



## MINERS' CANDLESTICKS

Mining is difficult and dangerous work. It is made even more so because mining occurs underground, in the dark. The first problem that miners in any century have had to solve has been finding a reliable light source so that they can see to work. Miners in ancient Greece and Rome carried clay oil lamps to light their way. When tallow candles appeared, they rapidly replaced earlier forms of lighting. These early lighting methods presented some problems, too.

A miner needs both hands to work. When holding an oil lamp or a tallow candle, a miner cannot work. Setting the candle or lamp on the floor of the mine did not work either. Water, ore, or a careless miner's boot could snuff the flame and leave the miner in the dark. Setting the candle down also limited its effectiveness. A stationary light source placed on the ground casts shadows on the walls and roof of the mineshaft, making it more difficult to work. Miners not only needed a source of light, but also one that was portable.

The first solution to the portability problem was to fashion a lump of clay that would hold a candle or small lamp to the wall. In the mid-19<sup>th</sup> century, miners began to craft candleholders from metal rods and spikes. They usually had a loop at one end for attaching to a belt or slipping over a thumb. The opposite end was sharpened so that it could be jammed into cracks and crevices in the rock or into the timbers that reinforced the walls and ceiling. In the center was a small circle that held the candle as well as a hook that could slip over a loop in a miner's cap. By the 1870s, blacksmiths were fashioning hundreds of these devices. The first patent for this type of candleholder was issued in 1872, and mass production began. Miners in the Great Lakes Region and in the American West preferred these spiked candleholders and soon began referring to them as "Sticking Tommies," as they resembled an oil lamp called a "Tommy Sticker" that had been in use in the fishing industry in the Northeast for many years.

"Sticking Tommies" remained the most popular lighting device in the mines until the invention and introduction of the carbide lamp in 1892. Even though it burned longer and brighter, the carbide lamp only slowly replaced candles in the mines. The first patent for a carbide lamp was issued in 1900, and by the beginning of the First World War in 1914, the carbide lamp had replaced the miners' candlestick as the primary source of underground lighting.