fering produced by the discovery and application of "anæsthetics," and the saving of life consequent upon the more rational methods which have prevailed, and are daily extending themselves over the whole range of modern medicine and surgery.

Revolving in my mind to find a subject upon which to address you that will command your interest, I think I cannot do better than give a brief epitome of the advances and improvements that have taken place in the theory and practice of medicine and surgery since 1837, when I received from my "alma mater" at Edinburgh, legal authority to kill or cure as best I could. With my degree in my hand I was vain enough to think that I was ready for any emergency; but I was not long at work before I found I had much to learn, and that my real study was only then commencing. Had I rested content with what I then knew, I should not have obtained the confidence you have so kindly reposed in me, or that of those who have trusted me for so many years. I do not mean to imply that we should read all the medical literature that is extant, for when we reflect that it comprises about "one thirtieth" of all that is printed, it could not be accomplished in the ordinary period of a life. But he who wishes to keep abreast of the ever-advancing knowledge of the day, must not be idle.

In 1837 the doctrines of Broussais had spent their force. The disturbing influence produced by Hahneman and Brolon, Gaul and Spurgheim, had come and gone, and men turned from the dogmas of authority to close observation and the study of *facts*. Consequently a revolution has followed in the theory and treatment of many diseases. At that period the *Lancet* was in the hands of every practitioner, in daily, and I might almost say, hourly use. To treat a case of inflammatory disease without the abstraction of blood, would have insured censure. But it was not long before observation, guided by the vascular theory of Cohnheim, and the cellular theory of Virchow, taught the medical world that rest, cold or hot applications at certain stages of the disease, together with aconite, opium &c., and supporting diet should take the place of the loss of the vital fluid, and with such results that bleeding is now one of the rare surgical operations, though some contend that its disuse has been carried too far. Milk has largely taken the place of stimulants in the treatment of fevers, and all diseases attended with febrile debility.

Materia medica, with the aid of chemistry and botany, has greatly advanced. Many new remedies have been added to the Pharmacopœa, and some have properly been expunged from it. Experimental research has taught us the therapeutic value of many, others unjustly vaunted, have been dropped, not bearing the test of clinical investigation. In these days of progress there is a rage for new things, and among the rest, for new medicines, but we should pause before we accept the statements of chemists regarding their action, until their toxic effects have been established by bedside experience. And this experience should be carefully weighed, it is not sufficient to quote a number of recoveries after the exhibition of a remedy, we also want a control list of the failures. Bacon's advice should be followed,—to "observe patiently, experiment cautiously, and generalise slowly." The practitioner of the present day has the means of exhibiting some of the most useful and powerful medicines in a concentrated form, not in the shape of large powders, nauseous tinctures, infusions, and decoctions, but in the form of alkaloids, extracts, elixirs, capsules, &c. We have a valuable list of hypnotics and analgesics, some fulfilling all that is claimed for them, others not. But none of them possess the combined properties of producing sleep and relieving pain equal to opium and its alkaloids. But the unguarded use of them too often causes an unconquerable appetite for, or dependence upon the drug. It is true Alexander Wood in 1858, gave us by means of his Hypodermic syringe, power in a measure of controlling this baneful appetite, still they with all other hypnotics, should be prescribed with caution.

Modern research has, I may say, established the use of digitalis and strophanthus as heart tonics, the nitrite of amyl and nitro-glycerine in angina pectoris, the salicyl compounds in acute rheumatism, antipyrin and antifebrine as febrifuges. And since 1848 electricity has been much used as a therapeutic agent. Chemical analysis has arrived at such perfection that poisons can be detected in various parts of the body years after death from them. Pathological chemistry is daily adding to our knowledge. Through it and with the aid of the microscope, Pasteur, Tyndall and others have established the fact that living organisms are constantly floating in the atmosphere, and when planted in a genial soil multiply and produce fermentation and decomposition, a discovery which has so revolutionized our