

A Century of Medicine.

JUST before the beginning of the nineteenth century (writes Dr James Walsh in an American magazine) an epoch-making discovery was made by an English country physician that foreshadowed the greatest advances that were to be made during the next hundred years in medicine. Edward Jenner (1749-1823), finding a tradition among the milkmaids in his native Gloucestershire that those who had suffered from a disease called cowpox, caught from an eruption on the cows' udders, did not afterwards contract smallpox, investigated the matter. He found that cowpox was probably an animal modification of human smallpox, and he suggested the introduction of vaccination—that is, inoculation with the virus of cowpox—in order to produce immunity to smallpox. Vaccination has been followed by all the benefits that Jenner prophesied. His idea was far in advance of his time. At the end of the eighteenth century his practical application of a chance discovery anticipated such ideas as immunity, protection and modification of disease that are now, at the beginning of the twentieth century, topics of acutest interest in the most promising department of medicine. At the beginning of the nineteenth century the impression was very general that most of the symptoms of disease

Were Due to Living Causes.

As nothing was known of the minute germs of disease, it was concluded that worms in the intestinal tract were a frequent cause of otherwise inexplicable symptoms. A great number of prescriptions for the removal of worms was in use. The vermifuges, as they are called, were the most popular family remedies. Popular medical tradition has not got entirely beyond this stage as yet, and many people are persuaded that unusual symptoms, especially in children, must be due to worms. Needless to say our care in food materials, and especially in the inspection of meats, has done away with the danger of worms developing to any great extent.

Supposedly scientific medicine at this time was occupied with the thought that disease was due to a change in one of the humors of the body, the blood, the lymph, or the bile. During the first few years the teaching of the eminent Frenchman Bichat (1771-1802) did much to counteract this false notion. He showed that most diseases were due to changes in special tissues. This took disease out of the order of systemic affections into the more special class of organic affections. Sad to say, excessive study brought Bichat's life to a premature close.

The first to take advantage of Bichat's teaching and apply it seriously to practical medicine was another Frenchman, Laennec (1781-1826). Laennec found that by listening to the sounds produced in the heart and the lungs he could tell much of the character of the ailments from which these organs suffered. This was an extremely important advance in diagnosis. At first Laennec applied his ear directly to the chest. During his investigations into diseases of that part of the body, a young woman was admitted to the benefit of his service at the Necker Hospital in Paris. In order to save her modesty he did not apply his ear directly to her chest but used a roll of paper as a tube to convey the sound from the chest to his ear.

This was the First Stethoscope.

and the invention of an instrument that has proved of very great service in the accurate detection of lung and heart diseases. Poor Laennec was destined to die at the early age of 45 from consumption, the study of which had enabled him to throw so much light upon diseases and initiate that exacter knowledge which was to prove so important in nineteenth century medicine. He was born in Bretagne and was, like his fellow-countrymen generally, known for his simple faith and earnest piety. It is related of him that once in the winter time, while on his way to Paris, his wife and he were thrown out of a sled. When they picked themselves up and succeeded in righting the sled, for the horses had not run away, the first thing he said was: 'Well, we were at the third decade. Let us go on.' They had been saying the Rosary together.

After Laennec the most important work on a special organ was done in England by Richard Bright (1789-1858), who showed that certain symptoms, and especially dropsy, were connected with changes in the kidneys. Bright's work was very complete in its way and since then the degenerative kidney affections have been called Bright's disease.

Curiously enough there is a tradition that Richard Bright, like Laennec, died of the disease the study of which had been his principal life work. This was probably no more than a coincidence. In Laennec's case association with tuberculosis patients had probably proved a source of contagion. Sometimes such cases are considered as illustrating the influence of the mind over the body, for a number of surgeons have died of affections of the organs which they had studied the most. This explanation seems far-fetched, however, and is often doubted.

A Revolution in Medical Thought

with regard to the basis of disease was preparing. Theodor Schwann (1810-1882), a German professor in the Catholic University of Louvain, showed that the tissues of all animals, like those of plants, are composed of distinct minute portions separated from one another, which he called cells. The study of cells and cell-life soon led to better knowledge of the intimate constitution of organs and of the manner in which their functions are performed.

Another famous German, Virchow, the father of cellular pathology, as he is called, showed, about the middle of the century, that it is not the organs as a whole that are affected by disease, but the cells of which the organs are composed. Not all of the cells are affected, but different ones in different diseases. This was the new idea that was to revolutionise pathology. Ten years before Virchow's discoveries, the great medical men of Vienna were teaching that disease was due to changes in the body humors. Except in

the popular mind, where, as Virchow pointed out last year at the International Medical Congress, the old humoral pathology flourishes in nearly its ancient vigor, changes in the fluids of the body are no longer considered as the important basis of disease.

Another great change in medicine was effected by the illustrious Frenchman, Pasteur (1822-1895), shortly after Virchow's first work was published. Pasteur showed that certain diseases in animals, and, later, certain diseases in human beings also, are due to the presence of minute living germs, which are called bacteria. Pasteur's work represents some of the most practically

Valuable Advances in Medicine

during the whole century. When he came to die, and was laid in his tomb in the little chapel at the entrance to the Pasteur Institute in Paris, the scientists of both hemispheres felt that one of the world's greatest geniuses had passed away. Besides his labors in the cause of disease, Pasteur had conferred a never to be forgotten benefit on mankind by laying bare some of the secrets of nature's methods of curing disease. His success with chicken cholera and anthrax in animals, as well as the silkworm disease, had been the prelude to his great humane work on rabies. His experiments and observations made possible the diphtheria antitoxin, and the prospect of other such applications of biology to medicine.

Another distinguished Frenchman was doing great original work in medicine about the same time. This was Claude Bernard (1813-1878), who taught us the function of the ductless gland and a number of the important physiological truths with regard to the nervous system and nervous reflexes that enable us to understand the intimate sympathy that exists between all portions of the body. Claude Bernard's work made clearer something of the obscure pathology of such important diseases as diabetes, myxoedema, obesity, and many of the anæmias. Lord Lister, following closely the work done by Pasteur with regard to the existence of germs in the air that cause fermentation, suggested the employment of methods to prevent these germs getting into wounds—the antiseptic treatment. This made possible the great advances in surgery at the end of the nineteenth century.

Everyone to his Taste.

UNDER the above heading a contributor writes as follows in the *Ave Maria*:—If you should travel around the world, you would learn to eat your dinner in a good many ways. In Turkey you would learn to sit on the floor, cross-legged, and eat off a round tray, without knives or forks, plates, glasses, or napkins. All the guests eat with their fingers out of the same dish. If you dined with the Arabs, you would see no knives or forks; and if your host offered you a choice bit of meat, you would be expected to open your mouth and let him put it in. The Arabs use only the right hand in eating; and, what is still more funny, they will pull apart or carve turkeys and fowls with only one hand and without a knife. If it is hard to separate, one of the guests will lend his right hand. In Siam you would be treated to ants' eggs; and in Burmah to locusts, stuffed and fried. All you young folks would like to eat in Japan; for they serve candy and sweet things very often, and what one can't eat one is permitted to take home. At all grand feasts guests are expected to bring servants, with baskets, to take back the leavings.

In Abyssinia it is a mark of good-breeding to smack the lips while eating; and I'm sure you'll not be surprised to hear that Abyssinians eat their meat raw. In South America you would eat lizards and snakes, and among our American Indians you would be treated to roasted grasshoppers. In Otaheite you would have your dinner alone, in a basket; and if you were in the fashion you would sit down on the floor, turn your back to everybody and eat. It is there considered very improper to eat with others.

But the funniest dish you would see, I think, would be in China, where they serve up little crabs—alive! Just as they sit down to dinner the tiny crabs are put into a dish of vinegar, which makes them very lively. Then they are put into a covered dish and placed on the table. When everyone is ready the cover is snatched off, and instantly the table is covered with scampering crabs, running for their lives. Now comes the fun! The guests, with both hands, grab right and left, and stuff into their mouths these lively, wriggling crabs and eat them down with great relish.

The progress of the Catholic faith in Tasmania (says the *Monitor*) is marked by the steadily increasing number of convents and religious institutions which are springing up amongst us. Not many years ago in the Archdiocese of Hobart there were but three convents—two in Hobart and one in Launceston. Indeed, when his Grace, our venerable Archbishop, came to assume the reins of episcopal authority in the island, there was but one religious community in the diocese, and that consisted of a few Sisters only. Since then what a change has taken place! Instead of one we have five distinct religious sisterhoods, laboring amongst us in those works of charity special to the aim and purpose of their constitutions—the Presentation Sisters, the Sisters of Mercy, the Sisters of Charity, the Sisters of the Good Shepherd, and the Sisters of St. Joseph. Instead of one convent and school we have 26 convent schools, 21 convents, and something like 180 Sisters. The late census returns showed that we are holding our own in the increase of population, and considerably advancing with the years. The increase in our religious institutions, schools, convents, etc., show that efforts are being made to meet with the larger requirements of the faithful consequent upon their increased numbers.