

binding-straps of former days were thrown away. Patients no longer entered the operating theatre as victims of despair, but with hope and confidence, knowing that no matter how difficult or serious the operation they were about to undergo, they would feel no pain, experience no suffering. It can easily be imagined that an impetus was given to surgery by the use of these soothing and intoxicating drugs. Operations that before were considered impracticable or so appalling that life itself was often given up rather than undergo the anguish produced by the surgeon's knife are now welcomed and performed with comparative ease and safety.

But in this age of invention and discovery—an age in which every department of science is being pushed forward with wonderful activity—it is not surprising that we are enabled to record another grand triumph for surgery.

The labors of Lister, Koch, and other scientific workers in the field of bacteriology, revealed the fact that the air we breathe, the floating dust we inhale, especially in confined and ill-ventilated rooms, contain numerous micro-organisms, or germs, which, coming in contact with living tissues, such as are found in recent operative or accidental wounds, are capable of producing a train of evils which former generations of surgeons deplored, but, not knowing the cause, could not successfully obviate; such evils, for instance, as suppuration, septicæmia, erysipelas, and gangrene. By long and patient scientific experiments, Lister discovered that these living germs could be destroyed by various medical agents, the principal ones being bichloride of mercury and carbolic acid, and, as a consequence, wound infection prevented and the evils just mentioned greatly diminished. Hence another important era in the history of the healing art.

Lister's discoveries and the principles and methods which he promulgated have within the last twenty years revolutionized the whole system of operative surgery, with the gratifying result that the mortality following the larger operations, such as amputation of the extremities, has been decreased from thirty-five to about fifteen per cent. Within this time not only has the system of surgery changed, but it has expanded to such a wide range that every part of

the human body has become tributary to the surgeon's knife. Could such men as Abernethy, Sir Astley Cooper, Liston, and Mott, giants in their days, be called up from their peaceful abodes, they would stand amazed at the extraordinary advancement made in their own loved science.

Passing into the field of medicine, we find that here also, within the last few years, great and wonderful results in the direction of improvement and progress have been accomplished.

In all the centres of learning there has been a general waking up to the necessity of moving onwards in order to keep pace with the times in which we live. Colleges have enlarged and improved their courses of study; methods more discriminating in tendency and successful in results have been employed; instruction based on the most recent research and marked by a distinctive practicality has been called into play, and every means adopted calculated to equip the medical student with an outfit of theory and practice commensurate with the honorable and responsible profession which he has embraced.

The old-fashioned system of feeding students on didactic lectures for six months every year has, to a certain extent at least, been abandoned, and the more healthy and invigorating food of laboratory and clinical instruction has been supplied in their stead, in order that young men about to enter on the wide field of medical and surgical practice may be the better qualified to cope with the responsibilities and difficulties that surround them on every side.

The contributions of Tyndall and other eminent physicists from the regions of the infinitesimal orders of life have lighted up the dark mysteries of pathology and thrown open new fields for our inspection and observation. The microscope in the hands of the physiologist and pathologist bids fair to revolutionize still further the science of medicine. With its aid Pasteur has discovered the microbe of hydrophobia, and, having ascertained the cause of this formidable disease, has also discovered and announced an effectual remedy.

Following in the same line of research and scientific experiment, Koch has immortalized his name in the discovery of the cause of con-