Osler, Sir William

Medical Litterateur

■ Early in 1892 a slight wiry man with keen black eyes and a drooping mustache strode with decision into a Baltimore drawing room, placed an imposing red volume on a lady's lap, exclaimed: "There, take the darn thing; now what are you going to do with the man?"

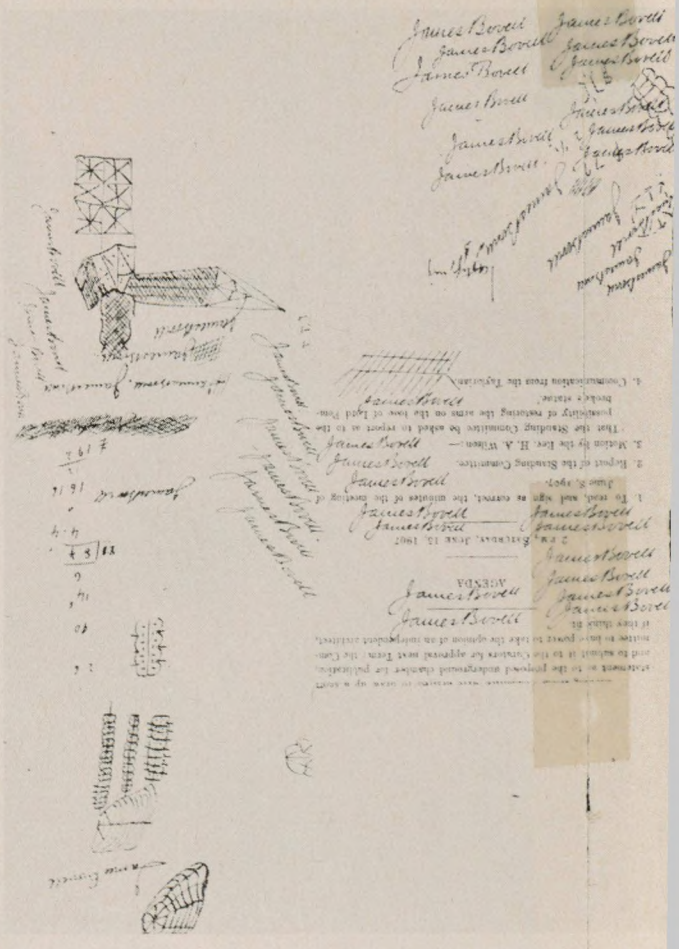
The challenger was Dr. William Osler,* already at 42 a distinguished clinician, teacher, prolific writer and a man of great culture. The book was the first copy of his now legendary *The Principles and Practice of Medicine*, soon to make textbook history. The lady was Grace Revere Gross† who had wisely deferred taking the man until the book was completed.

Known for his infinite capacity for work at the bedside and in the laboratory as well as for his fertile pen, Osler had briefly faltered in his sense of purpose in 1891, while courting Grace and wrestling with his *magnum opus*. He threatened to let the book "go hang." The wise and patient woman advised "the shoemaker

* He became Sir William Osler in 1911.
† Widow of Osler's good friend, Dr. S.W. Gross of Philadelphia, great-granddaughter of Paul Revere.

Dr. William Osler, author of The Principles and Practice of Medicine, *was the most brilliant teacher of medicine of his day.*

In Baltimore Osler, left, works on the manuscript of the Principles. *Page from an early notebook, below, has the name of his Toronto literary mentor Dr. James Bovell written over it. Dr. Thomas MacCrae, opposite, helped Osler edit the eighth edition of* Principles *and succeeded him as editor.*



to stick to his last," and with this encouragement Osler completed his manuscript.

ACCLAIM. The first edition which appeared on February 24, 1892, met with such unexpected acclaim that within three weeks the first printing of 3000 was sold out. It was not until May 7 that Grace and he were able to slip away quietly to be married.

The Principles and Practice of Medicine, a marvel of organization, marshalled facts with a clarity and literary grace that dazzled a medical world accustomed to the cumbersome medical encyclopedias then in vogue. Osler's tome easily replaced the reliable but out-of-date classic written by the late Sir Thomas Watson of King's College, London. It eclipsed the texts offered by contemporary American luminaries and even topped Britain's John S. Bristowe's popular work.

The textbook was dedicated to three men who had inoculated Osler with the love of science and literature in his student days in Canada: William Arthur Johnson, James Bovell, Robert Palmer Howard. Under their tutelage he progressed from ardent naturalist and collector to a young medical student imbued with the importance of pathology, making abundant notes and keeping systematic records. Dr. James Bovell, of the Toronto School of Medicine and McGill University, became his literary mentor, encouraged him to collect not only natural specimens but also books. Love of reading and a passion for medical history forged the unique alloy of humanism and science which was fused so artfully in *Principles*.

CHALLENGE. When he tackled the challenge of writing *Principles* Osler at 42 was not yet at the zenith of his fame. He had won a solid reputation in clinical medicine at the University of Pennsylvania, was well known for his precise laboratory methods, and his scientific work on the diseases of the blood; he was the first to identify blood platelets. A serious scholar, he had already organized a society for the study of the history of medicine. Wide reading, constant writing and a good ear for the cadence of words had burnished the clear and supple style that became his signature. A prodigious memory allowed him to dip freely into his encyclopedic knowledge for scientific facts and literary lore.

Writing his own textbook had been suggested to Osler before 1890. Reviewing recent medical manuals had clarified his concept of what a textbook should offer. He had made half a promise, even pre-

pared some chapters, but confessed that he "continually procrastinated on the plea that up to the fortieth year a man was fit for better things than textbooks." As he passed 40 he began to feel that the energy and persistence necessary for the task were lacking. He had been "bedeviled" into pledging several chapters to Dr. William Pepper's two-volume *American Textbook of the Theory and Practice of Medicine*. He had already contributed other chapters to Pepper's earlier *System of Medicine* and to Dr. John Keating's monumental *Encyclopaedia for the Diseases of Children*.

A visit from Appleton's agent, Dr. Granger, in 1890 spurred Osler's flagging ambition. Granger's visit was well-timed: Osler had just returned from an extended tour of Europe and his usually grueling schedule was lighter than he expected. He had been called to Baltimore from Philadelphia to be physician-in-chief at the newly created Johns Hopkins Hospital and to help organize a new medical school, but financial difficulties had delayed its opening. His responsibilities at the hospital were light: two competent residents assisted him ably, leaving him spare time for writing.

Dr. Granger's offer of a contract to write a textbook on medicine was "too glittering to refuse": a guaranteed circulation of 10,000 copies and $1500 on publication. Wrote Osler later: "We haggled for a few weeks about the terms, and finally, selling my brains to the devil, I signed the contract."

PROGRESS. Work on what Osler liked to call casually his "quiz compend" progressed slowly at first. After three months the section on infectious diseases, the first of ten, was barely finished. In January of 1891, Osler mobilized his formidable powers of concentration and reported that he "got well into harness."

He dictated at home three mornings of each week from eight until one; on other days he worked after his morning hospital rounds, devoting all free afternoon hours to correction and checking references. He borrowed his old pathology records from Montreal General and drew from them for statistics.

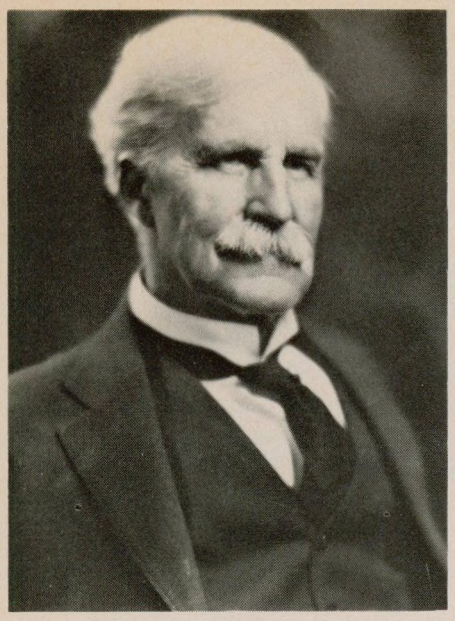
In May of 1891 he increased his efforts and left home to establish residence at the Johns Hopkins Hospital. There he gradually appropriated resident Dr. Hunter Robb's study, tucked away in a quiet corner at the end of a corridor. For six months Robb was unable to use his study. Osler confessed in the fly-leaf inscription of the copy of *Principles* he presented to Robb: "This book was conceived in robbery and brought forth in fraud. In the spring of 1891 I coolly entered in and took possession of the working room of Dr. H. Robb. . . . I just turned him out of his comfortable nest, besplattered his floor with pamphlets and papers and trash and played the devil generally with his comfort. In spite of the vilest treatment on my part, he rarely failed to have oranges in the cupboard, chocolates etc. (yum yum!) on his table and ginger ale and 'Old Tom' on the sideboard."

FUN AND GAMES. Osler's schedule was now work all day interrupted only by his visits to patients at two o'clock and again at five. After dinner he "loafed" and was in bed by ten. Occasionally he would lapse into his proverbial playfulness (once the leader of "Barrie's bad boys" he had been expelled from grammar schools for pranks), irrupted into Robb's bedroom to match quarters or exchange stories, or to "court inspiration" by kicking Robb's wastebasket around the room. Robb once filled the basket with camouflaged bricks which broke Osler of the habit.

By the middle of October 1891 the monumental work was almost completed; three months later in January of 1892, after painstaking proofreading, he prepared the index. During the gestation period he had gained eight pounds, had never lost a night's rest and only one afternoon "through transient indisposition." Before the corrections for the second printing had been completed he had also managed to produce the chapters promised for Dr. Pepper's textbook and to give major addresses and read papers before medical associations.

THE BOOK. The "quiz compend" was a formidable array of exact facts, historical material, practical advice. Harvey Cushing* later termed it a "medical

* Osler's biographer.



On reading the Principles *Rev. Frederick Gates, left, was inspired to lead his friend John D. Rockefeller into a major philanthropy, creation of The Rockefeller Institute for Medical Research in 1906.*

masterpiece" so readable and informative that "it immediately superseded all other textbooks of general medicine." Some 23,000 copies of the first edition were sold, 17,500 of the second, which was remarkable for a medical work.

Principles established new trends in medical teaching. "The patient was the text" in Osler's method of bedside teaching derived from the Edinburgh medical tradition. The book was only a supplement to clinical studies. Firmly based on morbid anatomy the textbook presented the symptomatology and diagnosis of disease based on the results of modern techniques of investigation. Physiology was challenging the reign of morphology and was preparing the way for a new era of scientific medicine. Osler wrote: "To investigate the causes of death, to examine carefully the condition of organs . . . to apply such knowledge to the prevention and treatment of disease is one of the highest objects of the physician."

Well received as the book was, there was criticism of Osler's attitude toward therapeutics, considered the weakest part of his work. He declared that many drugs then commonly used were useless and recommended good nursing care and letting nature take its course. Some critics called him a "therapeutic nihilist" but most were kinder and preferred to refer to him as a "therapeutic conservative," or a "therapeutic sceptic."

For one writer to cover the entire field of medicine was a *tour de force*. Osler relied on his collector's training to organize his unwieldy material. He defined each disease, traced its history whenever possible, then discussed it under the headings of etiology, transmission, morbid anatomy, symptoms, diagnosis, prognosis, prophylaxis and treatment (a schema later widely adopted by textbook authors). His extensive training in pathology made his descriptions of morbid anatomy of disease particularly vivid. Treatment was recommended only when it had been proved effective.

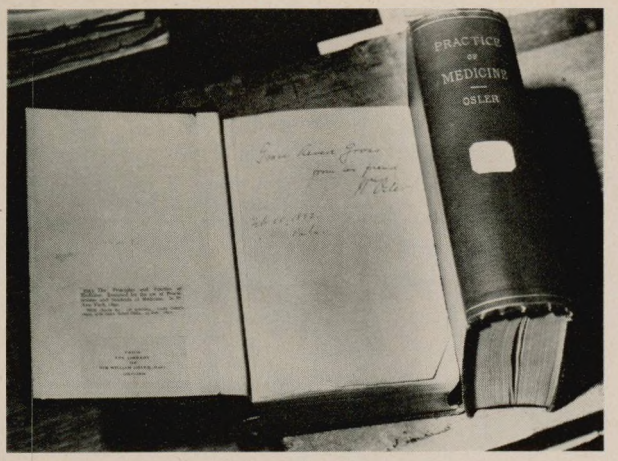
The first edition grouped infectious, parasitic and constitutional diseases; those of the digestive, the respiratory, the circulatory and the nervous system; of the muscles, blood and ductless glands; intoxications, sunstroke and obesity under ten subheadings.

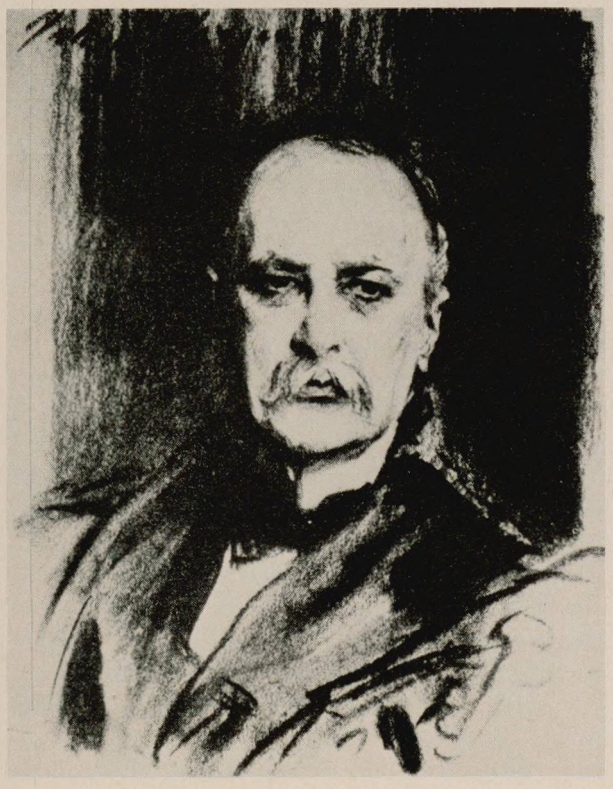
The first topic was typhoid fever. A long historical note followed the brief definition and terse description of the clinical symptoms. Osler credited Pierre Bretonneau of Tours with distinguishing *dothién-enterite* as a separate disease and Pierre Louis for first calling the illness typhoid in 1829. To Louis' young American student William Wood Gerhard of Philadelphia went the palm for having been the first to make a distinction between typhoid and typhus, which were thought to be the same. Later, limitations of time and space curbed Osler's discursive bent though he could not refrain from sharing his vast resources of history and lore. The reader learned that lobar pneumonia was confused with pleurisy by Hippocrates and that the father of medicine related body build to tuberculosis.

Pithy literary allusions* spiced the medical material: John Bunyan had dubbed pneumonia "Captain of the Men of Death." Izaak Walton's Maudlin sang of "the green sickness" (chlorosis) that it was "a disease of girls, more often of blondes than brunettes" and that country lasses were usually free of

* At Oxford he was curator of the Bodleian Library, and president of the Classical Association.

In February 1892 Osler presented a copy of the Principles *to Grace Revere Gross whom he married three months later. Portrait of Osler, below, is a charcoal sketch by John Singer Sargent.*





it. "The fat boy" in the *Pickwick Papers* was mentioned as an example of narcolepsy.

REVISIONS. Revised editions reflected the progress of medical knowledge and the change in scientific climate. Osler had his finger on the pulse of medicine. He taught at Johns Hopkins with some of the finest medical personalities of the day; his wide travels in Europe and in Great Britain kept him in touch with medical advances which he promptly incorporated in each new edition. Many sections of the sixth (1905) edition were so splintered and altered that Osler felt it was in many respects a new book.

The seven editions of *Principles* spanned a dramatic period in medical science from 1892 to 1909: Freud and psychoanalysis, Schaudinn and Ehrlich and the mystery of syphilis, Roentgen's rays and the Curies' radium. Yellow fever was traced to a carrier mosquito, sleeping sickness to the tsetse fly. In 1892 the treatment of diphtheria had scarcely changed since the disease had appeared among settlers of New England. The second (1895) edition reported the discovery of an antitoxin. The fourth edition (1901) endorsed the use of antitoxins and reassured "intelligent practitioners." By the seventh (1909) edition there were already warnings of complications from inoculations. Typhoid fever was attributed in the early editions to a specific organism, a poison in the feces. By 1901 prophylactic measures to control drainage and water supply were urged. The sixth (1905) edition described Wright's vaccine. Typhus fever was "one of the great epidemics in the world" in the first edition; its gradual disappearance was marked as "one of the great triumphs of modern medicine."

Few important trends in medicine failed to attract Osler's interest: problems of heredity and the inheritance of disease, early insights into the role of the psyche on the soma. Osler suggested that nostalgia and mental depression were important elements in scurvy, pointed out that the onset of goiter was preceded by "worry, fright, depressing emotions." Of angina he wrote: "The mental emotion is a second very important cause... John Hunter said that his life was in the hands of any rascal who chose to annoy or tease him."

Osler ascribed neurasthenia to a "neuropathic predisposition" resulting from a "feeble organization" of germ plasm related to improper development and nutrition of the embryo. He felt that emotional and sexual problems played a role in neurasthenia and warned that the "irritable humor" of neurasthenic patients was not a result of egotism but of their sensations of discomfort. In the seventh edition psychasthenia, which included obsessions and phobias, was attributed to "inherited psychoneurosis."

APOGEE. The seventh edition of 1909 has been called the apogee of Osler's textbook although he did not consider it a very serious revision. It offered the distillate of his formidable medical experience. The most dramatic changes were in the section on infectious diseases: among them the discoveries on syphilis, the understanding of the spread of pneumonia, the conquest of Malta fever by British military physicians, the new insights into tuberculosis, the work on yellow fever in Panama.

Engraving shows Osler as "The Saint" of Johns Hopkins where he taught from 1889-1904. He was also the author of A Concise History of Medicine, *1919.*

The order of the sections was scrambled; the section on animal parasites, also greatly revised and enlarged, replaced infectious diseases as the first heading. A new section on the diseases of the kidney was added. Obesity, originally discussed with alcoholism and morphine addiction, was by now transferred to "Constitutional Diseases," as was rheumatic fever which left the company of gout, diabetes and rickets. Osler added to the "Diseases of the Nervous System" recent studies on aphasia and other nervous disorders; he described psychasthenia as "inherited psychoneurosis" while neurasthenia was "usually acquired."

OSLERIAN TRADITION. The seventh edition was the last which Osler revised alone. An attack of renal calculi in 1910 pressed him to make provisions for the gradual transfer of responsibility for authorship of the *Principles*. His first suggestion had been that two Johns Hopkins doctors would join him and perhaps keep up the textbook as a Johns Hopkins project. Instead, his former resident Thomas MacCrae, then professor of medicine at Jefferson Medical College, assisted him with the eighth edition, continued the Oslerian tradition after Osler's death from pneumonia in 1919 through the twelfth editions. Henry A. Christian of Harvard Medical School then took over the editorship from the thirteenth edition in 1938 through the 16th and last edition in 1947, still keeping it a one-man book.

The Oslerian tradition was Osler's legacy to American medical writing and editing, still inspired by his masterly clinical descriptions of disease, his medical wisdom and his literate approach. Osler's vigilance in keeping the textbook up to date made it the medical bible of many generations of students around the world. Some 300,000 copies were sold in 16 editions and 84 reprintings. It was translated into French, German, Spanish and Chinese.

The major legacy of Osler's textbook was its influence in guiding the Rockefeller family's philanthropy toward research in science, medicine, public health. On a vacation at a resort in 1897, Baptist minister Frederick Gates, one of Rockefeller's trusted advisers, read *Principles* at the sugestion of a medical student. Charmed by Osler's style and lucid presentation of facts, he read the whole book straight through. Gates wrote: "It is one of the few scientific books that are possessed of high literary quality. There was a fascination about the style that led me on, and having once started I found a hook on my nose that pulled me from page to page..." That a man of Osler's medical distinction could admit simply that for many diseases there were no specific cures or remedies, only relief of pain and advice for good nursing was a revelation. Too little was known about infection and about the germs that caused it.

Gates concluded that the scientific study of medicine had been woefully neglected in all civilized countries and perhaps most of all in America. He shared his vision of scientific medicine with Rockefeller and his eloquence resulted in the Rockefeller Institute of Medical Research.

EPILOGUE. The influence of Osler's text has been revived in the tangible form of new editions bearing his name and called the 17th and 18th. It is a Johns Hopkins joint effort by the department of medicine, with six editors and scores of contributors under the senior editorship of Dr. A. McGehee Harvey, emphasizes clinical problems, centers on the patient rather than the disease. Therapy and management of patients occupy a large part of the new text.

SUMMING UP. By Oxford's Falconer Madan: "Osler succeeded in making a scientific treatise literature."