The first navigation lock on the River Murray was completed at Blanchetown in South Australia in 1922.

The first navigation lock on the Murray-Darling system was constructed near Bourke on the Darling River in 1897. This lock served as the prototype for locks later constructed on the River Murray.
River Murray Navigation

The locks and weirs were originally constructed on the River Murray to enable transport by barge and later by smaller vessels. Today, they are maintained and operated by the Murray-Darling Basin Commission to provide a safe and efficient navigation system.

**River Murray Navigation Lock Construction:**
- Goolwa 1940
- Tauwitchere 1940
- Lock 1 Blanchetown 1922
- Lock 2 Waikerie 1928
- Lock 3 Overland Corner 1925
- Lock 4 Bookpurnong 1929
- Lock 5 Renmark 1927
- Lock 6 Murtho 1930
- Lock 7 Rufus River 1934
- Lock 8 Wangumma 1935
- Lock 9 Kulnine 1926
- Lock 10 Wentworth 1929
- Lock 11 Mildura 1927
- Lock 15 Euston 1937
- Lock 26 Torrumbarry 1924

**Lock Design:**
A lock is a simple device, a rectangular chamber of concrete with gates at each end. Locks have made it possible to enable boats to move from one level to another without danger or loss of large quantities of water.

**Lock Sizes:**
There are two sizes in the locks on the River Murray, one including the small locks on the Upper Murray. These upstream of the Darling junction are shorter than those between Blanchetown and Waikerie. The River Murray Commission adopted the larger lock before the Darling junction because of the greater volume of traffic along that section of the river in the early 1920s. To reduce construction costs and because there was less traffic above the Darling junction, the smaller locks are used for locks Maude and Torrumbarry weirs.

**Passing Through a Lock:**
For a boat to pass downstream through the lock, the river inside the chamber will be at the same level as the top weir, to allow the boat to gap. The next lock on the downstream side is opened large hydrodynamically operated butterfly valves just ahead of lock gates. The butterfly valves are slightly higher than the average house door. Water flows from the lock chamber, via tunnels, to the weir pool above. The gate is lowered by hydraulic pressure formed behind valves, and the boat is lowered into the lock chamber by hydraulic pressure generated throughout the lock and the boat continues on its way. The water levels in the chamber are then adjusted by opening and closing various gates and sluice gates are adjusted to suit the water levels throughout the lock. After the water has levelled, the lock gates are closed behind the boat, and the chamber is filled with water. When the water level in the lock chamber is equal to the water level at the top weir, the gate can be opened and the boat can proceed. It takes only 15 minutes to empty to fill the lock chamber, but natural flow takes 15 to 30 minutes to pass a boat through the lock. So through-traffic boats can be accommodated in one lockage.

**Lock Operators:**
This is a simple design: a rectangular chamber of concrete with gates at each end. Locks have made it possible to enable boats to move from one level to another without danger or loss of large quantities of water.

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