

## History of the dental crown

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**Abstract:** A crown is a cap covering a tooth's entire surface.

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A crown is a cap covering a tooth's entire surface. A crown is placed on a tooth to preserve or improve its shape, size, rigidity, and aesthetic appearance. A crown helps protect cracked, brittle, destroyed, or decayed teeth or has an extensive filling, but crowns also support a bridge to replace missing teeth.

The use of gold as an ornament for the partially covering front teeth, although not full crowns, arose thousands of years ago. For instance, in Luzon (1), in the Philippines, a skull was found with gold decoration on its front teeth. Presumably, tribal leaders used it as a social distinction, symbolizing power and wealth. The Etruscans were excellent goldsmiths in 700 BC and made gold pontics to replace missing teeth (2). The first golden crown was described in 1595 by Jacob Horst (3), although the purpose was to deceive superstitious onlookers who came to witness a miracle: a six-year-old boy with a golden tooth.

Over the centuries, manual drills were insufficient to prepare an abutment for a crown. After the invention of the first foot-driven and then electric drills at the end of the 19th century, crowns became an effective treatment in dentistry (4).

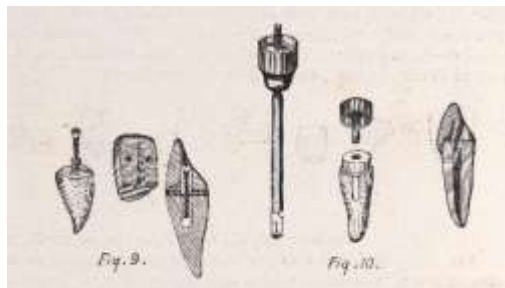
The father of the first modern porcelain and the gold dental crown was Dr. Charles Land, grandfather of aviator Charles Lindberg. In 1889 Land patented the platinum foil matrix to support the porcelain jacket

crown. Making a jacket crown was one of dentistry's most intricate technical jobs at the time. In addition to Land's procedure, countless improvements to the dental crown and root-supported mechanisms were developed and named after their inventor. These include crowns named after Richmond, Logan, Parr, Richardson, Leech, Davis, Dowel, and Brown (4). Starting in 1926, a cheaper alternative made of stainless steel alloy, Wipla (Wie Platin), was used to reduce the high cost of gold (5).

### Figures:



Charles Henry Land in his laboratory cc 1900.



Richmond crown

(Welcome collection). Cassius M. Richmond of New York patented the Richmond Crown (US Patent 224 355) in 1880. It attached the crown to the root.

Porcelain jacket crowns were in use until the 1950s. Microcracks appeared in these crowns during the cooling phase of crown production. Dicor glass ceramic crowns replaced the old ones, and after continuous improvements, they were made without a metal base in the 1990s. The current process involves computer-generated 3D design and manufacturing, often on the premises of the dental clinic.

### Resources

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