

History to Get Your Teeth Into

by Gina Collia

Pierre Fauchard, the father of modern dentistry, described the somewhat primitive construction of a complete set of dentures, carved from animal bone and set in a metal frame, in his book *Le Chirurgien Dentiste* of 1728. However, the citizens of Japan were already enjoying the use of wooden dentures that were both practically efficient and aesthetically pleasing. The earliest wooden dentures to be discovered, in this case the upper half of the set, were those of the Buddhist priestess Hotokehime and date from the early 16th century, but the beginnings of dental prosthetics in Japan can be dated to the 8th century.¹ Initially, the dentures were constructed from a single block of wood, usually boxwood, cherry or plum, but Japanese ‘tooth carpenters’ (*badaikusan*), as they were sometimes called, went on to incorporate pagodite, ivory, bone and real human teeth, among other things, into their dentures as time went by.² Fixing the dentures in place by means of suction, which was not discovered by dental practitioners in the west until 1800, was already common knowledge among their Japanese counterparts two hundred years earlier.³

A person suffering from toothache, for whom pain-killing remedies had not worked, was the perfect candidate for a nice new set of false teeth.⁴ Of course, before his new dentures could be fitted, he would need his existing teeth removed. Feudal lords had in their service various medical practitioners, including those who specialised in matters relating to oral health. Members of the middle classes visited town physicians, who had their own premises, while poorer members of society paid a visit to a street quack to have their teeth pulled in the open air. The benefit of having your teeth removed by a quack was that he would often perform tricks to grab the attention of passers-by, so, along with your extraction, you would enjoy a show of fancy fencing or top-spinning. Admittedly, he may also rob you of your teeth and sell them on to others wanting new dentures, but he was an entertaining fellow all the same.⁵ The tools used for the extraction of unwanted teeth were usually the dentist’s index finger and thumb.⁵ If these ‘handy natural tools’ proved insufficient, a pair of pliers was used, or a wooden stick and mallet performed the necessary task. The finer end of the stick, which measured around six inches, would be placed against the tooth, and, much to the anguish of the patient, the twelve-inch-long mallet was hammered against the stick to knock the tooth out.⁷

Once the teeth had been extracted, the process of constructing wooden dentures began with an impression being made of the mouth using a beeswax disc, which had been softened in warm water. This, when cooled, formed the basic mould for the denture plate. A harder type of beeswax, in its molten state, was then poured into the mould to create a positive impression of the patient’s toothless gums. From this wax model, an approximation of the desired plate was carved in wood. The wooden plate was then tried in the patient’s mouth, adjusted until it provided the perfect fit, then fitted with appropriately carved teeth. To aid chewing, copper or iron nails were driven into the molar section of the denture. At a meeting of the Odontological Society of Great Britain in January 1885, Dr St. George Elliott recalled a visit from one of his Japanese

patients who happily crunched away on a piece of hard rock-candy in order to prove the efficiency of his traditional nailed wooden gnashers, the front teeth of which were made from ground down quartz pebbles.⁸

For someone who suffered from constant toothache, or who could no longer chew food properly, the acquisition of a new set of dentures was, despite the extraction process, ultimately a joyous occasion. In 1796, the classical scholar Motoori Norinaga (1730-1801) acquired a full set of wooden dentures and was so pleased at being able to chew once more that he composed a poem to mark the occasion.⁹ He must have awaited the arrival of his splendid new dentures with a great deal of anticipation. The renowned author Takizawa Bakin (1767-1848) had considerable problems with his teeth for some time and wrote extensively about their condition in his diary over a period of several years. On 5 June 1827, Bakin went to see his denture-maker, Yoshida Genjirô of Ushigome Kagurazaka, to receive his brand new set of wooden dentures. He had ordered a full set, had the fitting and paid in advance. Upon his arrival, much to his disappointment, he found that 'Repairing of the old dentures was done, but my new dentures have not yet been constructed. The denture-maker delayed finishing the work.'¹⁰

Having broken several of his artificial teeth, Bakin later paid one *bu* for the repair of his dentures.¹¹ Surprisingly, I am assured by my dentist that a similar amount of money would pay for a moderate repair to a set of false teeth in the 21st century. However, according to Takezawa Tôji, a manufacturer of dentures for men and women (and most likely the mid-19th-century juggler and conjurer of the same name), situated at the base of Tôei Hill in Ueno, the workmanship of his false teeth was guaranteed for a lifetime, so no repairs would ever be necessary.¹² His teeth were so well manufactured that all who wore them could, if they so wished, 'bite through the pit of a pickled plum'. That said, according to Tôji, in addition to being able to reset wobbly teeth, remove blood from the gums and cure toothache, he could, 'without the least hint of pain', extract extruding, crooked, overlapping, decayed and 'hammer' teeth. Presumably, he secured full payment for those painless extractions *before* whipping out his stick and mallet!

¹ Moriyama, N. and Hasegawa, M., 'The history of the characteristic Japanese wooden denture', in *Bulletin of the History of Dentistry*, vol. 35, no. 1, April 1987, p. 11.

² Yagyû Munefuyu (d. 1675), of the Yagyû Shinkage school of swordsmanship, had a full set of wooden dentures, the anterior teeth of which were carved from pagodite; they were discovered when his tomb was excavated in 1927. Teeth were held in place in the wooden base by means of *shamisen* string; see Nakahara, S., Shindô, H. and Homma, K., *Manners and Customs of Dentistry in Ukiyo-e*, Tokyo 1980, p. 133.

Regarding the appellation 'tooth carpenter', see Brown, L. P., 'Appellations of the dental practitioner (part III), in *The Dental Cosmos: A Monthly Record of Dental Science*, vol. 78, May 1936, p. 485.

³ Moriyama and Hasegawa, *op. cit.*, p. 11.

⁴ Various pain-killing treatments were available, including acupuncture, moxibustion, hot irons, charms and incantations. See Nakahara, Shindô and Homma, *op. cit.*, p. 133.

⁵ Chiwaki, M., 'Dentistry in Japan', in *The Dental Cosmos: A Monthly Record of Dental Science*, vol. 47, October 1905, p. 1202.

⁶ Chiwaki, *op. cit.*, p. 1201.

⁷ Chiwaki, *op. cit.*, p. 1201.

⁸ Hendricks, G. A. (ed.), 'Dentistry in Japan', in *The Physician and Surgeon: A Monthly Magazine, Devoted to Medical and Surgical Science*, vol. 7, Michigan 1885, p. 167. Dr W. St. George Elliott (1839-1920), formerly of New York, practiced in Yokohama, having arrived in Japan early in 1870. He was the first resident American dentist in Japan. See Elliott, W. St. George, 'Japanese dentistry', in *The Dental Cosmos: A Monthly Record of Dental Science*, vol. 44, September 1902, p. 930.

⁹ Moriyama and Hasegawa, *op. cit.*, p. 13.

¹⁰ Nakahara, Shindô and Homma, *op. cit.*, p. 134.

¹¹ Moriyama and Hasegawa, *op. cit.*, p. 13.

¹² In an advertising pamphlet written by Ryûtei Tanehiko during the first half of the nineteenth century. Takezawa Tôji's top-spinning took place in 1844 and 1849 and inspired citywide top-spinning mania. See Markus, A. L., *The Willow in Autumn: Ryûtei Tanehiko, 1783-1842*, Harvard University Press 1993, p. 115.

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