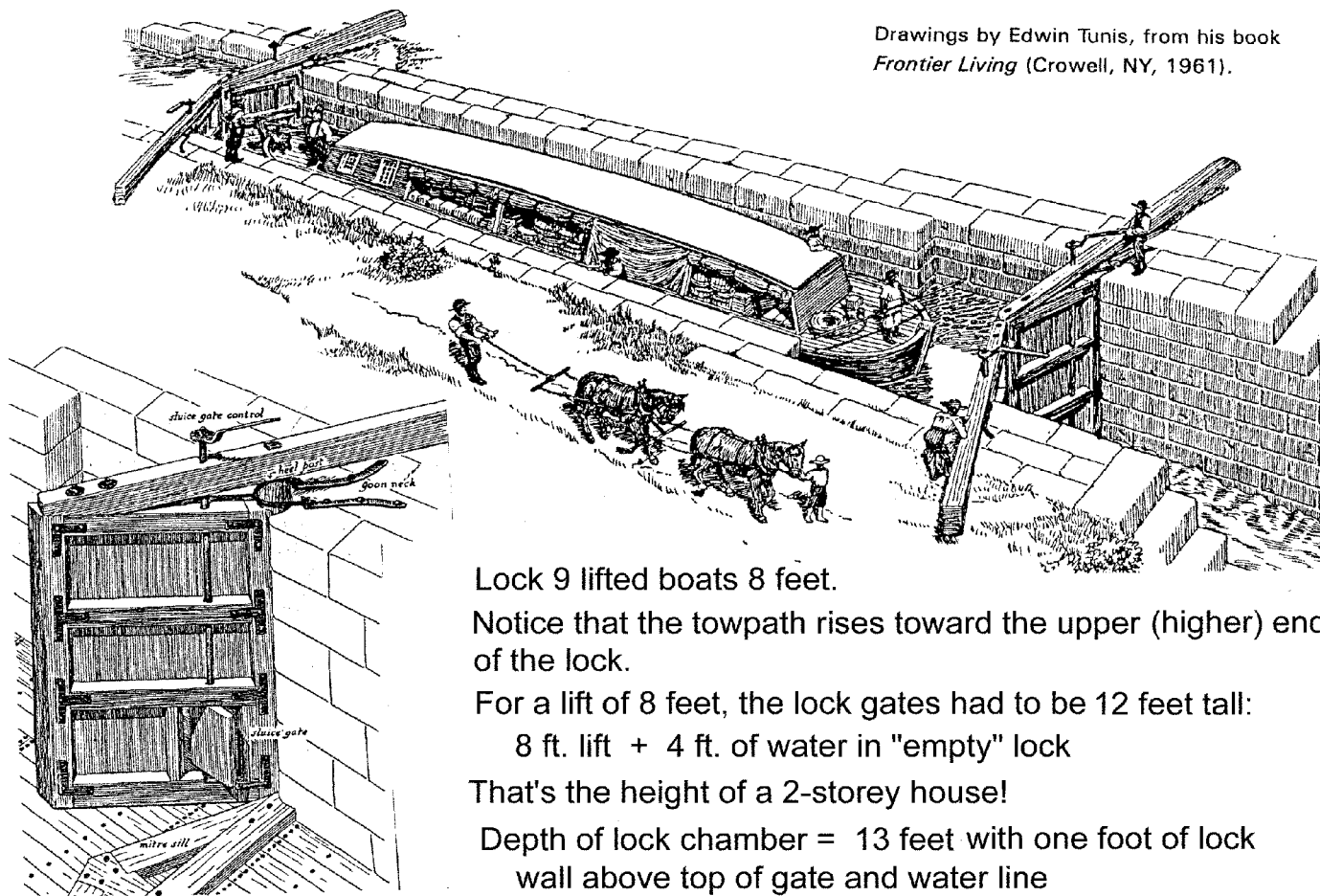


WEST PENN TRAIL

at
LOCK 9

Drawings by Edwin Tunis, from his book
Frontier Living (Crowell, NY, 1961).



Lock 9 lifted boats 8 feet.

Notice that the towpath rises toward the upper (higher) end of the lock.

For a lift of 8 feet, the lock gates had to be 12 feet tall:

8 ft. lift + 4 ft. of water in "empty" lock

That's the height of a 2-storey house!

Depth of lock chamber = 13 feet with one foot of lock wall above top of gate and water line

The freight boat has been lowered only a little below the level of the water in the canal behind the boat, where the upper gates are closed. The lower gates are closed too, but the sluice gates ("wickets") built into the gates have been opened, to allow water to flow out of the lock and so lower the water level, and the boat, in the lock.

When the gates are closed, water pressure pushes each gate leaf against a wooden stop, called a mitre sill, nailed to the wooden floor of the lock chamber. When the gates are fully open, each leaf tucks into a recess in the stone wall of the lock, so that the parked gate leaf does not reduce the width of the lock chamber, that is, the width of boats that can pass through the lock.