



Lorenzo L. Langstroth and The Quest for the Perfect Hive

The early history of beekeeping



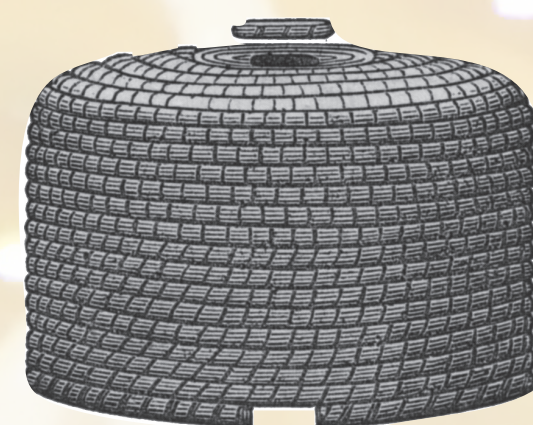
The earliest evidence of human interaction with honey bees dates back 8,000 years to a Mesolithic cliff painting in Spain that depicts a human figure robbing a colony of its honey. Honeycomb theft was probably the reason for our ancestors' first intentional encounters with bees.



The identity of the first beekeepers is unknown, but the oldest historical evidence of beekeeping comes from ancient Egypt. Ancient Egyptian beekeepers used horizontal hives constructed from dried mud and straw. The bees were quieted using a censer (a dish that contained burning incense). Then the honeycomb was removed by hand, broken into pieces, and placed in jars where the wax would separate from the honey. The honey was poured into vessels that were sealed for storage and transport.



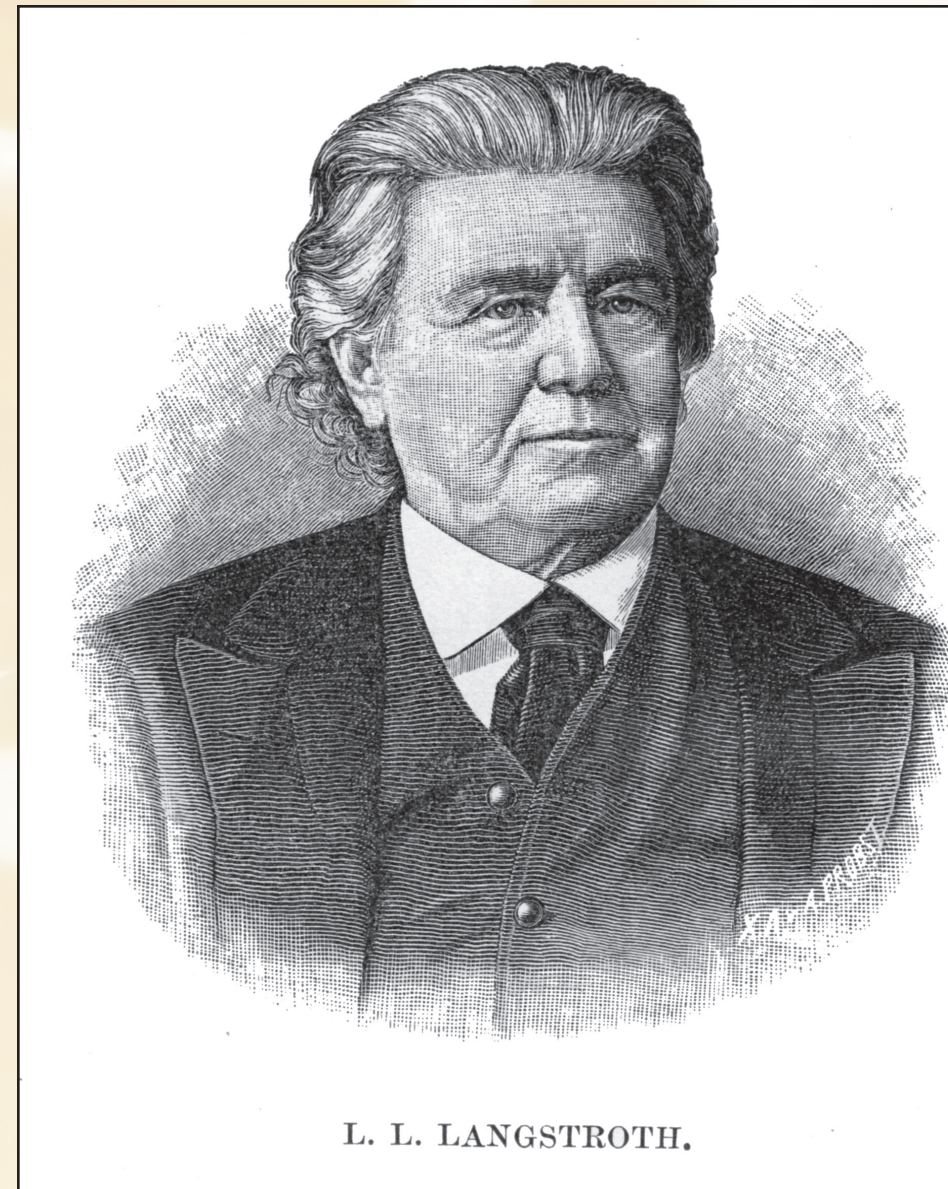
A log hive



A straw skep hive

When beekeeping moved into central Europe, horizontal hives were replaced with upright hives made from hollowed logs, but these logs were heavy and difficult to move between apiaries, or bee yards. What was needed was a strong yet lightweight hive that could be made from easily obtained, renewable materials. Straw "skep" hives, essentially derived from baskets used to carry coal, were developed to meet this need. These hives were commonly used in Europe for over a millennium.

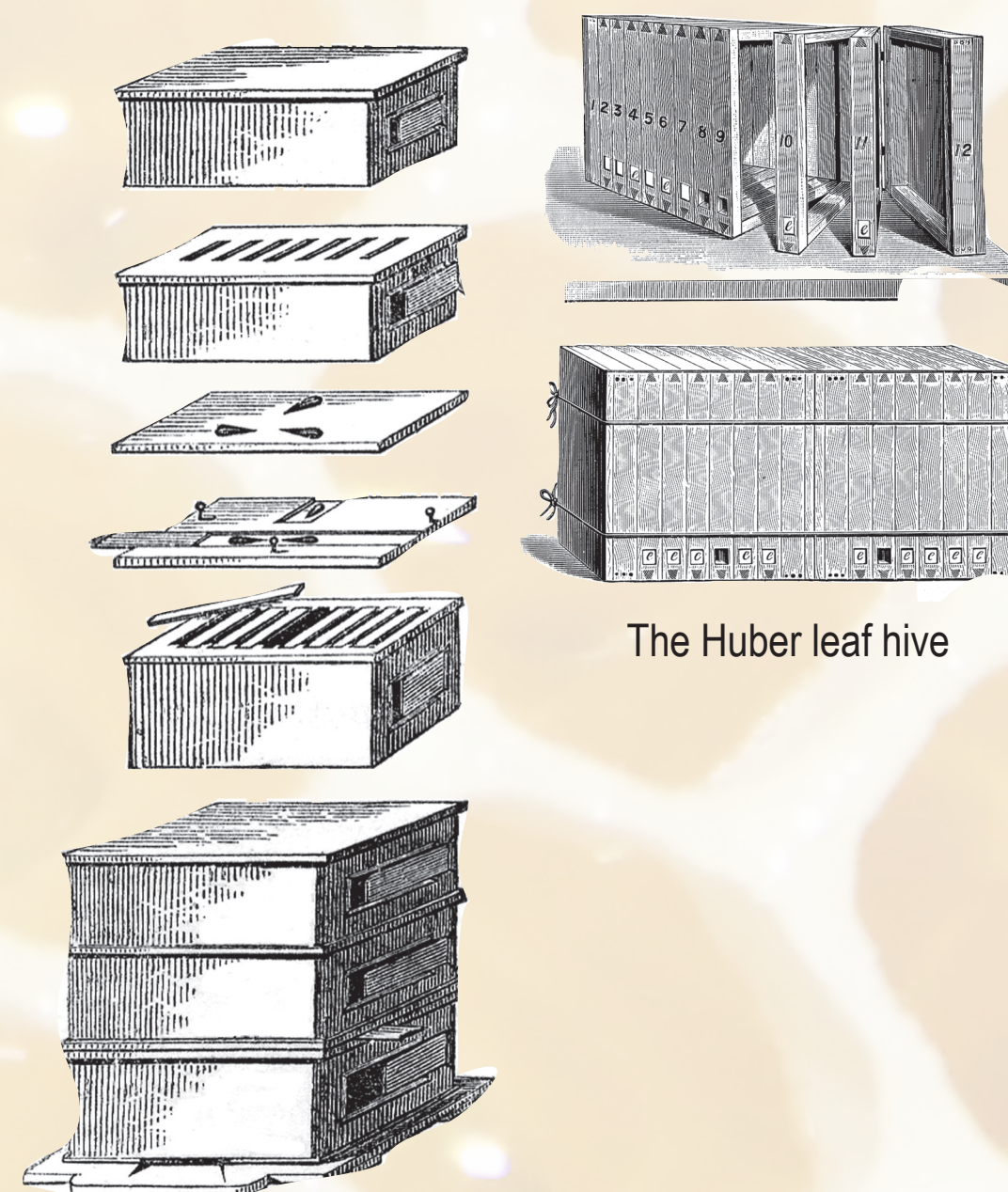
Lorenzo Langstroth



L. L. LANGSTROTH.

Langstroth arranged for the construction of a leaf hive based on the writings of Francis Huber, and of several bar hives, as described by Edward Bevan. Each hive provided Langstroth with important design features that he incorporated into his own hive design. The Huber hive had enclosed frames within which the bees produced their comb, while the Bevan bar hive used wooden bars that were fitted into rabbits, permitting the cover to rest flush against the bars.

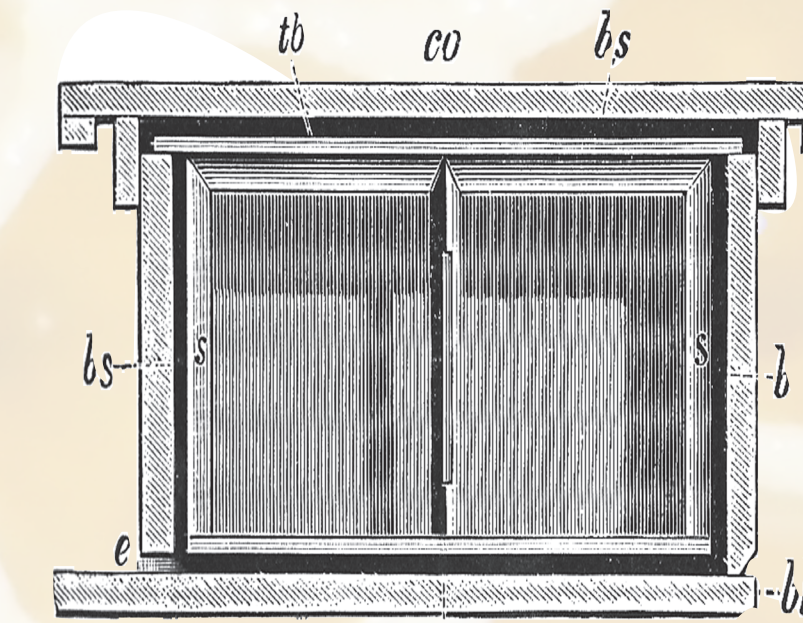
Lorenzo Langstroth was born on December 25, 1810 in Philadelphia, Pennsylvania. He attended Yale College and was eventually ordained as a minister. He had a childhood interest in insects and was first introduced to beekeeping in 1838, when he saw a large glass jar containing glistening honeycomb. Langstroth's first hives, purchased in 1838, were simple box hives with crisscrossed sticks inside which provided support for honeycombs.



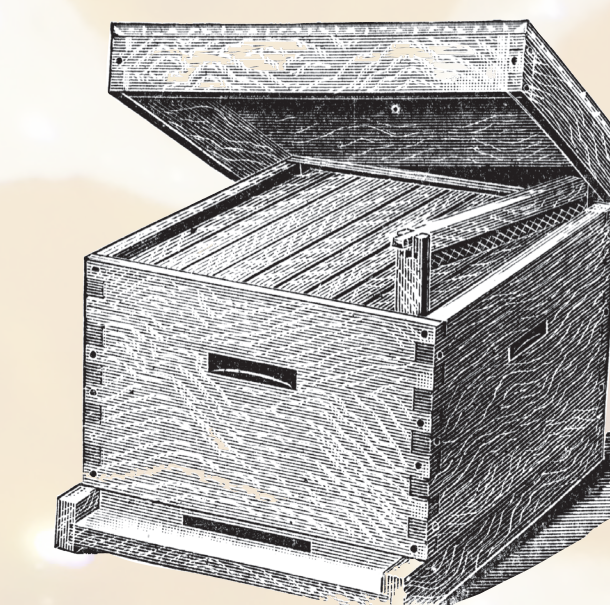
The Huber leaf hive

The Bevan bar hive

The Moveable-frame Hive

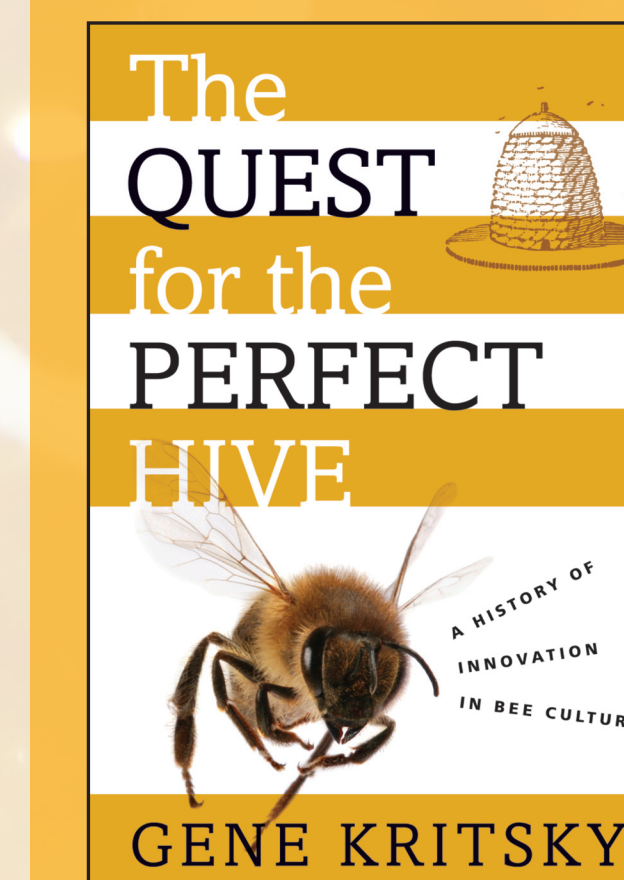


Langstroth found that the bees would seal the top of the Bevan hive to the bars with propolis, meaning that the bars would remain attached to the cover when it was removed. In 1851, Langstroth discovered that if he created a $\frac{3}{8}$ " space between the cover and the bars, the bees would not glue them together. He eventually realized that if this $\frac{3}{8}$ " space surrounded all sides of the frame within the hive box, he could easily lift out the frames without having to cut them away from the hive walls. This "bee space" set Langstroth's hives apart from all the others, resulting in a true moveable-frame hive.



The modern beehive

The first hive Langstroth constructed that incorporated his bee space bears little resemblance to the hives we see today. These initial hives had a portico entry and a hinged cover that enclosed the frames. The design of the Langstroth hive changed during the 70 years following the completion of his first hive. Better construction and the use of interchangeable parts permitted beekeepers to manage their hives more economically, but the bee space was the crucial feature that permitted these hives to stand the test of time.



Read *The Quest for the Perfect Hive* by Gene Kritsky to learn more about the history of the beehive.