

sions, of experiments badly made, tainted with errors which they have not known how to perceive, or which they have not known how to avoid. Spontaneous generation is then a chimera."

These researches marked out Pasteur as a remarkably acute observer with great clearness of mind. His writings are marked for their lucidity of expression, and in the debates produced by them in the French scientific societies Pasteur proved himself a keen controversialist, absolutely fair to his opponents, but demanding of them proofs of their statements, not mere words. "You say much but prove nothing," was his only reply to one opponent who endeavored to drown his demonstrations in a torrent of words.

Pasteur's work on fermentation and putrefaction set many other investigators to work, and amongst these the one to whom surgery owes so much, viz., Lister. Many men had previously pointed out that there was a close resemblance between fermentative processes and infectious disease, and, when Pasteur proved that fermentation depended upon the vital activity of microbes, Lister began to study wound secretions and had no difficulty in detecting numerous bacteria in these discharges. As Pasteur had shown that the microbes of fermentation were present in the air and surroundings of the fermentable material, Lister concluded that these wound bacteria were in like manner derived from the air and surroundings of the patient, and he then set himself the task of preventing the entrance of bacteria, or preventing their development in the wound. We do not employ to-day the exact system Lister devised, as it has been greatly improved upon with our more exact knowledge of the life history of the wound-infecting bacteria, but our present methods are a direct outcome of his. The antiseptic and aseptic system of wound treatment has, with anesthesia, made modern surgery, and proved one of the greatest blessings and boons to suffering mankind. One can only form some adequate idea of the value of Lister's work when it is remembered that the average mortality from the general run of operations ran from twenty to fifty per cent., and from the saying of the French surgeon, Vulpian, "The merest pin prick is an open door to death." Lister always attributed his basic ideas to Pasteur, freely crediting him with the honor, as witness the following extracts from his address at the Pasteur Jubilee in 1892: "Truly there does not exist in the entire world any individual to whom the medical sciences owe more than they do to you. Your researches on fermentation have thrown a powerful beam which has lightened the baleful dark-