

# Curator's Choice

## *The Disturbing History of Dentures*

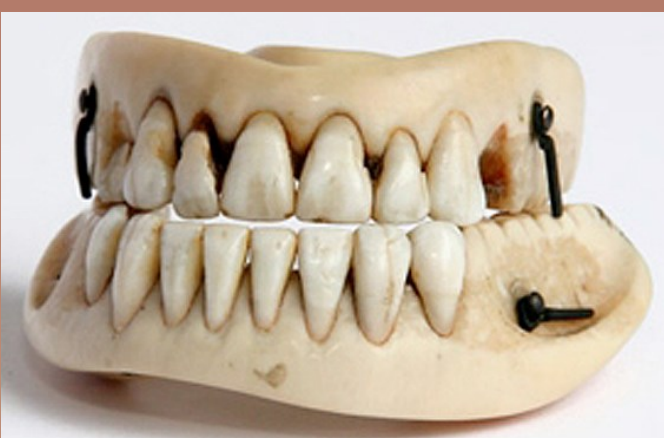
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**D**uring the 1980s, while excavating a series of late 18th and early 19th century rowhouses at the Queen's Street site in Fell's Point, Baltimore City, Maryland, archaeologists recovered an unusual, and slightly creepy, group of artifacts. These artifacts are fragments of both the top and bottom portions of a full set of dentures (Figure 1). The denture's main body is made from an early vulcanized rubber known as "vulcanite", with porcelain teeth attached to it by metal pins. Dentures may seem like a common item affordable and available for anyone; however, this was not always the case. They only became widely accessible in the late 1800s, after many years of patent infringement lawsuits that may have, ultimately, ended in murder.



Figure 1: Fragments of a set of vulcanite dentures found at the Queen's Street site in Baltimore City. White and pink colored porcelain "teeth" and "gums" were held in place by metal pins, which can be seen in the right side of the photograph.

**T**he earliest dentures were considered a luxury item and were constructed of wood with teeth carved from bone or hippopotamus ivory. The highest quality dentures used an ivory base and what were referred to as Waterloo teeth (Figure 2). These were actual human teeth either removed from the dead or extracted from living, destitute individuals looking to make some money. Barrels of Waterloo teeth scavenged from battlefields during the American Civil War were even shipped back to England (British Dental Association, Wynbrant 2000: 151). These early dentures were typically created by a craftsman, not a doctor or dentist, and fit very poorly often causing further pain and discomfort. Also, because of the time and materials needed to construct dentures, they were only available to the upper classes. Members of the middle class, who also had poor dental health, would have gone without (British Dental Association).



**H**owever, this all changed with the invention of vulcanite, a soft rubber material that could be easily molded and then hardened. Charles Goodyear perfected this process in 1839 and received patents for related vulcanite products in 1851 (Wynbrant 2000: 166). Dentists discovered this rubber could be molded to fit the mouth of each individual and then cured for more comfortable fitting dentures. Since vulcanite dried into an unnatural looking, dark reddish brown color it was only used for the main body of dentures. The "teeth" and surrounding "gums" were created out of porcelain and colored to appear more lifelike (British Dental Association).

**W**hen dentists first began making vulcanite dentures, Goodyear chose not to enforce its patent. One dentist even made a set of vulcanite dentures for Charles Goodyear himself. Goodyear's original patent expired in 1861, but was reacquired specifically for vulcanite dentures in 1864. Unlike years earlier when dentists who used vulcanite were ignored, this time an officer with the company, Josiah Bacon, made it his personal mission to collect fees from every dentist. He was referred to as the, "engineering Mephistopheles of the whole skinning raid upon the dentists" (Wynbrant 2000:168). Dentists were charged an annual fee based on the size of their practice, as well as royalties for each denture produced. Bacon would sue any dentist choosing not to pay the fees and then collect the monetary damages for his own use. Bacon even utilized spies in his search for offending dentists. He became known for sending beautiful ladies to pose as potential clients, bribing servants, and resorting to intimidation to collect his fees (Wynbrant 2000:166-169).

**I**n 1879, Bacon traveled across the country from Boston to San Francisco filing law suits along the way and pocketing the rewards. After reaching San Francisco, he made a special effort to track down dentist Samuel Chalfant. Chalfant had twice previously avoided paying fees by choosing instead to close his practice and move elsewhere. When Bacon brought Chalfant to court again, Chalfant was found guilty of patent infringement (Wynbrant 2000:169). What happened afterwards is unclear. One version of this tale recounts that the next day, Easter Sunday, Chalfant came to Bacon's hotel room distraught, seeking a settlement and offering to pay whatever he could. They argued and Bacon threatened to have Chalfant imprisoned. At the height of the argument, Chalfant pulled out his gun, which he claimed went off accidentally. In his fear he fled the hotel. All that is really known is that Bacon was found dead in his room, drilled with lead from Chalfant's pistol. Chalfant hid in a cheap boarding house in the city for a few days before turning himself over to the police (99% Invisible).

**A**fter Bacon's death, the Goodyear Company continued to call infringing dentists petty pirates and tried to redeem Bacon's image as an honorable gentleman protecting the rights of legitimate licensed dentists everywhere (Goodyear Dental Vulcanite Company). However after the murder, Goodyear decided it was no longer in its best interests to continue enforcing the patent for vulcanized dentures (99% Invisible, Wynbrant 2000:169). This allowed denture prices to drop and ushered in a period of comfortable, good quality dentures for everyone, greatly impacting the lives of ordinary individuals.

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