**Udder-to-pail** is the most natural, though not always most efficient, way to transport milk from cow to consumer. Science has not found a good substitute for the udder, but it has triumphed in making milk packaging more sanitary and utilitarian.

Until the end of the 19th century, milk was brought to the market in cans or crocks. Shoppers would have to transfer it into their own pails or bottles before lugging it home. The hygiene of this distribution method left something to be desired.

According to *A Treasury of American Bottles* (Bobbs-Merrill, 1975), by William C. Ketchum Jr., the first patent for milk bottles was issued to the Warren Glass Works Company on March 23, 1880. A few years later, Dr. Henry D. Thatcher unveiled a bottle with lettering and designs embossed on it as well as a novel bail-style fastener (previously used for fruit jars). In 1889, he invented a bottle with an internal groove that supported a waxed-paper cap. (Wax or paraffin was the major sealing material at the time.) From then on, milk-bottle manufacturers produced wide-mouth bottles industrially.

Milk containers were made in round, square, squat, and cream-top versions. (The latter had an elongated cap that captured cream.) Meanwhile, the embossed decorations introduced by Thatcher were a boon for milk producers. They branded their bottles with pictures of barns, cows, and even U.S. presidents. (Washington and Lincoln were among the presumably lactose-tolerant politicians whose images were used to sell milk.) In the 1930s, Ketchum notes, the new Applied Color Label made painting labels directly onto bottles an affordable option for many dairies, replacing embossing.

The wax sealers eventually gave way to heavy cardboard tops, which prevailed through the 1960s. Printers specializing in tops had a wide variety of stock typographic and illustration patterns, onto which the dairy or other identifying information was printed in a variety of colors. But while the hues of the tops proliferated, the bottles themselves increasingly became clear as shoppers insisted on being able to see the milk they were buying. Wax was put to a new use in 1904, when James Kimsey patented milk cartons made from waxed paper. Wax containers were soon made in squares, cylinders, cones, and even replicas of glass bottles.

During the postwar years, the popularity of waxed milk cartons grew. The American Can Company held a patent for square, flat-topped containers with an attached cap. The container was made in a factory, and milk was poured at the dairy. They were purportedly more sanitary that way, though wax flakes would often fall into the milk, creating an unpleasant taste and tactile sensation. Today’s milk containers are better sealed and include pouring spouts. But there is still something about those glass bottles and cardboard caps that says “fresh” better than any of the new, overly branded cartons and jugs.