacement:	892t
Dimensions:	178ft 5in wl, 186ft 11in deck x 30ft 5in wl, 30ft 9in max x 11ft 11in mean, 13ft 0in max. Depth 11ft 4in
Same, meters:	<u>54.38, 56.98 x 9.28, 9.37 x 3.62, 3.97m. 3.46m</u>
Machinery:	260nhp (Schneider). Oscillating cylinders, geared, 10.30kts
Hull material:	Iron
Armament:	(1848) 8-16cm shell. (1864) 6-12cm rifles
Complement:	123

<u>Name</u>	<u>Builder</u>	<u>Laid down</u>	<u>Launched</u>	<u>Commiss.</u>	<u>Fate</u>
CATON	Toulon	20.6.44	1.5.47	12.7.47	Stk. 30.1.74

**Class.** In 1842 the 26-year old Dupuy de Lôme was sent from Toulon to England to learn the techniques for building iron-hulled ships. In 5.43 Toulon sent to Paris plans for an iron shipbuilding facility and for a 220nhp paddle steamer to be built there. Paris approved the plans in 8.43 but ordered "slight modifications" to allow the use of a screw propellor instead of paddle wheels. Dupuy de Lôme quickly found that the screw required a totally different type of hull, and submitted new plans which were approved in 1.44. The hull was complete by the middle of 1845, but the engines were not ordered until 8.46 due to long bureaucratic delays in Paris. By this time, new engine technology made possible an increase in power from 220 to 260nhp. The ship was brig-rigged and had a sail area of 1491 sq.yd.

All 2nd class corvettes of 260nhp and below, including Caton and Chaptal, were reclassified as 1st class avisos in 1855 and the remaining corvettes were merged into a single "corvette" category covering ships in the 300-400nhp range.

**Disposal.** Caton was BU 1875 at Toulon.