

## Electric Kettles

The Museum has a large collection of electrical domestic appliances, including kettles. Most of the kettles were previously owned by a private collector, who also gathered together some related trade literature and patent specifications. These papers together with two taped oral history interviews relating to kettle manufacture at Bulpitt & Sons and the Premier Electric Company are now in the Museum's archive collections.

In the early years of electricity, manufacturers tended to concentrate on producing small appliances such as kettles and tabletop hotplates. This was because both electricity itself and electrical appliances were expensive. Electrical appliances were targeted at larger, wealthier households. An advantage of electric kettles and hotplates was that they could be used in the room where the family ate its meals as well as in the kitchen. In the wealthier households that could afford electricity, the kitchen might be on a different floor from the main living rooms, so serving foods and beverages hot was a challenge.

The first electric kettle was exhibited in 1893 by the Carpenter Electric Co. at an exhibition in Chicago. By the following year, the British firm of Crompton & Co. was featuring electric kettles in its catalogue. The main problem with early electric kettles was that they were very inefficient. For safety reasons, the element had to be housed in a separate compartment at the base. This meant that water was heated indirectly, as with a traditional stovetop kettle. However, the electric element produced less heat than a gas ring so electric kettles took longer to boil than stovetop kettles. Also, the concealed built-in element could not be replaced if the kettle boiled dry and burnt out the element. To protect against this, boil-safe devices were developed. The first type was the fusible cutout, as used in the Archer kettle of 1902. Like an electric fuse, this broke the electric circuit by melting a metal alloy, but the cutout was in the kettle rather than in the plug.

Stylistically, early electric kettles were completely traditional. They were usually made of copper or brass with wooden handles. Working for AEG (Allgemeine Elektrizitäts Gesellschaft), the German designer Peter Behrens was the first to introduce variety and modern elegance. In 1908 to 1909, he designed a range of kettles with choices of shape, material and finish. AEG was also the first company to experiment with an immersible element. However, until the early 1920s, the more common solution was to attach the element to the underside of the kettle, where it was accessible for replacement.



Electric kettle made by Dowsing, c. 1914.

In 1922, Leslie Large, an electrical engineer at Bulpitt & Sons of Birmingham, patented a type of immersible element that was to become standard for electric kettles. The element

consisted of wire wound around a mica core and sheathed in a flat metal tube. As it heated the water directly, it made the electric kettle more efficient than stovetop kettles. Bulpitt & Sons, which used the Swan brand name for its products, claimed another advance with the introduction of a spring-loaded self-ejecting lead connector in 1937.



Electric kettle made by Landers, Frary & Clark, USA, c. 1930.

During the inter-war period, kettle design still tended to be conservative, although some kettles were produced in more stylised Art Deco-influenced designs. It was only in the late 1940s that electric kettle design was truly modernised. One of the first distinctively modern kettles was HMV's Bentinck model, designed by Christian Barman and registered in 1949. Its chrome-plated finish became common in the 1950s. The British company Russell Hobbs, founded in 1952, established a reputation for stylish products. Its stainless steel K1

electric kettle of 1955 was the first fully automatic kettle. Automatic kettles have switches containing a bimetallic strip that flexes, when heated by steam, to cut off the current.

The standard shape and material of electric kettles changed radically in the last quarter of the twentieth century. Until the early 1970s, the use of plastic had been confined to handles. Newer plastics, developed in the late 1950s, were lightweight yet durable and heat-resistant. Polyacetal was the first plastic to be used for kettle bodies, superseded in the late 1970s by polypropylene. The advent of polypropylene coincided with the re-emergence of the jug kettle, which soon became the dominant type of electric kettle. Small electric jugs had been available before the First World War. They were intended for heating sufficient water or milk for one hot drink or heating water for shaving. The jug shape had been tried for kettles but with little popular success, although it was common for electric coffee percolators. Its main advantage was that it was more economical for boiling small amounts, as less water was needed to cover the element.

Functionality rather than style has characterised the jug kettle, although some makers, such as Philips in partnership with Alessi, have used design as a selling point. The emphasis on convenience and performance was shown by the introduction of features such as the water level gauge and the mesh lime scale filter that could be removed for cleaning. The arrival of the 'cordless kettle' in 1986 marked a more radical advance. Although not truly cordless, in the sense of a cordless drill, fitting the lead to a base that the kettle sits in made it much easier to detach the kettle for refilling. Latterly, changes to electric kettles have been largely cosmetic, although a new approach to the lime scale problem has been to use more resistant elements, such as the flat element in the Russell Hobbs Millennium model. By 2000, about half of kettles sold in Britain were cordless models. Today, the electric kettle is taken for granted as a piece of kitchen equipment.

*For more information:*

*Read* Woodham, Jonathan M. *The Kettle: an appreciation*. Lewes, UK: The Ivy Press, 1997.

Webb, Pauline and Mark Suggitt. *Gadgets and Necessities*. Santa Barbara, CA: ABC-CLIO, 2000.

*Visit* The *Electricity in the Home* displays in the Museum's Electricity Gallery.