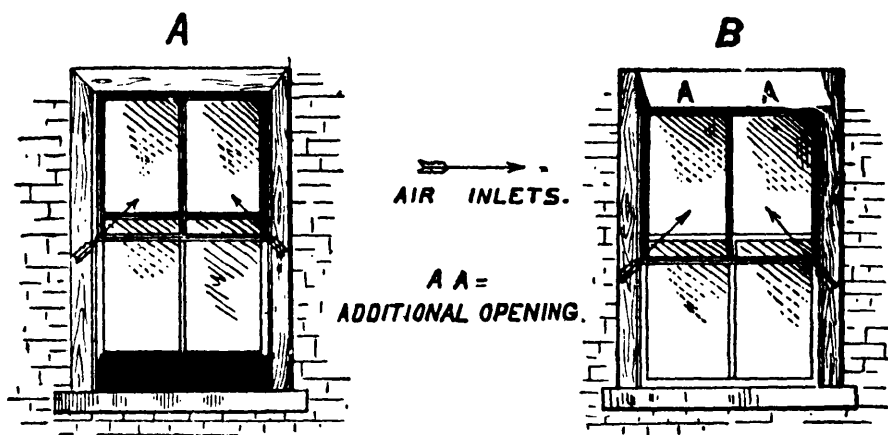




a way as to expose part of the metal so that wet or cold feet can be dried or warmed at it. A register may be placed in the floor under where the stove will stand. The register draft may be fed by two zinc or galvanized iron pipes leading air from the outside, or by a matched covering of the joists between which the register is placed. In either case the flues, whether zinc or wooden, should be so close as not to allow the air "from the cellar" to be drawn into the house. Such a chamber as this feeds a strong current of fresh warm air all the time that there is a fire in the stove.

Speaking of ventilating flues, it may be safe to state as a rule, they are practically useless in rural schools, unless they are warmed by the smoke flue's passing through them, or are heated in some other way. It is really surprising to find how many people think cold air and pure air are identical. I have several times, on complaining of the ventilation of the room, heard the command given a pupil to "close the damper."

One seldom sees an evaporating pan on the stove, or any other means adopted to maintain the proper hygro-metric condition of the air in the school-room. It is not generally

known that external air at freezing point brought into a room heated to 65° or 70° requires at least four times as much moisture as it contained outside.

"I wish I had time," said Prof. Leeds, in a lecture before the Franklin Institute, "to explain the dreadful effects of this want of moisture in all our artificially heated rooms. The air in winter is very dry, the moisture is squeezed out as the water is squeezed out of this sponge. But as you heat it you enlarge its volume again, and it sucks up the moisture just as this sponge does, and if you do not supply this moisture in other ways it will suck the natural moisture from your skin and from your lungs, creating that dry, parched, feverish condition, so noticeable in our furnace and other stove-heated rooms. Few persons realize the amount of water necessary to be evaporated to produce the natural condition of moisture, corresponding with the increased temperature given the air in many of our rooms in winter. Air taken in at ten degrees and heated up to seventy—the ordinary temperature of our rooms—requires about nine times the moisture contained in the original external atmosphere, and if heated to a hundred degrees—as most of our hot air fur-