

where he wishes to reduce the actions of the living body to the laws which govern inert matter, the whole body being regarded as a machine, and the laws of mechanics, of hydrostatics and hydraulics rigidly applied to it. As an instance, Borelli calculated that the heart, at each contraction, overcame a weight of 180,000 lbs.

Booerhave, Professor of Medicine at Leyden, a man of great talent and immense learning, was an ardent follower of the mathematical school. Succeeding Booerhave, we have the great Haller, who has not inaptly been called the "father of modern physiology." He was the pupil of Booerhave, and imbibed from him his thirst for knowledge, his correct judgment, his undeviating candor, his unblemished integrity, and, in short, all the intellectual qualities of his great master. He wrote a work called the "Elements of Physiology," and thus gave the world the first practical work on that subject. Contemporary with Haller, we have Cullen, the eminent Scotch writer. Since the revival of letters, no one has risen to greater eminence during his lifetime, nor has left behind him a higher reputation than this celebrated individual. He employed the greater part of a long life in the study and teaching of medicine, principally in Edinburgh, which he contributed in no small degree to raise to the rank, which it long held, of the first medical school in Europe.

We will now briefly consider some of the great and brilliant advancements of the present century:

1. Preventive medicine or sanitary science, which, during the present century, has made great advances.

2. By increased attention paid to microscopy, the processes of repair, and that of inflammation, and other morbid processes have been investigated.

3. The discovery of new modes of detecting disease; for example, auscultation and percussion of the chest, discovered by Laemace; also that by Bright, of disease of the kidney, which bears his name; the application of the thermometer in fevers; the sphygmograph in arterial tensions; also electricity in determining various forms of paralysis; the ophthalmoscope in

diseases of the eye and brain; the laryngoscope in laryngeal affections; many other appliances of like nature I might name.

4. The discovery and application of anæsthetics, first publicly made known Oct. 16th, 1846. This discovery is one of the most brilliant in all the annals of medicine, working a mighty revolution in surgery; also serving as a valuable means of diagnosis. Well may the poor sufferer, racked and tortured with pain, call for heaven's choicest blessing upon the head of him who gave the world this boon.

5. The discovery and introduction of new and valuable remedies; also the new application of older remedies. Notably among these we find, the phosphates, hypophosphites, bromides, iodides, iodine, cod liver oil, coca and its alkaloid cocaine, eucalyptus and eucalyptol, cascara, chloral, aconite, jaborandi, salicylic acid, carbolic acid.

6. The effect of the various drugs upon the living organism has been most carefully and accurately observed through the increased attention paid to *comparative physiology*, coupled with experiments upon the lower animals.

7. Etiology and pathology of disease have been most carefully studied, so that drugs are applied to the alleviation and cure of disease in a more rational manner.

8. The many improvements and discoveries introduced for the treatment of disease, especially of a surgical character, viz.: (a) The antiseptic treatment of wounds and surgical operations, thus contributing, along with anæsthetics, largely to *conservative surgery*, by which many injured members of the body have been spared to the owner; (b) the hypodermic mode of administering medicine; (c) the use of electricity, especially the galvanic and interrupted currents; also the galvanic cautery.

In conclusion, allow me to quote the words of one of England's statesmen, as follows: "He considered that medicine during the present century had made great advances in the field of science, and if it continue at its present rate of progress, at the close of the century it will have far outstripped all other branches of science."

Dr. Aschenbach states that salol taken internally relieves his sciatica better than any other remedy.