

The Story of the Refrigerator

Snow and ice, cool streams, springs, caves and cellars were long ago used to refrigerate food. Meat and fish were preserved in warm weather by salting or smoking.

The Chinese cut and stored ice in 1,000 B.C.

Around 500 B.C. the Egyptians and Indians made ice on cold nights by setting water out in earthenware pots and keeping the pots wet.

In 18th century England, servants collected ice in the winter and put it into icehouses, where the sheets of ice were packed in salt, wrapped in strips of flannel, and stored underground to keep them frozen until summer.

At the beginning of the 19th century, ice boxes were used in England.

Natural ice was harvested, distributed and used in both commercial and home applications in the mid-1800s. The ice trade between Boston and the South was one of the first casualties of the Civil War.

Wooden boxes lined with tin or zinc and insulated with various materials including cork, sawdust, and seaweed were used to hold blocks of ice and "refrigerate" food. A drip pan collected the melt water - and had to be emptied daily.

Pioneers in refrigeration included Dr. William Cullen, a Scotsman whose studies in the early 1700s dealt with the evaporation of liquids in a vacuum. Michael Farady, a Londoner who in the early 1800s liquified ammonia to cause cooling, and Dr. John Goorie of Apalachicola, Florida, who built a machine to make ice to cool the air for yellow fever patients in 1834. Today's compression refrigeration system operates on a concept adapted from Farady's experiments. It involves compressing gas into a liquid which will then absorb heat. In so doing it returns to gas. This is a simplified description of what happens in a home refrigerator, freezer, air conditioner or dehumidifier.

Warm winters in 1889 and 1890 created severe shortages of natural ice in the U.S. This stimulated the use of mechanical refrigeration for the freezing and storage of fish and in the brewing, dairy and meat packing industries. Commercial refrigeration techniques were also applied to railroad cars, were used in "coolers" in grocery stores and in various ways in manufacturing industries.

Two of the first home refrigerators both appeared in Fort Wayne, Indiana, where, in 1911, General Electric company unveiled a unit invented by a French monk. In 1915 the first "Guardian" refrigerator - a predecessor of the Frigidaire - was assembled in a wash house in a Fort Wayne backyard.

Kelvinator and Serval models were among some two dozen home refrigerators introduced to the U.S. market in 1916. In 1920 the number had increased to more than 200. Compressors were generally driven by belts attached to motors located in the basement or in an adjoining room.

In 1918 Kelvinator introduced the first refrigerator with any type of automatic control. One manufacturer's 1922 model had a wooden cabinet, a water-cooled compressor, two ice cube trays and nine cubic feet of storage space. It cost \$714. In 1923 Frigidaire introduced the first self-contained unit. Steel and porcelain cabinets began appearing in the mid-20s.

In the 1920s and '30s, consumers were introduced to freezers when the first electric refrigerators with ice cube compartments came on the market. Mass production of modern refrigerators didn't get started until after World War II.

In the 1930s freon 12 was used to replace sulphur dioxide as the most commonly used refrigerant.

During the 1940s frozen food storage became widely used by consumers

Refrigeration technology began hopping in the 1950s and '60s when innovations like automatic defrost and automatic ice makers first appeared.

The environment became a top priority in the 1970s and '80s, which lead to more energy-efficient refrigerators and elimination of chlorofluorocarbons in refrigeration sealed systems.

Source:

Association of Home Appliance Manufacturers (AHAM)