**Domestic Appliance Design**

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Possibly the first domestic appliance was the cast iron coal range, which began to be inserted into kitchen

fireplaces in the late eighteenth century. In the mid-nineteenth century they were a standard fitting in most

middle-class houses and by the late nineteenth century they were almost universal in industrialized nations, at

least in towns and cities. They provided many of the facilities of a modern cooker, rings for saucepans and

ovens for baking and (often complicated) systems for temperature control using flue dampers and baffles. In

addition they often incorporated a hot water boiler. As there was still an open fire, it remained possible to spit

roast and toast items, but the ease of oven and ring cooking was to change the nature of domestic cooking

through the century. The range, however, was rarely designed to be removed, while the term “domestic

appliance” tends to be defined in terms of durable goods that can travel with their owners. As such the freestanding

gas range, with easy control of flame by taps, introduced in the late nineteenth century, brought the

range out of the fireplace and made it an “appliance.”

Domestic appliances began to proliferate in the mid to late nineteenth century, particularly in the USA.

The domestic appliance maker was constrained by making relatively expensive goods, which in many

industrialized nations was only affordable for those who employed servants to do the work of the appliance;

therefore the appliance had to give some sort of added value. Adrian Forty places sewing machines in the

1850s as the exemplar of this problematic. First costing about US$125 or £30, who with that sort of disposable

income would want the machine when a seamstress could be employed for pennies? Makers therefore

attempted to sell the machine “above stairs” as a finishing tool for such items as embroidered panels and so

on, by richly decorating it to give it status and move it from the simply utilitarian.

In the USA, market conditions were different outside of the great cities. There was a dispersed but

large population, which was relatively well-off; while domestic servants were difficult to obtain. In this

situation the concept of “labor-saving” was far more attractive to potential purchasers, who would otherwise

have to do the work themselves. As many were involved in agriculture and food preparation, domestic

appliance design was particularly focused here, with a plethora of devices for peeling, chopping, grating, and

pulping. Smaller appliances, such as these, were typically made of cast iron and often highly decorative. With a

population distributed over such a large landmass, American retailers were adept at developing distribution

systems and had the most advanced mail ordering systems in the world. This also assisted the sales of larger

appliances such as washing machines and ice boxes. Various types of stoves and heaters had a perennial

market; as did appliances that assisted the task of washing fabric, particularly wringers (often mistermed

“mangles”).

In addition to iron “slugs” placed in the fire until red, paraffin oil (1863) and town gas were both

employed in small domestic appliances that required heat, such as smoothing irons, but in technological

terms, domestic appliances possibly benefited most from the introduction of mains electricity, which could

provide light, heat, and power in an equally clean and easy way. Until the early twentieth century, domestic

appliance design tended to be derivative, with new appliances replicating the appearance of older ones, early

gas cookers were styled as if coal ranges, electric irons looked like gas or coal irons, and so on. The first clear

attempt to break from this model was made by the architect-designer Peter Behrens on his employment to

design/redesign the product range of the German AEG company in 1909. Behrens believed that electrical

power should free the form of appliances from their predecessors. In conjunction with the manufacturer

Gebruder Bing, Behrens developed a range of appliances such as heaters and kettles that are seen to represent

the starting point for modernist approaches to electrical goods using systematized mass production of

relatively simple forms and little or no decoration. Typical of the design thinking was that while previous

designers had replicated a hob kettle, with a concealed dry element in the kettle base, Behrens believed it

would be better “immersed,” setting the pattern for three generations. The AEG/Bing products are now seen

as “design classics.”

Styling domestic appliances as a deliberate sales tool was developed by Raymond Loewy in the early

1930s, in the context of government price fixing in the Great Depression. Loewy is often credited with

inventing the concept of stylistic obsolescence in domestic appliances, notably in his work on the Coldspot

refrigerator from 1933. Like Behrens, Loewy reconsidered the form of the “traditional,” moving the

refrigerator’s mechanism beneath its floor and enclosing the whole in a “wipe clean,” stream-form, white or

cream enamel casing that looked modern and hygienic. Unlike Behrens, Loewy then effected aesthetic

adjustments on an annual basis, with the intention of making the 1933 model look obsolete after about three

years, prompting the customer to replace it. Loewy’s approach to design was widely copied and is probably the

root of the term “white-goods” to describe appliances such as refrigerators and washing machines.

The introduction of oil based non-organic plastics has an important place in domestic appliances.

Plastic could replace pressed and cast metal, did not oxidize, and was an electrical insulator. While plastic

offers designers vast options of form and color, few domestic appliances move away from the 1930s concept

of white goods. A notable exception is the Dyson vacuum cleaner, which was first designed in a 1980s

“postmodern” style and remains strongly influenced by it.

In the so-called third and fourth industrial revolutions design interest in domestic appliances has

shifted from the form of the object to the “Internet of Things,” in which appliances can remotely respond to

their owners and to each other using electronic messaging and information technology.

**References and further reading**

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