

# Dentists On Stamps

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## INTRODUCTION

Knowledge of teeth and problems with teeth have existed from the beginning of time. Dental decay, abscess, toothache, periodontal disease, and premature tooth loss have been documented in ancient chronicles. The exact time when dentistry made its appearance is not known; however, there is ample proof of its existence in ancient Egyptian, Etruscan, Assyrian, and Chinese civilizations. Early on, dentistry was a subspecialty of medicine, and early “dentists” were primarily physicians. The first person generally regarded to be a dentist was Hesy-Re (3000 B.C.), who lived during the third dynasty of Egypt. For his service to the pharaoh Djoser, Hesy-Re had the title of “Chief of Dentists and Surgeons,” although he was primarily a physician.

The American patriot Paul Revere (1735-1818) is known not only for his epic ride, made famous by Henry Wadsworth Longfellow (1807-1882), but also as a tradesman of extraordinary ability. He was a silversmith, engraver, and maker of artificial teeth that were worn by many famous Americans of his time. In 1778, the body of physician and American general Joseph Warren (1741-1775), killed at the Battle of Bunker Hill during the American Revolutionary War (1775-1783), was identified by dental work (two artificial teeth) made by Paul Revere.

Although the designation “dentist” did not become recognized until about 1759, 4 persons who can qualify as “dentists” and who have made significant contributions to dentistry have been honored on stamps: Arabian dentist Albucasis (936-1013), French dentist Pierre Fauchard (1678-1761), American dentist William Thomas Morton (1819-1868), and Maltese dentist Egidio Lapira (1897-1970). Albucasis was one of the earliest oral surgeons and is credited with significant contributions to the anatomy and care of the teeth; Fauchard is noted primarily for having written the first technical book devoted entirely to dentistry; Morton is credited with demonstrating the value and use of ether as a general anesthetic; and Lapira is known and honored primarily for his pioneering work and contributions to dentistry on the island of Malta.

The discussion of Dentists on Stamps can begin with the patron saint of dentists, St. Apollonia, whose feast day is celebrated on

February 9 in the Western world. She became known as the patron saint of dentists after her death and martyrdom in 249 A.D.

During the reign of the Roman Emperor Philipp (reigned 244-249 A.D.), unruly mobs roamed the streets of Alexandria, Egypt, looking for Christians to torture and kill. Apollonia, an elderly deaconess of the church in Alexandria, was among the victims. She was attacked by a mob and hit in the face, and all her teeth were knocked out. Afterward, the attackers kindled a large fire, threatening to cast her into it unless she renounced her Christian faith. When she refused, the mob grabbed her to throw her into the fire. However, she fought free of her captors and leaped into the flames.

There were 3 other victims of the mob that day at Alexandria. The first victim was Metras, an old man who was stoned to death after being tortured. The second victim was a holy woman named Quinta, who was dragged, scourged, and eventually stoned to death. The third victim was a holy man named Serapion, who was taken from his home, tortured, and then thrown from the roof to his death. These victims, including St. Apollonia, were described in an account of the persecutions of the Christians written by St. Dionysius of Alexandria in the third century A.D. in a letter to the bishop of Antioch (Turkey). In art, St. Apollonia is represented by a golden tooth held in a pair of pincers. In 1982, Austria issued a stamp (Scott

no. 1225) depicting St. Apollonia to commemorate the 70th annual meeting of the World Congress of Dentists, held in Austria (Fig. 1).

The earliest oral surgeon was the Spanish-Arabian Albucasis (Abul Kasim), who was born in Cordoba, Spain, in 936 and died in 1013 at the age of 77 years. His contributions to dentistry involved the invention of a device for extracting tooth roots and another for straightening teeth. He also was one of the first to describe the treatment of deformities of the mouth and dental arches. In addition, he recommended the use of artificial teeth, which at the time were made from the bones of a cow.

One of his works, *De Chirurgia*, although primarily on surgery, contained descriptions of dental instruments and emphasized the care and treatment of teeth and the formation of dental tartar. Albucasis recommended the thorough cleansing of the teeth with



Figure 1: St. Apollonia

a set of 14 scrapers (scalers), which he devised for the purpose.

Albucasis also considered it wrong to extract a tooth, recognizing the importance of retaining teeth and the poor results obtained with artificial teeth. He was among the first who thought that teeth might be replaced by other human teeth or by artificial teeth made from the bone of an ox.

Albucasis was court physician to Caliph Adb ar-Rahman III (891-961) and was well known for his texts on surgery. His greatest literary contribution was *Al-Tasrif* or, *Collection*, which was a comprehensive study devoted to medicine and surgery and translated into Latin, Provençal, and Hebrew. This was the leading textbook in Europe for about 500 years. It contained remarkable illustrations of surgical instruments and his personal observations, which revealed his familiarity with the ancient texts and his wisdom and skill as a practitioner.

The work itself consisted of 3 books. In Book I, Albucasis discussed cautery and recommended its use not only in surgical disorders but also in apoplexy, epilepsy, and dislocation of the shoulder; for arterial hemorrhage, he recommended holding the edges of the wound together and applying large ants to the wound. In Book II, he described other operations that were in use, such as trephining, and procedures for treating fistulas, goiters, and aneurysm. In Book III, he discussed fractures and dislocations, including fractures of the pelvis, and he mentioned paralysis in fracture of the spinal column.

In 1964, in commemoration of the fourth Arab Congress in Dental and Oral Surgery held in Damascus, Syria issued a stamp (Scott no. C314) on which Albucasis' portrait appears (Fig. 2).

Pierre Fauchard is considered the "Father of Scientific Dentistry." He wrote the first book devoted entirely to dentistry. His book made dentistry a profession, put it on a scientific basis, and advanced a broader education for dentists. Fauchard was a pioneer of modern dental thought, and probably no single individual in the entire history of dentistry exerted a stronger influence upon its development.

Fauchard was born in Brittany, France, in 1678 and lived until March 21, 1761, when he died in Paris at the age of 83 years. Fauchard's main literary contribution was *Le Chirurgien ou Traité des dente*, completed in 1723 and published in 1728 in 2 volumes. This work was one of the 3 most important books in the history of dentistry. The other two books were *Treatise of the Teeth*, written by the German dentist Philip Pfaff (1716-1780), and *The Natural History of the Human Teeth*, written by the English anatomist and surgeon John Hunter (1728-1793).

Fauchard's main work was a compilation of his knowledge about odontology. This remained the authoritative work for

more than a century. In this work, he discussed dental education, dental anatomy, caries, pathology, materia medica and therapeutics, orthodontics, surgery, replanting and transplantation, reflex nervous diseases related to mouth diseases, pyorrhea, hemorrhages and styptics, and operative and prosthetic dentistry. Fauchard designed instruments for removing dental tartar and for scraping caries. He also built a hand-held dental drill.

Where Fauchard obtained his scientific education is not known, although it was known that in 1693 he was apprenticed to the surgeon-major in the French navy. He did practice dentistry in Nantes (northwestern France), Rennes (northwestern France), and Angers (western France) before going to Paris in 1717.

Fauchard produced a second edition of his book in 1746. In it, he gave the first account of alveolar pyorrhea (Fauchard's disease, a purulent inflammation of the dental periosteum, with progressive necrosis of the alveoli and looseness of the teeth), commonly called "Riggs disease," after the American dentist John M. Riggs (1810-1885), who, in 1876, introduced the modern treatment of the condition by scraping teeth to their roots.

Fauchard was the first to use orthodontic procedures in the treatment of malocclusion. He improved the making of removable dentures. He did not make an impression of the edentulous mouth when he was constructing the dentures. He carved a piece of bone or ivory to the required shape, then carved teeth in it, so that the dentures fit the patient's mouth. The dentures usually were kept in place with springs. Fauchard also introduced the artificial crown. He removed the natural crown, filled the pulp cavity with lead, and fixed the artificial crown with a pin or dowel.

With Fauchard, a new stage was reached in the treatment of caries. In treating caries, he first cleaned out the carious matter. The cavity was then filled with tin, lead, or gold, with a preference for tin. The selected metal (in tin foil) was inserted into the cavity, in very small amounts, with specially designed pluggers. Fauchard treated the pain of pulpitis by the application of oil of cinnamon and oil of clove.

In July 1961, an international meeting of dentists was held in Paris and France issued a stamp (Scott no. 1003) to commemorate the 200th anniversary of Pierre Fauchard's death (Fig. 3). The stamp shows the portrait of Fauchard and the cover of his book.

William Thomas Morton is given credit for demonstrating the value and use of ether as a general anesthetic in dentistry. Morton was born in Charlestown, Massachusetts, on August 19, 1819. He studied dentistry for 2 years in Baltimore, Maryland, at the College of Dental Surgery, after which he opened a dental practice in Boston in 1842. Working with a partner, American dentist Horace Wells (1815-



Figure 2: Albucasis



Figure 3: Pierre Fauchard



1898), in 1842 and 1843, Morton used nitrous oxide as the anesthetic during the extraction of a tooth. The partnership broke up, with Wells returning to Hartford, Connecticut, and Morton remaining in Boston. While in Boston in 1844, Morton lived with the American scientist Charles Thomas Jackson (1805-1880), a chemist who had experimented with sulfuric ether (diethyl ether) as an anesthetic agent. Morton, aware of Jackson's experiments, tested ether on animals, on himself, and finally (September 30, 1846) on a patient, using it as a general anesthetic during the filling of a tooth. Shortly thereafter, Morton used ether before extracting a tooth.

Morton's major contribution, however, was made on October 16, 1846, when he served as the anesthesiologist for American surgeon Dr. John Collins Warren (1775-1856). Morton administered ether as a general anesthetic and Warren removed a congenital vascular malformation located on the left side of the neck of a patient at the Massachusetts General Hospital in Boston. This was the first public demonstration of the general anesthetic use of ether.

Shortly after this, Morton obtained a patent for a substance that he called "Letheon" (in reality, ether). In 1846, the French Academy of Medicine awarded the Montyon Prize of 5,000 francs to Jackson and Morton jointly, but Morton refused his share, claiming that the discovery was his alone.

In 1847, Morton reported on "Remarks on the Proper Mode of Administering Sulphuric Ether by Inhalation," in which he gave detailed directions on the use of ether in dentistry, general surgery, and obstetrics. In this report, he

listed the symptoms that indicated danger during administration.

Morton's claims and attempts to profit by the discovery brought conflicting claims from Jackson and Wells as well as from the American surgeon Crawford Long (1815-1878). Morton spent the last 20 years of his life in bitter controversy and litigation and died in poverty. Wells committed suicide when he was 33 years old, and Jackson died in an insane asylum. Long died on June 16, 1878, at the age of 62 years.

On July 15, 1868, at the age of 49 years, William Thomas Morton died of a stroke while in New York City. He is honored on a stamp (Scott no. 106) issued in 1984 by the South African Territory of Transkei (Fig. 4).

The Maltese dentist Egidio Lapira was born in 1897. He received his education at the Lyceum and the Royal University in Malta, where he was awarded a diploma in dental surgery. In 1929, he was appointed the first dental surgeon in Malta. Lapira continued his dental education at Rome University (Italy), completing this phase of his work in 1934. In 1943, he began his teaching career, when he was appointed professor of dental surgery. In 1951, he became the first dean of the

faculty of dental surgery at the Royal University of Malta. For his work in founding the Dental Association of Malta in 1926 and in establishing the faculty at the Royal University, Egidio Lapira is considered the "Father of Maltese Dentistry." He died in 1970 at the age of 73 years. In 2005, Malta issued a set of 5 stamps honoring Maltese personalities. Lapira is one of those honored (Fig. 5, Scott no. 1209).

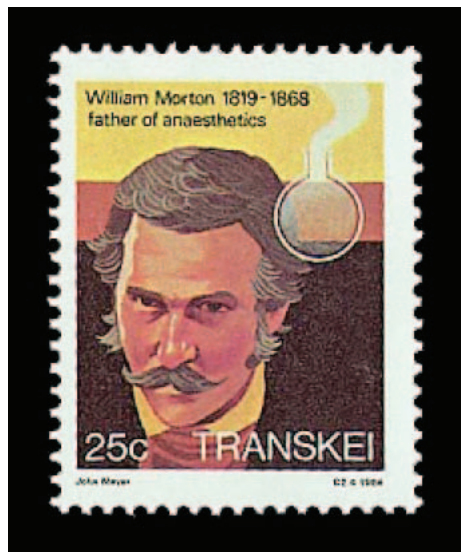


Figure 4: William Thomas Morton



Figure 5: Egidio Lapira