

Medical World Honors Dr. Welch

Medicine

Today's "Dean of American Medicine" Attains 80 Years

WHILE the whole medical world united in honoring Dr. William Henry Welch on his eightieth birthday on April 8, and the President of the United States delivered an address at the Washington celebration, few outside the world of science knew who Dr. Welch is or why he was honored in this way.

Picture to yourself a short stocky gentleman, with head held characteristically on one side; white moustache and Van Dyke; twinkling eyes and kindly smile; a combination of Santa Claus and the world's nicest grandpas rolled into one, whom all his friends and pupils fondly call "popsy"; a man with the brisk stride of a younger generation, with a brilliant mind and outstanding achievements but extreme modesty; that is Dr. Welch.

Known as the dean of American medicine, Dr. Welch himself has made a number of important contributions to science, beginning with the investigations of his student days. But his greatest contribution has been in the field of medical education.

It is largely owing to his influence and efforts that medical education in the United States holds its present high place, equal to that of any other country. Yet some fifty years ago when Dr. Welch was just starting on his career as doctor, it was impossible for a young man to get adequate medical training in this country. Then the practice of medicine was an uncertain, if well-meaning art. Today it is a science of many branches.

Fifty years ago the laboratory was almost unknown in American medical schools. Teaching was almost entirely by lecture. The professors spent only part of their time in teaching, being occupied for the most part with their own private practices.

Today fully half the courses in medical schools are given in the laboratory, and in addition the student has studied chemistry, physics and biology before entering medical school. Now the teachers in at least a few medical schools of the country devote all their time to teaching, and this movement for full-time instruction is gaining ground.

Dr. Welch is our greatest statesman in the field of public health, and his public service to the nation well warrants our appreciation of him. . . .

Our age is marked by two tendencies, the democratic and the scientific. In Dr. Welch and his work we find an expression of the best in both tendencies. He not only represents the spirit of pure science but constantly sees and seizes opportunities to direct its results into service of human kind.

Medicine until modern times was a species of dramatic play upon emotions rather than a science made useful through technology. It combined centuries of experience in trial and error in reactions from many drugs, with a maximum of skill on the part of the practitioner in a kindly art of making the patient feel as hopeful and comfortable as possible while he was dying of the disease, the origin and treatment of which was as yet undiscovered. Providence was made responsible for his fate rather than the bacillus which should never have been allowed to infect him.

Modern medical practice, however, is based upon a vast background of scientific research and discovery. In the creation of this science, in the conversion of its principles into technical methods for use in actual practice, in the diffusion of knowledge of these principles and methods, and in the application of them upon a national and world-wide scale, Dr. Welch has played a leading American part. . . .

No valuable change in everyday practice of any of the great arts has ever been made that was not preceded by the accretion of basic truths through ardent and painstaking research. This sequence that precedes effective action in medicine is equally important in every field of progress in the modern world. It is not the method of stirred public emotions, with its drama of headlines; it is rather the quiet, patient, powerful and sure method of nature herself. . . . —President Herbert Hoover at the Welch Celebration.

Besides his influence on medical education, Dr. Welch has been the teacher and the inspiration of a long line of eminent medical investigators who have done much to increase our knowledge of disease and how to conquer it. He has been the guiding star of the public health movement in this country and abroad.

Hundreds of his students have gone out to campaign for such reforms as better sewer systems, better control of milk and water supplies, and other measures necessary to prevent the spread of disease. Dr. Welch himself through his eagerly sought advice to Presidents, Sen-

ators and Congressmen has done much to promote the enactment of laws necessary for the prevention and control of disease and for the betterment of the health of the country. It was through his advice that the Yellow Fever Commission of the United States Army was created, which accomplished the discovery of the role of the mosquito in the spread of yellow fever.

William Henry Welch was born in Norfolk, Conn. His father, four uncles, grandfather and great-grandfather were all doctors. He studied first at Yale, where he received the degree of bachelor of arts, standing third in a class of 111. After a year of teaching he took up his medical studies at the College of Physicians and Surgeons, New York. Later he studied abroad under the most distinguished teachers. Here he learned not only the new facts and theories about diseases which were just being brought forward, but also the modern methods of scientific investigation. It was that important period of medicine when such men as Virchow, Pasteur and Koch were at work on their epochal discoveries.

Back in America again, Dr. Welch found physicians slow to accept these newly discovered medical facts and still clinging to the old theories and old methods.

Dr. Welch's own medical specialty is pathology, that branch of medicine which deals with the nature of disease. When he first started out as a physician, pathology was almost unknown in the United States. The chances of making it a career were extremely slim. Yet when the young doctor returned from abroad, he refused to become a lecturer on pathology at the College of Physicians and Surgeons because he would have no opportunity to set up the laboratory which he considered essential for teaching this and related subjects. However, Bellevue Hospital Medical College prepared a laboratory for him and here he taught for several years, during which time he acquired a high reputation in the medical profession of New York.

When President Gilman of the Johns Hopkins University looked about for a man (*Turn to next page*)

America's Machine Age Has a Birthday—Continued

leave still much to be desired from the point of view of automobiles. However, a great scheme of 20,000 kilometers of road improvements to be completed in 10 years is now in course of active realization.

In the meantime several "autostroads" built expressly for rapid transit of automobiles are already in service and more in construction. They are roads very solidly paved and reserved exclusively for automobiles. They are not in direct communication with ordinary roads and they can be entered only at proper places protected by signals like an ordinary railroad. Thus automobiles are free to travel at any speed they like, because the signals protect them from side collisions. It is a new idea which has found great favour with the public.

Switzerland

Dr. A. Stodola of Zurich:

Swiss technical science owes its origin to the economic needs of a country poor in raw materials and dependent upon the scanty yields of its soil. The initiative of far-seeing leaders gifted with creative genius found powerful and encouraging support in the natural liking and ability Swiss people have for technical activity. In early days Switzerland recognized that its very existence depended largely upon the quality of its products being of the very highest, and to live up to this standard is natural to the Swiss character which is averse to all outward show but prizes genuineness in goods and in character. In addition to this the Swiss engineer has instinctively endeavored to impart the stamp of beauty to his designs, a fact which has always been acknowledged by the technical world.

Belgium

From a report by a number of Belgian engineers:

Examples of Belgium's contribution to the technical progress of the world are:

The ammonia process invented by two eminent Belgians, the brothers Solvay. The dynamo invented by Zenobe Gamme of Liege. The first artificial silk factory at Tubize. The first plate glass factory exploiting the Fourcault process. The adoption at Langerbrugge of high-pressure boilers for the production of electric power, proving the possibility of reducing the cost of power by such a margin that electrochemical plants

may come down from the mountains to the coal fields. This fact is particularly important for Belgium which controls practically no water-power.

Scandinavia

Vilhelm Nordstrom of Sweden, representing Scandinavia:

Mechanical engineering has developed rapidly in Sweden and has contributed to the industrial progress of the world on a scale far out of proportion to the number of inhabitants. Even if we leave out many names, we still have a very significant list, including:

The founder of mechanical material testing, Per Lagerhjelm; the inventor of the ball testing method, Johan Brinell; the originator of absolute exactness in mechanical production, E. C. Johansson inventor of the Johansson precision gauge. The name of Gustaf de Laval is well-known in technical circles because of his revolutionary work in increasing the speed, peripheral as well as angular.

In the field of power and heat economy there are the brothers Birger and Frederik Ljungstrom, turbine inventors. Johannes Ruths is the inventor of a new method for the storage of steam. The Swedish Ball Bearing Company, based on S. G. Wingqvist's invention of spherical ball-bearings, now controls 35 per cent. of the world's supply in this field. The Swedish Match Company and the name of its far-seeing leader, Ivar Kreuger, are well known.

The inventions for lighthouses by Gustaf Dalon can be seen all over the world, for instance the installations in the Panama canal. Many other names might be mentioned, such as that of Alfred Nobel. We honor as the ideal mechanical engineer, John Ericsson.

Denmark's industrial development is based on a decidedly scientific foundation, and names such as Tycho Brahe and H. C. Orsted, the discoverer of electro-magnetism, give a certain splendor to this phase of Denmark's contributions to scientific industrial research.

South America

Prof. Donato Gaminaro, of Uruguay, representing South America:

Like youth that develops in an environment full of difficulties to be met, where great activity is called

for and the prospects are bright, South American engineers have matured rapidly until now they are the real leaders in political and social life. Today in South America there are engineers in the presidency of Republics, in the presidency of universities, as members of Congress, and in other high places. The countries of South America are developing rapidly and engineering must necessarily be one of the greatest factors in their progress.

Austria

Hofrat Ing. Ludwig Erhard of Vienna:

Austria is still in the heart of Europe. This geographical position still provides us with natural advantages, and even in this dark period of our existence Vienna's culture and beauty are maintaining the reputation and tradition of centuries. Our cultural mission is deep-rooted and of real importance to the civilization of Central Europe. Whether or not we can maintain it in the future will depend to a great extent on the economic development of our country. With humble pride, the engineer engaged in our economic restoration finds himself at work on one of the most serious problems of European culture.

Dr. Welch—Continued

to guide the new medical school of the university, he was advised by eminent European professors that he could find no one better suited to the task than the young Dr. William Henry Welch. As a result, Dr. Welch became the first professor of pathology and first dean of the Johns Hopkins Medical School. In 1916 he was appointed Director of the School of Hygiene and Public Health, a position he held for ten years, although his duties as director were at first interfered with by his war service. Since 1926 he has been Professor of the History of Medicine at Johns Hopkins.

While he has remained unknown to the general public the world of science has long recognized his ability and achievements, and has bestowed countless honors and degrees upon him. Yet he is one of the most modest of men. Much of his accomplishment has been due to his charming but forceful personality which has won loyal followers to his standards and ideas.