

19th century textbook illustrations

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Ventilation



Testing the currents of air to and from flame.

“Two openings are necessary to ventilate a room. To illustrate this, set a lighted candle in a plate of water, as shown in fig. 29. Cover it with an open jar, over the neck of which is placed a common lamp-chimney. The light will soon be extinguished on account of the consumption of O, and the formation of CO₂. Raise the jar at one side a trifle above the water, and the candle, if re-lighted, will burn steadily—fresh air coming in below, and the refuse passing off at the top. Replace the jar, and as the candle is flickering, insert in the chimney a slip of a card, thus dividing the passage, when the light will brighten again. Hold a bit of smoldering touch-paper at the top, and the smoke will show two opposite currents of air established in the chimney. Mines have been ventilated in this way by dividing the shaft. More commonly, however, they have two shafts at a little distance apart.”¹

¹ Steele, J. D., “A Popular Chemistry”, American Book Co., New York, 1887, p. 70.

Editor's Note: Textbook Illustrations is a series of interesting and informative illustrations taken from American chemistry textbooks of the past. The author welcomes comments and suggestions.