

Straasburg the daughter of the Rector or President of the Faculty, and he seems to have been particularly happy in the choice of his helpmate. Early in 1855 he was appointed Dean and Professor of Chemistry in the new Faculty of Science being organized in Lille. This city was the centre of the manufacture of beet root alcohol, and also produced much wine and vinegar, so that it was peculiarly well situated for the practical study of fermentations. Let me point out that the proper control of fermentation processes was, and is, of vast practical importance in the wine, beer, vinegar and other industries, including in our province cheddar cheese-making, and that before Pasteur's time, while much was known practically about methods of fermentation, nothing was known as to reason which caused, say, one brewing of beer to be excellent, while another brewing, fermenting similarly, soured in the cask, grew flat or even became ropy.

Pasteur showed that ordinary fermentative and putrefactive processes were caused by and occurred only in the presence of certain yeasts or bacteria as case might be. Further, he showed that without these special yeasts, or bacteria, being present and developing, a material, no matter how fermentable or putrescible, did not undergo any change. Again, that, when a fermentation went wrong, it was due to entrance and growth of other and different forms of organisms. The experiments brought forward to prove these points were exceedingly ingenious and convincing. It took but a short time indeed to convince the brewers of the practical value of his findings, and all large breweries are now equipped with a microscope for a study of yeast and detection of its impurities, and, speaking from my knowledge of English breweries, the use of the microscope is a very important item of training for brewers there. I cannot say the same for this country, as certainly, in so far as my knowledge goes, the microscope is not an instrument seen in our breweries. Perhaps if it were more used there would be a better brand, but it gives us bacteriologists a chance to straighten things out.

It took years, however, and the aid of Prof. Tyndall's decisive experiments, to break down the opposition that was brought to uphold the old doctrine of spontaneous generation. Let me give you a translation of Pasteur's own conclusions on this matter "No, there is to-day no known circumstance which permits us to affirm that microscopic beings have come into the world without germs, without parents like unto themselves. Those who hold that they do have been the plaything of illu-