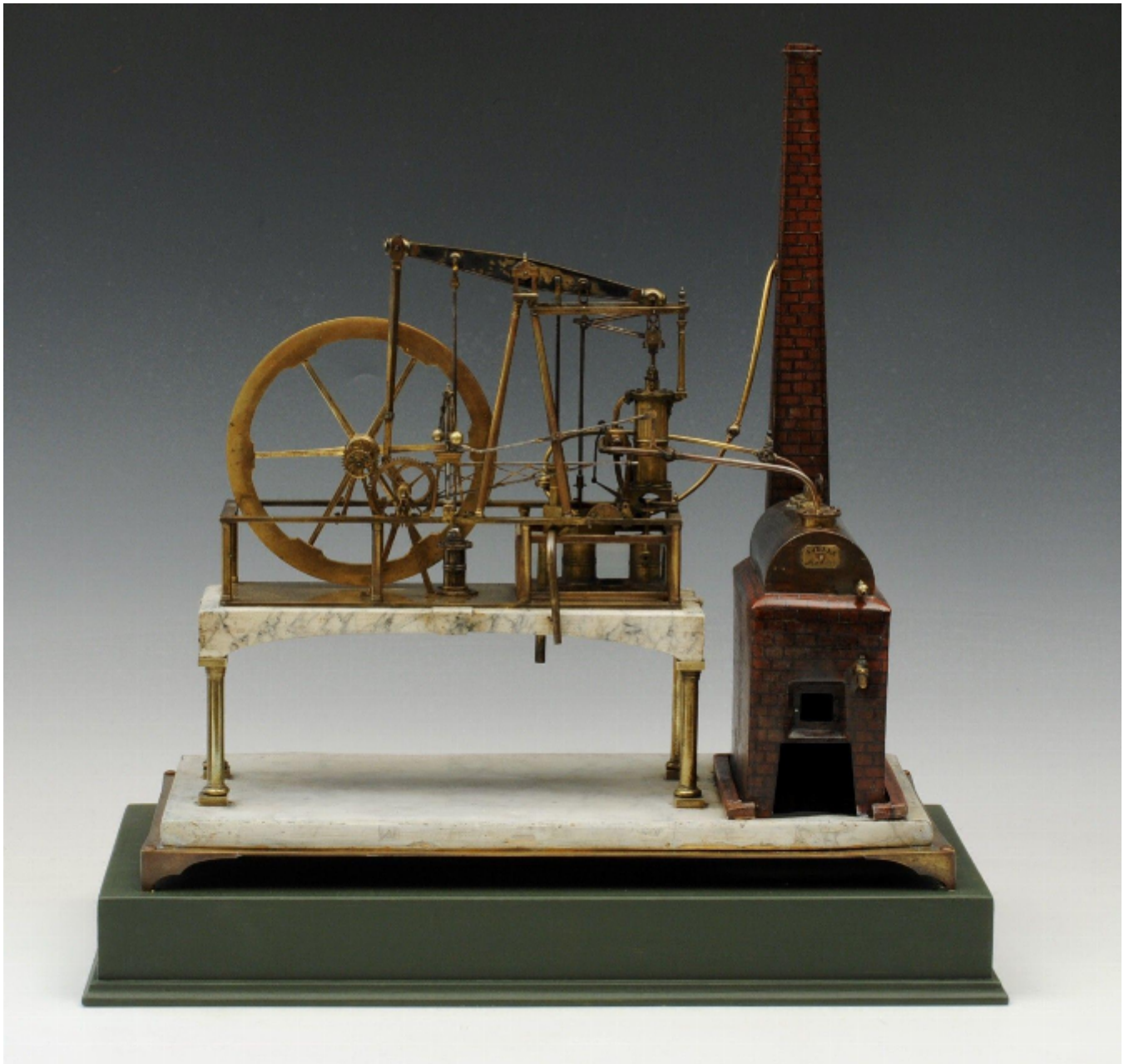


superb early 19th century model Watt steam engine

Sold



REF: 288417

Height: 39.37 cm (15.5")

Width: 38.1 cm (15")

Depth: 19.05 cm (7.5")

Description

A superbly engineered model of a Watt steam engine by SARLES who must have been a watch maker to have made such a fine model.

This beautiful model of a single cylinder, double acting, rotative beam engine incorporates three of James Watt's most significant inventions which dramatically improved the efficiency of earlier types of engine. The piston rod is connected to the end of the beam via a Watt's linkage, an elegant solution to the problem of converting vertical movement to rotary. This robust mechanism proved so versatile that it is commonly used in car suspension linkages to this day.

Although the centrifugal governor was a 17th century invention used in windmills, Watt used it to prevent a steam engine from accelerating out of control when it was relieved of load.

Perhaps Watt's greatest invention was the separate condenser. When Watt was renovating a model of a Newcomen engine in the 1760s, he realised that the inefficiency of this design came from the cooling of the cylinder at each stroke. He thought that if he could introduce a separate 'condensing chamber' it would maintain the working cylinder at full temperature, and dramatically improve working economy.

The model also shows how the flywheel could be geared up to run at twice the engine speed, very useful for an engine used for pumping water because it allowed for a lighter flywheel and made the action much smoother.