It may be observed that the point of solidification of the last five alloys on this table is constant at 180°. When those alloys are melted and then allowed to cool, small crystals form at 220°, 210°, 200°, or 190°, according to their composition, and when the temperature has descended to 180°, the whole mass solidifies. It is noticeable that during the whole time of solidification the temperature remains at 180°, and that the mercury of the thermometer again begins to descend only when every part of the alloy has become solid.

Another alloy remaining very homogeneous, and unvarying in temperature during solidification, is that composed of 207 parts of lead and 294 parts of tin (2 equivalent lead to 5 equivalents tin). This alloy melts at 180°, and solidifies at precisely the same temperature.

In these two alloys, which have the most useful properties, the different metals are united in atomic proportions, which seems to prove that, to obtain a good alloy, it is necessary to take into consideration the atomic weight of the metals composing it. It is beyond a doubt that such alloys, remaining so homogeneous during solidification, are possessed of valuable properties not belonging to other and less homogeneous alloys. This question is certainly of great interest in the manufacture of printing type, and for similar purposes; and deserves to be thoroughly studied.—*Bulletin de la Societe Chimique and Chemical News.*

[It will be observed that the temperatures are given in the centigrade scale. To reduce them to Fahrenheit degrees, multiply by 9, divide by 5, and add 32. In the centigrade thermometer, the interval between the freezing and the boiling point of water, is divided into 100 degrees, and the freezing point is made the zero. Fahrenheit divided the interval into 180 degrees, and made his zero 32 degrees below the freezing point. The proportion of 180 to 100 is the same as that of 9 to 5.—Eds.] —*Scientific American.*

Horse Power.

A pull of 250 lbs. is the maximum effort which a good horse can exert for a mile.

Effect of Gas on Silks and Metals.

Mr. Howell, of Regent Street, states that during the winter months, when much gas is burned, the color of silk dyed of delicate colors is taken out. With regard to metal goods, the gas deposits a thin film on the metal, and unless it is removed every day it eats into the metals, so that the articles must always be regilded. This necessitates the use of air-tight cases for such goods. French goods are much more affected than English. The former are attacked in a day or two; the latter may not show the film for a week or two.—*London Engineer.*

Impure Water.

The presence of poisonous organic matter in water frequently is imperceptible to taste and sight. The pump in Broad street, Golden square, London, yielded water perfectly clear, yet its waters killed 500 people in the first three nights of September, 1854. A drain from a neighboring cess-pool had broken into the well.—*Ibid.*

Adulteration of Flour.

The presence of a mineral adulteration of flour or meal may be readily detected. A small quantity of the suspected flour is shaken up in a glass tube with chloroform. All mineral adulterations will collect at the bottom, while the flour will float on the liquid. In this country, where the comparative cheapness of flour makes adulteration unprofitable, this test may not be valuable; yet the fact may not be without interest.—*Scient. American.*

What is Saleratus?

Wood is burnt to ashes, these are lixivated, and lye is the result. Lye is evaporated by boiling, black salt is the residuum. The salt undergoes purification by fire, and the potash of commerce is obtained. By another process we change potash into pearlash. Now put these into sacks and place them over a distillery mash tub, where the fermentation evolves carbonic acid gas, and the pearlash absorbs it and is rendered solid; the product being heavier, whiter, and drier than the pearlash. It is now saleratus. How much such salts of lye and carbonic acid gas one can bear and remain healthy, is a question for a saleratus eater. —*Ibid.*

Mineral Oil.

The illuminating power of one gallon of mineral oil is equal to that of 18 lbs. of paraffine candles, 22 lbs. of sperm, 26 lbs. of wax, 27 lbs. of stearine, 29 lbs. of composite, or 39 lbs. of ordinary tallow candles.

Depth of Milk for Cream.

A correspondent of the Boston *Cultivator* says that the form of the vessel containing milk, from which it is intended to collect the cream, does not affect the quantity of cream raised. He says: "desiring to test this matter, I took glass cream jars, in which were graduated scales, and set milk at different depths, from 2 to 18 inches. The depth of cream was always in proportion to the quantity of milk."

Waters of the St. Lawrence.

It is said the St. Lawrence river carries by Montreal 50,000,000 cubic feet of water per minute; and in the course of one year bears 143,000,000 tons of solid material, held in solution, to the sea.

Gaseous Bodies in Water.

Mr. Grove states that it is almost impossible to free water from gaseous bodies, and that the steam liberated from this liquid, when boiled under oil, always leaves a small bubble of permanent gas; when condensed this gas is found to consist of nitrogen.

Surveyors Tables.

In England surveyors tables for laying out curves are now printed on a pack of cards. In use the proper card is placed on the theodolite and it allows the surveyor the use of both hands.