

through the influence of a sufficiently low temperature, or from any other cause, the functions of vegetable life are suspended, and the fluids cease to circulate, the leaves no longer discharge oxygen, but, in common with all dead bodies, absorb this gas, which, forming an acid, changes the color of the leaves either to yellow, red, or some intermediate shade, depending on the quality of the matter present in the leaves. It has also been asserted that this acid can be neutralized by an alkali, and the green restored. This is not, however, the case. A leaf does not become green by any reagent: but when it has become red, a solution of potash will change it to green, because the red coloring matter forms green compounds with that alkali.

Berzelius, the great Swedish chemist, spent considerable time in investigating this subject. He found that when the yellow leaves were treated with alcohol, they yielded a granular substance, which had a tendency to crystallization, and also a yellow, soft, fatty substance, which appeared identical with the grains. These contained the yellow coloring matter of the leaves, which is described as a yellow, fatty, unctuous substance, easily melted, and on cooling becoming concrete and transparent. When moistened with water, and long exposed to the air and light, it loses its color entirely. Berzelius was of the opinion that the transformation of the green coloring matter of the leaf into a yellow is effected by the frost. Every effort to re-produce the green from the yellow proved fruitless; neither could he succeed in changing the green coloring matter to yellow. The red coloring matter of the leaves has been also extracted, and is believed to be the

same with that of red fruits. The brown color which leaves assume when completely withered has nothing in common with either the red or the yellow colors. It is produced by an extractive principle, originally colorless, but which, when the epidermis or outer layer of the leaf structure has decayed off, is acted upon by the oxygen of the air, and communicates to the fibrous skeleton of the leaf the well known brown color. This color is one of the most fixed and unchangeable with which we are acquainted, and cannot be impaired or destroyed.

The Father and his Little Boy.

WHILE the Rev. John Chambers was speaking at a meeting in Philadelphia, a man who had been occupying a seat in a distant part of the room arose with a little boy in his arms, scarce six years old, and came forward to the speaker's stand; all gave way for him. He placed his child on the stand, and while the tears were running fast down his cheeks, he with trembling accents addressed the speakers: "My little boy said to me, 'Father, don't drink any more!' Gentlemen, I have taken my last drink." The effect produced upon the audience beggars all description. The speakers, with the whole audience, were bathed in tears; and such were the good effects of this example, that seventeen others came forward and signed the pledge. Mr. Chambers, with tears streaming down his face, caught the boy in his arms, exclaiming—"Well may we say that the grave of Alcohol has been dug by this little boy!"

NEVER chase a lie, for if you be quiet, truth will eventually overtake and destroy it.