Hands On Learning
with Reading Museum Service

MILK COOLER H253



We now take for granted being able to buy fresh milk in the supermarket and drinking tap water. In the Victorian period milk was delivered by horse and cart whilst water flowed to street pumps and into houses from pipes linked directly to rivers.

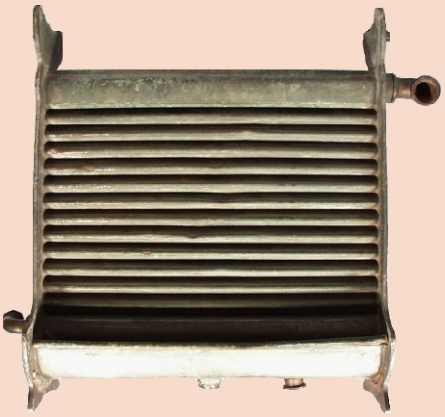
The early Victorian sewage system pumped waste straight into rivers. These rivers were often where companies extracted the drinking water. Large towns suffered from epidemics of cholera and typhoid that was carried by the polluted water.

Many books were written in the nineteenth century to help maids and cooks. They provided ideas of how to tell the suitability of water. One suggested that if dipping a penknife into the water turned it yellow then there was copper in it. Another theory was to add a small amount of sulphuric acid into the water and if it turned black then it was contaminated. We wouldn't think of doing either of these tests now. The thought of putting a penknife or sulphuric acid in the water would worry us more than the water!

Large quantities of alcohol were drunk, especially by the men. Weak ale and gin were preferred to water. For many Victorian women, though, alcohol was not appealing. Milk was therefore very important to them and their children as a healthy refreshment. But with the milk travelling great distances from the farm to the streets how could it be kept as fresh as possible?

Milk cooler

As the towns and cities grew larger a way had to be found for ensuring milk could be transported from the country. Milk warmed up when it was being transported and lost its freshness.



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Keeping milk cool lengthens its life but this was very difficult and expensive for Victorian dairy farmers. Windmills and well pumps which provided water for animals were also used to cool milk. The cold underground water would be continuously pumped into a tub holding containers of milk.

The invention of the milk cooler late in the nineteenth century worked on the same principle. It became possible to lower the milk's temperature with greater speed and efficiency. Cold water flowed in through the pipe at the base of the cooler and left through the pipe at the top. The cooler was suspended from a metal frame and above it was a large pan into which the freshly produced milk was added. The milk then flowed through the holes onto the curved surface of the cooler. With the water keeping the metal cold it acted like a radiator in reverse. The milk was finally collected in the dish at the bottom and poured into a churn, ready for transportation. The drawing below shows how the process would have worked.

In the twenty-first century cow's milk goes directly into a refrigerated unit. It is then collected by a tanker and taken away. A lot of milk also undergoes a process called pasteurization, which extends the life of the milk. The milk is forced through pipes that are surrounded by hot water for a very short period of time. This reduces the harmful bacteria that spoils the milk, giving it a longer use by date.

