

SA721891

Early Nineteenth Century Dobereiner Lamp by Johann Cassel of Vienna

Price

Sold**Item Reference: SA721891****Date of manufacture: 1800**

Dimensions

Height = 23 cm (9.1")

Width = 14 cm (5.5")

Depth = 14 cm (5.5")

Description

For sale, an early Nineteenth Century Dobereiner lamp by Johann Cassel of Vienna. This fascinating piece is often considered the pre-cursor for the humble cigarette lighter but it is ultimately more interesting. Working by means of pure chemistry, the main glass jar would be filled with a dilute mix of sulphuric acid, the brass lid has a wax seal on the underside with a secondary bell shaped glass jar attached to the centre which is open at the base and hangs free within the outer jar. Inside the bell jar is a piece of zinc suspended on a hook. When the zinc comes into contact with the sulphuric acid it reacts and creates hydrogen which fills the internal bell jar and pushes the acid down by means of hydrostatic pressure. Once the acid is pushed back to below the zinc, the reaction ceases and the lighter is fully charged. The top of the lamp has a spring release which allows the hydrogen to escape through a jet on the side which exhausts towards a receptacle containing platinum gauze. The reaction of the hydrogen, air and platinum causes the platinum to react, heat up and light the gas being emitted causing a flame which can be used to light a match or wick. Once the ...

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