

*JSBillings*

NATIONAL LIBRARY OF MEDICINE

JOHN SHAW BILLINGS CENTENNIAL







*In this portrait, painted by Cecilia Beaux in 1895, Dr. Billings wears the gown of a Doctor of Civil Law of Oxford. The painting hangs in the Reading Room of the National Library of Medicine.*



## THE MEDICAL LIBRARIAN AND BIBLIOGRAPHER <sup>1</sup>

The gravitation of John Billings to books was as inevitable and as certain as any law of nature. It was equally certain that, given access to books, he would know their contents, use them, and introduce others to their solace and help. Detailed to the Surgeon General's Office and finding no library, he made one.

That he and no one else was founder of the national medical library needs no discussion after reading the following letter, printed in *The Medical Record*.<sup>2</sup>

WASHINGTON, February 3, 1880.

To the Secretary of the Medical Society of the County of New York:

DEAR DOCTOR: As my attention has several times been called to the communication by Dr. Wm. A. Hammond relative to the library of this office, read at the annual meeting of the Society, October 27, 1879, and more especially to the report of this communication given on page 472 of the *New York Medical Record* for November 5, 1879, with requests for explanations, I deem it proper to make a statement on the matter to the Society.

From the report in the *Record*, some have inferred that I claim to have been the founder of the National Medical Library, although the letter of Dr. Hammond as printed on page 40 of the minutes of the meeting, makes it very plain that I have made no such claim.

The facts of the case are simply as follows:

For many years there was a small collection of medical books and journals in the Surgeon General's Office at Washington, which collection was commenced by Surgeon General Lovell prior to 1836.

At the commencement of the war this collection amounted to between three and four hundred volumes.

Dr. Hammond entered on his duties as Surgeon General April 28, 1862, and left Washington August 30, 1863, after which date he was not on duty in this office. During this interval three hundred and fifty-nine volumes were purchased for the use of this office, the principal works being a set of the *Annales d'Hygiene* and a set of the *Boston Medical and Surgical Journal*. During the years 1864 and 1865, about 1,000 volumes were added to the library, mainly selected by Drs. Woodward and Otis.

When the library came under my charge, in the fall of 1865, it contained, as shown by a catalogue made at the time, about 1,800 volumes. At this date it contains about 50,000 volumes and 60,000 pamphlets.

Very respectfully and truly yours,

JOHN S. BILLINGS,  
Surgeon, U.S. Army.

<sup>1</sup> Lydenberg, H. M., *John Shaw Billings*, Chicago, 1924. p. 40-1.

<sup>2</sup> Billings, J. S., *Letter to the Secretary of the Medical Society of the County of New York*, Med. Rec. 17:298-9, March 13, 1880.





## **JOHN SHAW BILLINGS**

Dr. John Shaw Billings was an outstanding figure in American medicine and public affairs from the mid-1860's until his death in 1913. He achieved an international reputation as physician, librarian, bibliographer, statistician, educator, hospital planner, and sanitarian. His accomplishments won him honorary degrees from Edinburgh, Oxford, Munich, Budapest, Dublin, and Harvard, and membership in many learned societies.

Born in Indiana in 1838, Billings obtained his early education chiefly through reading. After graduating from Miami University at Oxford, Ohio, in 1857, he attended the Medical College of Ohio at Cincinnati where he earned his M.D. degree in 1860. He joined the U.S. Army Medical Corps in 1862 through competitive examinations in which he made a brilliant record. He organized Army hospitals in Washington, D.C., and saw field service at Chancellorsville and Gettysburg. In 1864, he was assigned to the Surgeon General's Office in Washington, D.C., to organize medical records of the Union Army. In 1865, he was placed in charge of the Library of the Surgeon General's Office, and he devoted the next 30 years to building this institution into a national resource. This year marks the 100th anniversary of that assignment.

On the occasion of his retirement in 1895, 259 physicians from Great Britain and America sponsored a testimonial dinner at which Dr. Billings was presented with a silver box containing a check for \$10,000. That box and his portrait, painted in oil by Cecilia Beaux of Philadelphia, are now in the National Library of Medicine. (The painting hangs in the Reading Room.) After leaving the Library and the Army, Dr. Billings became professor of hygiene at the University of Pennsylvania and subsequently was appointed Director of the New York Public Library.

When the National Board of Health was given quarantine powers and responsibility for reporting on diseases, Dr. Billings served for four years (1879-82) as vice president and was, effectively, director of the Board. In this post, he succeeded in obtaining from the Congress a \$500,000 appropriation—remarkably large for those days—to aid States and localities in dealing with epidemics. With these funds, he launched the first Federal grants-in-aid research program. He also devised a system by which Federal grants could be awarded to competent authorities, many of whom were university professors, for "special scientific investigations," including studies relating to air pollution, food and drug adulterations, and infectious diseases such as yellow fever, diphtheria, and malaria.

### **Helped Plan Hospitals**

From the Civil War on, Dr. Billings was regarded as an authority on hospital construction. He was medical advisor to the trustees of the Johns Hopkins Hospital, recommended the selection of William H. Welch and



William Osler for the faculty, laid out the plans for the building, and was highly influential in guiding the institution to a position of leadership in the reform of American medical education. He also participated in planning the buildings of six other institutions: the Barnes Hospital (Soldiers' Home, Washington, D.C.), the Army Medical Library and Museum, the Laboratory of Hygiene and the William Pepper Laboratory of Clinical Medicine of the University of Pennsylvania, the New York Public Library, and the Peter Bent Brigham Hospital in Boston. Besides being one of the original incorporators of the Carnegie Institution of Washington in 1902, he served as Chairman of the Board of Trustees for 10 years. His proposal for the consolidation of New York's many free circulating libraries with the New York Public Library led to the establishment of the famed Carnegie libraries, in whose planning he directly assisted Mr. Andrew Carnegie.

Dr. Billings' achievements were many and varied, but the most important was his creation of the National Library of Medicine. While preparing his doctoral thesis, Billings discovered that no library in the country had the literature he needed for his research. After the Civil War, Billings set about remedying this defect. At the Library of the Surgeon General's Office, his major contributions were:

(1) *Building a collection.* Founded in 1836, the Library of the Surgeon General's Office comprised only 2,253 volumes in 1865. By 1873, there were about 25,000 volumes and 15,000 pamphlets. In 1895, when Billings retired from the Army, the collection totaled 116,847 books and 191,598 pamphlets. Today the National Library of Medicine is the world's largest depository of biomedical literature.

(2) *Index-Catalogue.* To save medical teachers and researchers the drudgery of consulting thousands of incomplete indexes, Billings decided to compile a single, comprehensive reference to the Library's collection which would index all journal articles under subject and, in turn, catalog all separate monographs, pamphlets, theses, and serial titles under author and subject. The first volume of the *Index-Catalogue* appeared in 1880; the first series, consisting of 16 volumes, was completed in 1895. As a guide to the literature of medicine of its time and before, it remains unsurpassed. William H. Welch considered it the most important American contribution to medical science in the 19th century. This was reaffirmed last year by the distinguished head of the Royal Society of Medicine Library in London.

(3) *Index Medicus.* Realizing that a publication as exhaustive as the *Index-Catalogue* could not be kept current, Dr. Billings established the *Index Medicus* in 1879 as a monthly, classified index to current periodical literature, with a detailed, annual author and subject index. Although there have been various changes in format since its beginning, this volume is the direct ancestor of the National Library of Medicine's *Index Medicus*.

## Worked on Census

Dr. Billings also had a leading role in the development of vital statistics in connection with the U.S. Census from 1880 to 1910. Indeed, he delighted



in statistics as such and is credited by his biographer, Dr. Fielding H. Garrison, and also by the *Dictionary of American Biography* with being the progenitor of the modern tabulating machine.

"In 1880," Garrison says, "Dr. Billings suggested that the various statistical data of the living and the decedent 'might be recorded on a single card or slip by punching small holes in it, and that these cards might then be assorted and counted by mechanical means according to any selected group of these perforations.'

"This suggestion was taken up and applied by Mr. Herman Hollerith in the electrical counting and integrating machines which are now used by the United States Census."

In its article on Hollerith, the *Dictionary of American Biography* states that the inventor gave Dr. Billings the credit for suggesting the idea and offered him a share in the Tabulating Machine Company which Hollerith started and which eventually grew into the International Business Machines Corporation.

Another modern development that can be traced back to the punchcard idea is MEDLARS, the Library's computer-based information storage and retrieval system. MEDLARS is used to index the literature and prepare various bibliographic guides, including the monthly *Index Medicus*, first produced by Dr. Billings.

As a young military surgeon, armed with uncommon vision and determination, John Shaw Billings set out 100 years ago to transform the small Surgeon General's library into a major research resource for physicians, scientists, and educators throughout the country. He succeeded beyond his fondest expectations as reflected by the National Library of Medicine today.

Dr. Billings was a true pioneer of American medicine.

The vigor with which the Billings tradition is being carried forward by the National Library of Medicine is a happy augury for the future of medical communications.

LUTHER L. TERRY, M.D.

*Surgeon General.*





# NATIONAL LIBRARY OF MEDICINE

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

## PROGRAM

Thursday, June 17, 1965

2 p.m.

PRESIDING

DR. NORMAN Q. BRILL  
Chairman, Board of Regents

INVOCATION

THE REVEREND FREDERICK BROWN HARRIS  
Chaplain of the Senate

WELCOME

DR. MARTIN M. CUMMINGS  
Director, National Library of Medicine

INTRODUCTION

DR. LUTHER L. TERRY  
Surgeon General, Public Health Service

MEDICAL LIBRARIES AND MEDICAL RESEARCH

THE HONORABLE JOHN E. FOGARTY  
United States Representative, Rhode Island

INTRODUCTION

THE HONORABLE WILBUR J. COHEN  
Under Secretary of Health, Education, and Welfare

MEDICAL LIBRARIES AND MEDICAL EDUCATION

THE HONORABLE OREN HARRIS  
United States Representative, Arkansas

INTRODUCTION

THE HONORABLE ANTHONY J. CELEBREZZE  
Secretary of Health, Education, and Welfare

THE MEDICAL LIBRARY CRISIS—BILLINGS TO MEDLARS

THE HONORABLE LISTER HILL  
United States Senator, Alabama

BENEDICTION

BRIG. GEN. W. J. MORAN  
Deputy Chief of Chaplains, U.S. Army

Music by the United States Army Band

Lt. Col. SAMUEL R. LOBODA, Conducting

The Public is Invited to Tour the Library and View the Exhibit Depicting the Life and  
Career of Dr. John Shaw Billings



## DIRECTORS OF THE LIBRARY\*

1865-1895	Deputy Surgeon General John Shaw Billings, M.C.
1896-1897	Assistant Surgeon General David Low Huntington, M.C.
1898-1902	Surgeon James Cushing Merrill, M.C.
1902-1902	Major Walter Reed, M.C.
1903-1904	Brigadier General Calvin DeWitt, M.C.
1904-1913	Brigadier General Walter Drew McCaw, M.C.
1913-1918	Colonel Champe Carter McCulloch, M.C.
1918-1919	Colonel Paul Frederick Straub, M.C.
1919-1919	Brigadier General Francis Anderson Winter, M.C.
1919-1924	Major General Robert Ernest Noble, M.C.
1924-1927	Colonel James Matthew Phalen, M.C.
1927-1932	Colonel Percy Moreau Ashburn, M.C.
1932-1936	Major Edgar Erskine Hume, M.C.
1936-1945	Colonel Harold Wellington Jones, M.C.**
1945-1946	Colonel Leon Lloyd Gardner, M.C.
1946-1949	Colonel Joseph Hamilton McNinch, M.C.
1949-1963	Colonel Frank Bradway Rogers, M.C.
1964-	Martin Marc Cummings, M.D.

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*\*Known originally as the "Library of the Surgeon General's Office," this institution was named the "Army Medical Library" in 1922 and the "Armed Forces Medical Library" in 1952. It became the "National Library of Medicine" in 1956.*

*\*\*During the term of Colonel Jones, the traditional title of "Librarian" was changed to "Director." Colonel Gardner was made "Commandant." Colonel McNinch and his successors have held the title, "Director."*

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