sent in wines. It form with potass an insoluble salt, known by the name of cream of tartar.

Malic Acid is contained in the fruits of the Rose tribe (*Rosacca*). It has the same general properties as the other acids, and is contained alone in apples and pears, whilst in cherries, plums, &c., it is mixed with other acids.

Oxalic Acid is contained in the Wood Sorrel (Ox alis acetosella, also in the common Sorrel (Rumex acetosa), and various species of Rhubarb (Rheum). Species of the latter genus are extensively cultivated in this country, and the petioles of their large leaves cut up and made into pies, puddings, &c.

The basis of vinegar consists of acetic acid, which is composed of carbon, hydrogen, and oxygen; the same elements that enter into the composition of alcohol. This compound is also procured from the distillation of wood. The acetic acid thus procured is called pyroligneous acid. The quantity of acetic acid in vinegar is from 4 to 5 per cent. Malt vinegar contains, besides acetic acid, water, dextrin, and frequently sulphuric acid. Wine vinegar contains, besides acetic acid, the constituents of the wine from which it is made, as tartaric acid, &c. Pure vinegar is traneparent, but burnt sugar is added to give it a colour, on account of a popular prejudice in favour of coloured vinegar.

Various kinds of fruits, leaves, and parts of plants are preserved in vinegar and added to food. Some things are used in this way which are not otherwise employed. This is the case with the caper, which is the fruit of the *Capparis spinosa*; and the Stertion, the fruit of the Indian cress (*Cropæolum majus*). A collection of fruits and plants preserved in vinegar will be found on the shelves devoted to the exhibition of "acids."

Sugar may be converted into vinegar by the aid of vegetation. The so-called "Vinegar Plant," of which a specimen is exhibited in the Museum, is the *mycelium* of a fungus, which, during its growth in sugar and water, decomposes the sugar, and the result is the formation of the vegetable matter of the plant, and the development of acetic acid.

The natural order Aurantiaceæ embraces the Orange, the Lemon, the Citron, the Shaddock, the Pomelot, the Lime, and other fruits. All of them contain citric acid, and varying proportions of sugar.

The flowers of the Orange yield a delicious perfume known as Oil of Neroli.

The juice of these fruits is employed in the Navy for the purpose of preventing scurvy amongst sailors. This effect has been attributed solely to the citric acid, but it has been found that the acid alone does not act so efficaciously as when contained in the juice of the fruit. Hence some writers have attributed the effect to a chemical compound of the acid with other ingredients of the juice.

Citric acid is also found in many fruits, but mixed with other acids, as in the Berberry, Strawberry, &c.

Turtaric Acid forms with potass an insoluble salt, known by the name of Argol, and, when purified, 'Cream of Tartar. This salt is found in the lees of wine. By burning it the tartaric acid is converted into carbonic acid, and the salt of tartar (carbonate of potash) is made from the tartar of wine. Hence also the name Tartaric Acid. The dried fruits of 'the Grape (Vitis vinifera) are known by the name of 'fraisins'' and "currants."

The Tomato is the fruit of the Lycopersicum esculentum, and on account of its acid flavor is used as a sauce.

The edible products of the natural order Rosaceæ, comprising the fruits of the Apple, Pear, Apricot, Nectarine, Peach, Cherry, Plum, Raspberry, Strawherry, contain malic acid. They are mostly preserved in sugar. Many forms of plums called Prunes contain a sufficient quantity of sugar to be dried and preserved without further preparation.—A Guide to the Food Collection in the South Kensington Museum.

The Board of Arts & Manufactures FOR UPPER CANADA.

The regular quarterly Meeting of the Board will be held on Tuesday, the 2nd day of July, at half past one o'clock, P.M., at the Board Rooms, in the New Hall of the Mechanics' Institute, corner of Church and Adelaide Streets, Toronto.

The Sub-committee will meet at half past eleven o'clock, A. M., on the same day.

W. Edwards, Secretary.

## THE TORONTO MECHANICS' INSTITUTE.

The Annual Meeting of this Institution was held on Monday, May 13th; Joseph D. Ridout, Esq., President, in the chair.

The Secretary read the report of the Board of Directors, which was adopted; and the President having appointed scrutineers of the ballot, the election was proceeded with, and resulted in the selection of the following named gentlemen as Office-bearers and Directors for the ensuing year, viz:

Rice Lowis, President. R. A. Harrison, 1st Vice-President. W. Edwards, 2nd Vice-President. John Paterson, Treasurer.

Directors: Messrs. W. Hay, J. E. Pell, Jos. D. Ridout, Patrick Freeland, John Cowan, C.W. Bunting, James Litster, W. S. Lee, John Withrow, H. Piper R. J. Griffith and R. McPhail.

The first topic taken up in the report is the membership.

"The Board had hoped to be in a position to report an increase of members during their term of office. Although their hopes in this respect have not been fully realized, the decrease has been so trifling, compared with the two former years, as to justify them in concluding that the Institute has again entered upon a career of prosperity similar to that which it previously eujoyed."

The number of members and subscribers at last annual report, was 626, the total number at present is 620, showing a decrease of six during the year, compared with a decrease of 165 reported last year.