

# Anemometers as a Mining Collectible

*by Dave Johnson*

From the beginning of underground mining the problem of ventilation to supply sufficient oxygen for the miners has existed. Many methods were tried including the "fire lamp", which was left in the bottom of the shaft in coal mines during the night to burn off the methane gas. This was followed by the upcast ventilating furnace located at the bottom of the shaft, frequently below a separate compartment within the shaft. As the warm air rose through the furnace compartment of the shaft it drew fresh air down the main part (downcast) of the shaft. Other early ventilation methods included large bellows, falling water, heated air pipes, and steam jets. The



*ABOVE: Davis & Son single dial anemometer.*

first mine ventilation fan was invented by Nasmyth in 1851 and embodied the principles of the centrifugal fan as we know it today. With improvements, the Nasmyth fan quickly replaced the less efficient ventilating furnace and other primitive ventilation methods.

#Originally it was thought best to have a single air current passing continuously through all the mine-ways, which in older mines meant that the air current had to travel considerable distances. By 1850, due to the work of Hopton, the coal mine operators began to see the wisdom of splitting the air currents to more efficiently and safely reach all of the underground workings.

*RIGHT: Closeup of Davis & Son single dial model.*

