mixture of old frozen snow and salt (newly-fallen snow does not answer well,) the sulphur dioxide gas is easily condensed to a liquid, which is heavier than water, sp. gr.=2·38). The boiling temperature of this liquid, however, is 14°, and when in sealed tubes (if the temperature be raised to 60°, that of ordinary air) it exerts a pressure of 2½ atmospheres. At between 105° and 110° below zero the liquid freezes into solid crystals, which are heavier than the liquid. To succeed perfectly in showing the boiling of the liquid dioxide by heat of the hand, it is necessary to have a twist of cotton, enveloping freezing mixture, around the top of the tube, to provide for rapid condensation; or the tube may be fitted with an encircling short piece of much wider tube at the top to contain the freezing mixture.

The next experiment was a very remarkable one. A platinum crucible was made red-hot, the dioxide was thrown into it, and immediately passed into the spheroidal state, water was added, and the red-hot crucible became filled with ice—the whole having cooled down in half a minute from red-hot to a temperature far below freezing, and under favorable circumstances it would reach 40° below zero, so that even mercury could be frozen.

Professor Lawson, in referring to the great opportunities which we have in this climate of studying the effects of heat, exhibited a large bottle containing several pounds of glacial sulphuric acid that had separated and crystallized spontaneously from a solution of ferrous sulphate in oil of vitriol during the recent severe weather. The small portion of solution left in the bottle had a sp. gr. of 1.612.