

DR. JOHN SHAW BILLINGS: THE SURGEON GENERAL'S LIBRARIAN A HISTORICAL VIGNETTE

Robert M. Beazley, MD, FACS

John Shaw Billings was frustrated writing his graduation medical dissertation, "The Surgical Treatment of Epilepsy," by both the difficulty of searching the literature and the near impossibility of accessing identified references. In a commencement address 30 years later, he reflected that this experience may have changed his entire life (1).

After enlisting in the Union Army in 1861, he served as a surgeon at both the battles of Chancellorsville and Gettysburg, finishing the War assigned to the Surgeon General's Office, where he worked for the next 30 years. Ultimately, Billings would become librarian of the Library of the Surgeon General's Office, making "order out of chaos" (2). Beginning in 1873, he published the first in a series of 19 catalogs of the Library's holdings, and in 1879, he established the monthly "Index Medicus," designed to comprehensively index current medical publications by subject. Under Billings, the Library expanded from 1,500 volumes in 1864 to 117,000 volumes when he retired in 1895. The Index Medicus continued to be published until 2004, when PubMed came into being. By Act of Congress in 1956, the Office of the Surgeon General's Library became the National Library of Medicine.

Multiple assignments as a military hospital inspector gave Billings a unique appreciation of large hospital design and construction, and as a result, he was recruited by the



Fig. 1. Dr. John Shaw Billings

Board of the Johns Hopkins Hospital to consult on the construction of their new hospital. This association continued over 15 years, during which time he also assisted in planning the medical school and the curriculum. He was responsible for the selection of both Doctors William H. Welch and William Osler to the nascent Hopkins faculty.

Billings' knowledge and statistical talent came to attention of the U.S. Census Bureau, which employed his talents for the 1880 to 1910 censuses. He proposed recording census data on punch cards to speed up data processing. Billings collaborated with Herman Hollerith, who designed and built an electrical counting machine for reading the cards. Years later, Hollerith's company became the nucleus of the International Business Machines (IBM) Corporation. In 1896, Billings was recruited as superintendent of the embryonic New York Public Library. On a note card, he pencil-sketched the interior floor plan for the building and collaborated closely with architects in the design and construction until the building's completion in 1911. Billings negotiated a \$5 million contribution from

Submitted for publication June 28, 2013
Accepted for publication July 9, 2013
From the Boston University School of Medicine, Boston, Massachusetts.
Address correspondence to Dr. Robert M. Beazley, Professor Emeritus,
Boston University School of Medicine, 45 West Newton Street, Boston, MA
02118. E-mail: rbeazley@bu.edu.
Published as a Rapid Electronic Article in Press at <http://www.endocrinepractice.org>. DOI:10.4158/EP13288.VV
To purchase reprints of this article, please visit: www.aace.com/reprints.
Copyright © 2013 AACE.

2 Historical Vignette, *Endocr Pract.* 2013;19(No. 5)

Andrew Carnegie to establish 65 neighborhood branches of the New York Public Library system.

Following surgery for a urinary calculus, John Shaw Billings died of pneumonia on March 13, 1913, 1 day before his 75th birthday. He was buried next to his wife Katherine in Arlington National Cemetery. The impact of his contributions to medicine, which facilitated global dissemination of medical knowledge in the late 19th and early 20th centuries, is incalculable. Literally, Billings has touched every physician since he first began to make “order out chaos” in the Library of the Surgeon General’s Office. His genius, energy, dedication, and administrative genius should be exemplar to all physicians. An 1895 Cecilia Beaux portrait of Billings, in Oxford University Doctor of Civil Law academic gown, hangs in the Reading Room of the National Library of Medicine (Fig. 1). A copy was made of the Beaux portrait by Bradley Stevens for the Johns Hopkins Centennial in 1989 and hangs in the rotunda of the John Shaw Billings Administration Building of the John Hopkins Hospital, Baltimore, Maryland.

DISCLOSURE

The author has no multiplicity of interest to disclose.

REFERENCES

1. **Billings, JS.** *Address: The Medical College Before the War.* Address to the Society of Alumni of the Ohio Medical College, delivered at Annual Commencement, March 7, 1888. *The Cincinnati Lancet-Clinic.* 1888:297-305.
2. **Garrison, FH.** *John Shaw Billings: a memoir.* New York, NY: GP Putnam’s Sons; 1915; 65. (A Gettysburg letter to wife Katherine, dated July 9, 1863 [6 days after the battle ended]: “The days creep by and I am still trying to produce order out of chaos, and to get my wounded patriots into something like a state of comfort.”).

Other interesting readings:

1. **Chapman C.** *Order Out of Chaos: John Shaw Billings.* Boston, MA: Boston Medical Library; 1994.
2. **Cameron JL.** Early Contributions to the Johns Hopkins Hospital by the “Other” Surgeon: John Shaw Billings. *Ann Surg.* 2001;234:267-278. (Excellent brief but detailed account of Billings’ life.)