

know that as soon as it shall be generally received, Fashion will sanction and enforce it.

IMPORTANCE OF EDUCATION.

That the Eastern States of America have flourished more than the Southern is well known, yet neither the climate nor the soil are accounted as favourable as those of the more Southern districts, but the enterprising and intelligent New Englanders, where they found the soil insufficient to support them, turned their energy to commerce, the fisheries, and manufactures, with such success that they became much more wealthy than their more ignorant and indolent Southern neighbours, many of whom constantly wore the clothes which were made by the tailors of Connecticut, and exported from New York; and the increasing opposition to the emancipation of the blacks in Boston and New York, may probably be traced to the number of slave plantations in the Southern States which have been transferred to the merchants of these cities in payment of debts. Much of the prosperity of the new Western States also, may be justly ascribed to the superior intelligence and industry of the Yankee portion of the population. Why these things are so, will be seen from the following "Scale of Education in the United States," promising that there are at present a much greater proportion of ignorant persons in some of the Eastern States than there were formerly; the Railroads and other public works having retained among them many thousands of Emigrants from Europe.

SCALE OF EDUCATION IN THE UNITED STATES.—The census recently completed by the General Government exhibits the number of white persons over 20 years of age, in the different States, who cannot read or write, as follows:

Connecticut.....	1 to every 568
Vermont.....	475
New Hampshire.....	310
Massachusetts.....	366
Maine.....	198
Michigan.....	96
Rhode Island.....	67
New Jersey.....	59
New York.....	56
Pennsylvania.....	50
Ohio.....	43
Louisiana.....	32½
Maryland.....	27
Mississippi.....	20
Delaware.....	18
Indiana.....	18
South Carolina.....	17
Illinois.....	17
Missouri.....	16
Alabama.....	15
Kentucky.....	13½
Georgia.....	13
Virginia.....	12½
Arkansas.....	11½
Tennessee.....	11
North Carolina.....	7

ADDRESS OF WILLIAM McKEEN, Esq.

President of the Inverness Agricultural Society, at its semi-annual meeting, held at Fort Hood, 18th October, 1842.

Chemistry is the science which defines the laws or principles which regulate the combinations of elementary particles of matter, and relates to those operations wherein the nature of bodies is changed or by which they acquire new properties. Within the last 70 years it has advanced towards perfection with a rapidity unparalleled in the history of Philosophy. To whatever art or manufactory we turn our attention, we find that it has either been created by

Chemistry or indebted to it for some of its greatest improvements. In my present Address it is my object to present a simple view of some of the principles of this important science, and a description of a few of the elemental bodies and their combinations so far as they are connected with Agriculture, and here I would notice a fact which is everywhere diffused, and it is impossible to conceive of the universe subsisting without it, it is the tie which connects the most remote parts of it together, and were it dissolved the universe could no more exist as it does at present—the particles of which the countless Globes are composed would exhale into space and nothing of the creation would exist, but an infinity of innumerable atoms, which renounced the society of each other. Chemical attraction or affinity is that which unites the atoms of two or more distinct substances so as to form one perfect compound, termed combination, and is quite distinct from aggregation or mixture, for instance if we pour oil and water into a glass bottle and shake them until mixed, the substances can never be made to unite permanently together, for if the bottle be allowed to stand a sufficient length of time, the particles of water being heavier than those of the oil will descend to the bottom, while the particles of oil rise to the top. Here then it is evident that there has been a chemical attraction existing between the particles of the two bodies because no chemical change has taken place, in a word there has been a mechanical mixture without any chemical combination, if with the water in this experiment we add a quantity of potash so as to form a pretty strong solution, the particles of the two bodies will intimately combine with each other and the substance obtained will be that useful article Soap, having properties entirely different from either the oil or the potash. The general name for a substance thus obtained by Chemical combination is a compound, the substances of which it is composed are called its component parts or principles; the separation of these is called decomposition, and decomposition is performed for the purpose of ascertaining the composition of a body, it is named Chemical Analysis. The reverse of the constituent parts is denominated Chemical synthesis. Heat or caloric as it is Chemically called is the great counteracting principle to attraction, for when a continued addition of heat is made any body the distances which exist between the constituent atoms are increased, and the bulk of the body is enlarged. Matter is capable of existing in three different states, the solid, fluid, and aërial. If the principle of heat did not exist, we could not conceive of matter existing in one state, which would be the solidity, it is the application of heat which first softens a hard solid body, and then causes it to assume the fluid and aërial state, thus ice when heated becomes water, and water when heated to a greater degree becomes steam. If heat again be abstracted from the steam it assumes the fluid state, and if further cooled it is the solid form of ice; thus there is kept up a continual struggle between the attraction of aggregation and the repulsive power of heat which gives rise to the beautiful variety of solids, fluids, and aëria, exhibited in external nature. Heat exists every where and can be obtained from every thing; all bodies, whether solid, fluid, or aërial, can be made to emit heat when subjected to certain processes, so that there is not in nature such a thing as absolute cold, even ice contains a quantity of heat, for by Chemical means it can be made colder than we find it in its natural state, and Chemists are from time to time discovering processes by which a greater degree of cold can be obtained than any previously known. If we are unacquainted with the extremes of temperature related either to heat or cold, it has been compared to a chain, the two ends of which are concealed from view, whilst only a few of the middle links are exposed to observation.