pain in surgical operations. Like all the other anæsthetics, it first acts as a stimulant, but when its administration is carried farther it induces narcotism. The livid hue of the countenance, lips, &c., almost leaden, often seen under its use, more decidedly so than by that of any of the other anæsthetics, is produced by the absence of oxygen, giving the dark color to the blood; as it is almost entirely cut off in the administration of the gas.

By careful measurement when there has been five or six gallons of nitrous oxide gas inhaled, there is only about three quarts retained in full anæsthesia.

Chloroform—Terchloride of Formyl—is usually produced from distillation of alcohol and chloride of lime in a closed retort. The vapor condensing is drawn off into water. It is easily made on a small scale. It consists of two atoms of carbon, one of hydrogen, and three of chlorine (C^2. H. Cl^3.); specific gravity 1.48; density of vapor 4.2; boils at 141 °; is uninflamable. As a therapeutical agent it is stimulant and narcotic. When inhaled in small quantities largely diluted with atmospheric air, it "increases the frequency and force of the heart's action." Carried into the system more rapidly, it depresses the circulation, by partially paralyzing the nerve fibres that are distributed to the blood vessels, and thus, by loss of the power of muscular contraction they become relaxed.

Chloroform does not immediately change the vermillion hue of arterial to that of venous blood, like nitrous oxide gas, or even as readily as ether; but by its long continuance this result will be produced, though in a less degree; in part from the large admixture of atmospheric air that it is always necessary to introduce into the lungs with it to sustain life. It should never be given more rapidly than from four to five per cent of the volume of the air breathed. If given more rapidly, or in larger proportion to the air, it is likely to produce disastrous results.

Ether is made from distillation of alcohol and sulphuric acid. Its chemical properties are, oxygen about 22, hydrogen 14, and carbon 64, in a hundred parts. It is very volatile, and when exposed to the air becomes impure by absorbing oxygen, gradually changing into acetic acid and water, showing the necessity of keeping it in well corked bottles; and when in use, as little exposed to the atmosphere as possible. If too long kept, and even occasionally opened, it will *sour*, and loose its original quality, becoming unfit for use. This fact should be borne in mind by all who use it. While it is shown that