



The Challenge & The Guineas

By Fletcher Madden #1520

Working as a locksmith in the 21st century requires countless hours of research, practice and dedication. Whether you are learning about the first Egyptian pin-tumblers or the inner workings of a security



FACE

pinned filed Medico bi-axle, a wide spectrum of understanding is needed. The following story has been told many times over the years and is an example of how persistence and creativity can overcome even the most secure lock systems.

In the summer of 1851, at the height of the Industrial Revolution, the first America's cup was raced, the Immortal chess game was played and England hosted the Great Exhibition. Prince Albert proudly displayed to the world Britain's industrial, military and economic superiority with the construction of the Crystal Palace in Hyde Park, London England. The palace was built with over a million feet of glass and held 13,000 exhibits viewed by over six million visitors. Visitors from around the globe observed many spectacles of ingenuity and amazement, including the 50-year-old challenge lock that remained unopened on Joseph Bramah's locksmith shop.

In 1801, Bramah hung a large lock of great beauty in his shop window at 124 Piccadilly which contained the inscription, "The artist who can make an instrument that will pick or open this lock shall receive 200 Guineas the moment it is produced." The barrel shaped padlock used a small tubular key with cuts on the end used to depress slides inside the lock freeing the bolt much the same way a sheer line is created inside modern pin tumbler locks. The 18 sliders inside the lock provided a combination with 470 million possibilities. Alfred Charles Hobbs knew of the cele-

brated lockmaker Bramah and his challenge lock. In 1851, on the steamship Washington, Hobbs travelled, with his chest of tools, across the ocean to the Crystal Palace. He presented his American locks to the Duke of Wellington, Prince Albert, the Prince of Wales and Queen Victoria. Mr. Hobbs also displayed his lockpicking ability with the successful defeat of Chubb's "Detector Lock". Bramah had died in 1814 and his representatives politely accepted Hobbs' request to attempt to pick the challenge lock, using his simple custom-made tools.

The challenge lock was removed from its half century window display and prepared for the attempt. Bramah's sons arranged a room above the shop where the lock was



BACK

sealed inside a wooden box with only the keyway exposed. Bramah was given 30 days to open the lock and began his attempt on the 24th of July, 1851. Thirty



CORE KEY

days later, after working a total of 51 hours, Bramah opened the lock. He presented the open lock to a committee of six men; Mr. G. Rennie, Dr. Black, Professor Cowper, Mr. Bazalgette, Mr. Abrahart, and Edward Bramah. During the next few days, Hobbs used his personally created tools to repeatedly open and close the lock without ever seeing the proper key. On the 30th of July the proper key was produced from its sealed case and used to open and close the lock thus ensuring that the inner mechanism of the challenge lock was undamaged. His performance caused a disruption within the lock committee, and the

chairman of the committee overseeing the



KEY BITTING

challenge wrote in the Bankers magazine, Vol.11, 1851:

"...he was allowed to take impressions of the key and the tops of the wards. Day by day he was shut alone with the lock, none being permitted to enter the room while he was at work and with the aid of 'thieves' wax', a hinged mirror in the keyhole, a strong light, all sorts of odd instruments, and with his great cleverness, he was successful on the lock..... we do not think that any lock can be found to resist such appliances"

It was not until September that Bramah received a cheque for 210 British pounds (equivalent of 200 Guineas) with a letter detailing the grievances of the committee. The vulnerabilities of the allegedly unpickable lock created much discomfort within the security establishment. Locksmiths know that absolute and impenetrable security systems do not exist and locks are only temporary barriers for creative and determined opponents. Many in the past have believed that the locks of the day had reached an impenetrable peak of technology. The events of the great lock controversy of 1851 are an example of how locksmiths would best serve the profession if they maintain an open mind toward others' accomplishments and modern developments in the field.

NOTE: The author of the pictures is Matt Blaze and we thank him for allowing us to use some of his pictures.

If you are interested to see more of bramah locks please visit his site at:

<http://www.crypto.com/photos/misc/bramah/>