

Evolution Of Lime Kilns

Early History

Lime is one of the earliest building materials known to mankind. It was most likely discovered when ^{early man} ~~cavemen~~ observed that chunks of limestone rocks lining an outdoor fire pit turned to a white, putty-like material after a heavy rain.

The heated limestone was converted to quicklime by absorbing the rainwater. After the rain stopped and the lime putty dried out, it became hard and stone-like

Throughout recorded history, there is mentioned three general types of limekilns, The Pit kiln, the Intermittent Box Kiln and the Continuous Burn, Vertical Shaft Kiln.

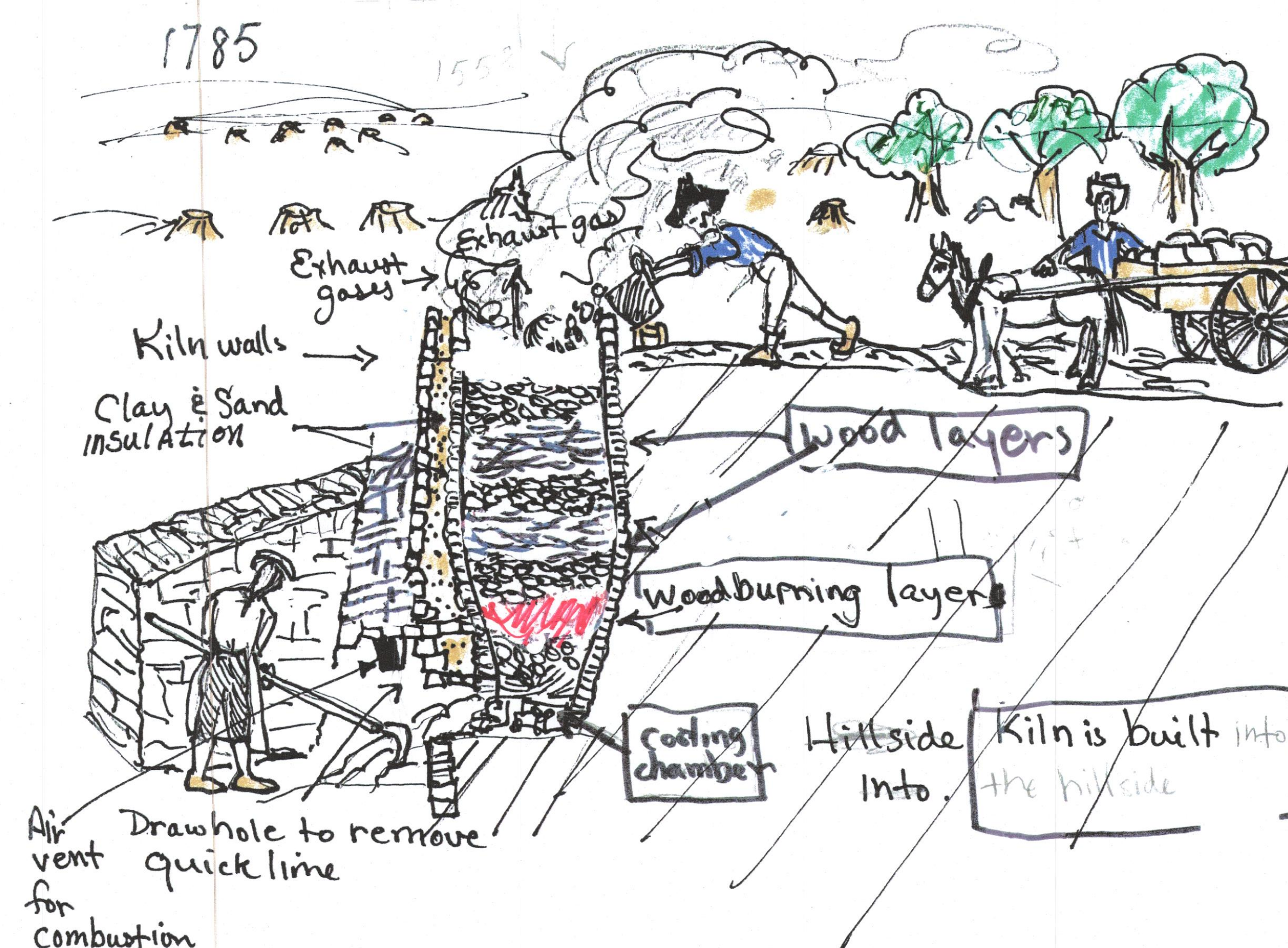
The Pit kiln was simply a pit dug in the ground, filled with alternate layers of wood and limestone and lit on fire. The fire burned for several hours or days depending on the size of the pit. The burned limestone became quicklime.

13th Century English Pit Kiln



The Intermittent Burn Box kiln is the second general type of lime kiln.

It was an extension of the walled Pit Kiln idea. This kiln was most often built above ground with vents and draw holes at the bottom.



At the top was a tall, insulated, circular, wall varying in height and shape, with a large, open mouth or hopper to receive fuel and limestone. Usually, there was no roof or chimney attached.

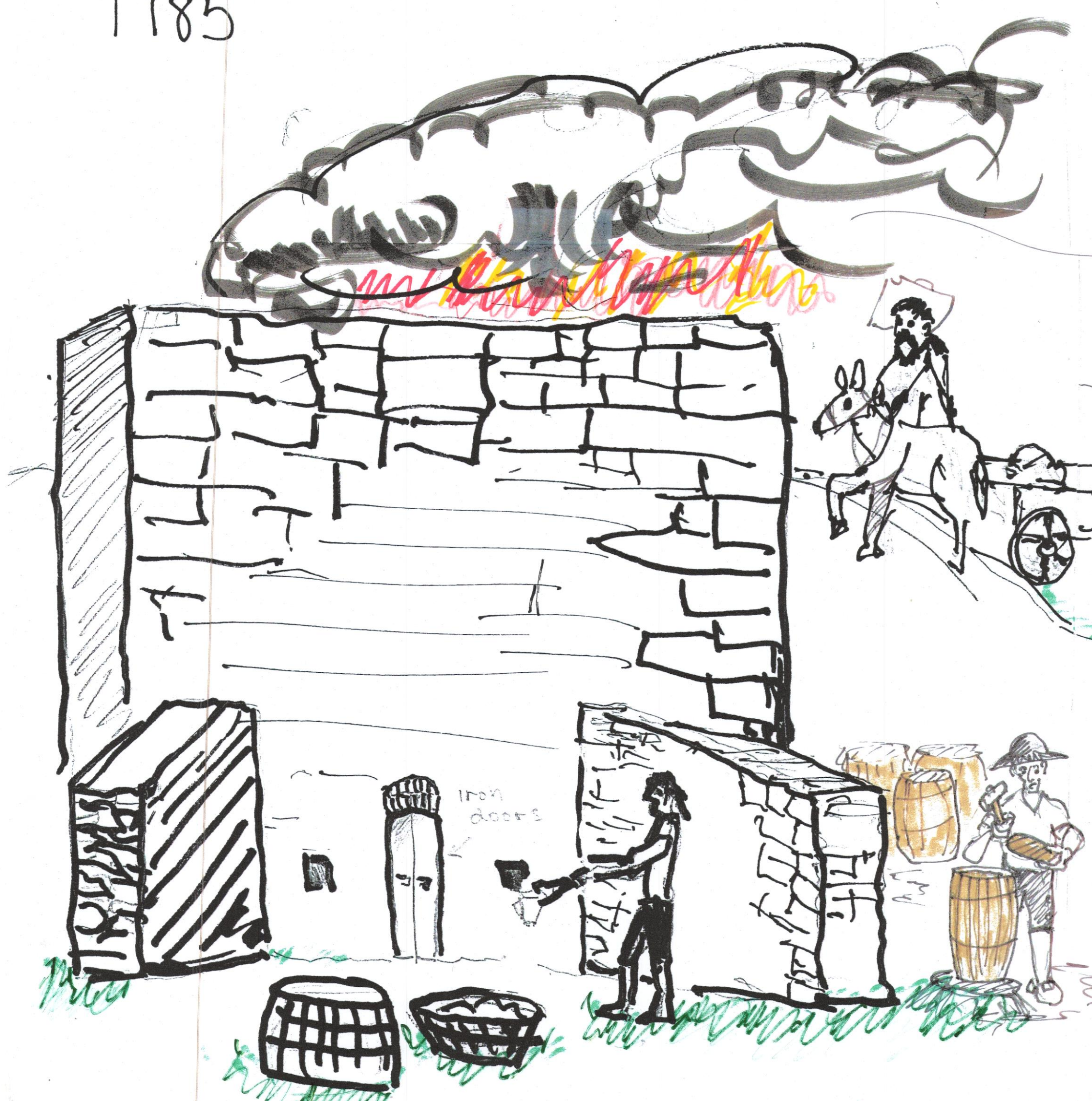


The Ristiau Kiln took nine to twelve days to produce a batch of quicklime. At the end of this burning period the kiln needed to be cooled, reloaded, and the cycle started all over again.

The Ristiau Kiln

This is a good example of the Intermittent Burn Box Kiln. It operated with a technology that became popular in the middle Ages.

1785



Eventually, the walled Pit kiln was covered by a sod, mud or clay roof to further contain the heat and to speed up the lime making process. Earth ovens and pottery kilns today resemble this later type of Pit kiln.

Another example of a walled over Kiln - An Earth oven

