

## VIII

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### The *Index-Catalogue* and *Index Medicus*

#### CONGRESS APPROPRIATES FUNDS FOR *Index-Catalogue*

THE estimate of the cost of publishing 3,000 copies of each volume of an eight-volume bibliography at \$6 a volume amounted to \$144,000, a very large sum of money in 1877. This was probably the cause of the resistance in Congress to publication of the *Index-Catalogue*. By comparison, Congress would only appropriate \$200,000 for construction of the entire Medical Museum-Library building a few years later. Hoping for a lower cost Surgeon General Barnes and Billings sought a more precise estimate from the Public Printer. This turned out to be \$25,000 for 3,000 copies of volumes 1 and 2, or about \$100,000 for 3,000 copies of all eight volumes.<sup>1</sup>

This estimate was used during the winter of 1877-78 and the following spring as Billings and his friends continued to exert pressure on Congress. George F. Shrady wrote about the need for an appropriation for the catalog in his *Medical Record* and urged physicians to influence legislators.<sup>2</sup> A committee of the Medical Society of the County of New York sent a memorial to the Senate and House.<sup>3</sup> Horatio C. Wood of Philadelphia, chairman of the American Medical Association committee on the catalog, took the train to Washington and talked to members of the House Committee on Appropriations.<sup>4</sup>

But the amount of money involved was still too large. Representative Sayler thought it best to reduce the number of copies to 2,000 and ask at first for funds to print volume one. This he did in a bill in May 1878.<sup>5</sup> The reduction did not satisfy all opponents. Within the Committee on Printing there was resistance that kept Sayler's bill from being released to the House.

Billings, disappointed, increased his lobbying activities. Among his correspondents was Abraham Jacobi, to whom he wrote the following letter:<sup>6</sup>

Congress has adjourned without authorizing the printing the catalogue. This is not Mr. Eickhoffs fault for he did what he could but he was defeated by Mr. Singleton of Mississippi who made the most exaggerated statements as to its cost.

I saw Mr. Hewitt who said that next session he thought it could be done. Now during the summer and fall I want to have the profession talk to the Members and Senators, and then in November have some formal resolutions

&c sent in, and I think it will go through. I shall put in an estimate for \$25000 for the first two vols.

Will you not consider your committee as still existing and have messrs Hewitt, Eickhoff, and other New York members impressed with the part that their medical constituents *really* want this thing, and that their request is not merely pro forma to oblige the Surgeon General or myself but is for their own pleasure and profit.

I am writing all over the country about this. . . .

Billings sent a longer plea for assistance to William T. Briggs of Nashville, editor, teacher, and former vice president of the American Medical Association:<sup>7</sup>

Congress having adjourned without authorizing the publication of the Index Catalogue of the Library of this Office, it is very desirable that members of the medical profession who desire its publication should do what they can to convince Members and Senators of its utility and of their desire for its publication that they may obtain copies.

I believe you are familiar with the character of the collection and of the proposed catalogue, and I will only say that the catalogue will contain about 400,000 titles, that it will make from 7 to 10 volumes and that it will cost for an edition of 2000 copies of each volume less than \$11,000 per vol or about \$100,000 for the entire work. This estimate may be relied on.

The Surgeon General will again apply next winter for the necessary authority to print the catalogue, asking for a sufficient appropriation to print the first two volumes. The entire mss is ready for the press, but not more than two volumes a year can be printed consistent with that accuracy which such a work demands. (The Members from Tennessee will be very powerful in this matter, especially Mr. Atkins and Blount who is chairman of the Committee on Appropriations.)

I venture to call your attention to this matter and to suggest that during this summer and fall, steps should be taken by the physicians of Tennessee to get Mr. Atkins and others interested in the matter.

It will be a great pity if the authority to print is not given next winter, and it will surely be given if the physicians of the country take hold of the matter in earnest. I am aware that I am suggesting some troublesome work for you, for it will involve correspondence etc., but I hope you will excuse me in consideration of the importance of the object, and in view of the fact that my acquaintance with physicians in Tennessee is very limited and I do not know whom to apply to.

Presumably Billings sent similar letters to influential physicians in the states of other key congressmen.

With the Committee on Printing opposed to any bill favoring the *Index-Catalogue*, Billings' friends in Congress changed their strategy. Instead of trying to pass a specific bill they decided to include funds for publication in an appropriation bill. Billings informed Edward Ely Van de Warker, a prominent physician of Syracuse and a friend of Representative Frank Hiscock, of the plan:<sup>8</sup>

The matter of printing the catalogue will not come up as a separate bill, but will be on the estimates before the appropriation committee. The Surg. Gen'l. has estimated for \$25,000 to print and bind the first two volumes of the catalogue and to stereotype the same, and will urge this in his annual report.

## THE INDEX-CATALOGUE AND INDEX MEDICUS

The *first* thing to be tried therefore is to induce the Appropriation Committee of the House to rept this item on one of the appropriations bills. If they do there will be no further trouble in the matter. The principal opposition in the appropriation committee will probably come from Mr. Singleton of Miss. and Mr. Atkins of Tenn. If the committee will not pass this item, then we want some one to see that our amendment is introduced to put the item on the Appropriation Bill. If this amendment is presented in a five minute speech so as to make the points, it will almost surely pass, and if the yeas and nays are insisted on it will pass beyond doubt. I shall be very glad to give Mr. Hiscock all the information I can about it when he comes here and I have no doubt that he can do much towards obtaining the necessary authority.

The strategy worked. In February 1879 appropriation legislation containing many items moved through the House and Senate without any comment about a sum of \$20,000 for printing volumes 1 and 2 of the *Index-Catalogue*.<sup>9</sup> The President approved the bill on March 3. The next day Billings thanked Jacobi, who had influenced a key representative:<sup>10</sup>

The catalogue appropriation *has passed* and we are authorized to print the first two vols. This is largely due to a letter which you wrote to Mr. Eickhoff—a letter which kept the printing committee from being hostile actively although they would not report favorably—probably on account of homeopathic opposition.

The Surgeon General received \$5,000 less than was needed and he had to return to Congress later for additional money,<sup>11</sup> but Billings was now able to make arrangements with the Government Printing Office for production of the *Index-Catalogue*.

### THE APPEARANCE AND RECEPTION OF *Index-Catalogue*

In July 1880 reporters in Washington on their daily quest for news learned that the *Index-Catalogue* was ready to be issued. Papers mentioned the coming event and the Medical Department began to receive requests for copies.<sup>12</sup> When volume 1 appeared it contained 888 pages of text, preceeded by a 6-page preface and a 126-page list of journals indexed by Billings and his helpers. In the text were 9,090 author-titles, representing 8,031 volumes and 6,398 pamphlets; 9,000 subject titles of books and pamphlets, and 34,604 titles of articles. The first entry was "A. (E.E.), Ozonized cod-liver oil . . .," and the final entry was "Berliński (Marcus), De nascentium morientiumque numero ex lege naturae diversis diei temporibus diverso."

Billings' clerks began to mail volumes during the summer, and letters of praise started to reach the Library in September. "It is a monument of useful labor, a time saving directory to medical literature, a delight and a blessing to the medical scholar. May the Lord save Dr. Billings to finish it," wrote George J. Fisher of Sing Sing, New York. "I am filled with admiration at your ability with however much help to bring out so vast a work & I am also filled with dispair that there should be such a mighty mass of medical literature," said Henry D. Noyes, New York. "Such a work, so full of research & of patient

labor, reflects immortal credit upon the office from which it emanates," stated Samuel Gross, Philadelphia.<sup>13</sup>

Alfred S. Purdy told Billings: "The profession can never repay you for the exhausting labor you have spent upon the library and catalogue." Austin Flint, Jr., echoed the same thought: "The medical profession at the present and in all future time should feel under great obligation to you." Charles Rice wrote: "I must say that I hardly ever opened and examined a work which is more carefully prepared and more beautifully gotten up than this masterpiece of printing. To bestow words of praise upon the immense labor devoted to making the catalogue, is entirely unnecessary on my part, for it is impossible to do justice to the work by mere words. *This* work, if no other ever before, will be sought for everywhere, and its publication will put to shame many wealthy and otherwise well-governed libraries abroad, none of which can show anything of equal value and usefulness."<sup>14</sup> From his farm Oliver Wendell Holmes sent this message: "You are raising a monument to science . . . more enduring than brass, and a great deal more valuable to mankind than palace or pyramid."<sup>15</sup>

Reviews in journals in every section of the United States and in Europe were equally flattering. *Cincinnati Lancet-Clinic* called the catalog "an additional honor to the name of one of the youngest, most industrious and distinguished medical men in America."<sup>16</sup>

Billings was a happy person when the medical profession heaped praise on the catalog upon which he had worked for 6 years. "Dr. Billings is in every sense the author of the Index, is very proud of his work, as he has reason to be, and appreciates the approbation and encouragement of the profession," wrote William Lee of Washington, a frequent visitor to the Library.<sup>17</sup>

The *Index-Catalogue* made the Surgeon General's Library universally useful. Without the giant catalog the huge collection of medical writings would have been consulted almost solely by physicians who lived in and near Washington. With it and through the courtesy of interlibrary loans, books and journals were available to physicians throughout the United States and Canada. Libraries in the Americas and on other continents used it as a subject index to their journals. It stimulated the growth of other medical libraries.

A goodly portion of the medical literature of the world was opened to the physician who had access to the catalog. It saved the time of every researcher and directed him to writings he might not have found otherwise. William Osler regarded it as "one of the most stupendous bibliographical works ever undertaken . . . of incalculable value to any one interested in books . . . a monument to the Army Medical Department, to the enterprise, energy and care of Dr. Billings, and to the scholarship of his associate, Dr. Robert Fletcher."<sup>18</sup>

#### THE SELECTION OF ARTICLES FOR THE *Catalogue*

Each year after the *Index-Catalogue* first appeared another volume came from Billings' assembly line. Each year Billings and Fletcher checked off more and more articles resulting from increasing research in new scientific schools,

hospitals, research institutions, and government agencies. His original estimate of five volumes proved a very bad guess; it doubled and then tripled. It might have doubled again had Billings not become more selective. He omitted trite public addresses, insignificant, duplicate, repetitious and worthless material, and some clinical cases. He passed by almost all editorials and letters to the editor. He picked all the articles in first-rate journals but only important articles in second-rate journals, and he ignored most of the contents of inferior journals.<sup>19</sup> "I do not index everything in med. journals," Billings explained to a researcher, "not even all those wh. come under the head of original communications and are of some length, but I do try to include everything wh. contains either a new fact, a new idea, or a new way of stating old ones."<sup>20</sup> On the other hand Billings' desire to appear unbiased in his selection may have resulted occasionally in some trash being included. Fielding Garrison recalled: "In two instances, I knew Dr. Billings and Dr. Fletcher to deliberately collect, card and catalogue full lists of the writings of avowed and bitter enemies, as showing that a private and personal opinion of these men and the specific worth of the products of their brains were different and disparate things, and in neither cases were the 'products' worth very much."<sup>21</sup> Thus the *Index-Catalogue*, contrary to what most persons believed, became not the index to *all* the medical literature of the world, but only to the important literature. Perhaps as much was omitted as was included.

#### THE *Index-Catalogue* AS A MODEL OF THE PRINTER'S ART

Billings was as particular about the final appearance of his *Index-Catalogue* as he was about the content. His foresight in bringing printer Hall from the GPO to the Library and placing him in the assembly line resulted in great care being taken with the typography and proofreading. A tradition of error-free printing was started and maintained throughout the long life of the work. This, even though the printing was said to be "the most difficult piece of typography attempted in the United States."<sup>22</sup>

Billings had the aid of Acting Assistant Surgeon Henry C. Yarrow as a proofreader. Yarrow examined proof sheets carefully from 1879 to 1888, until his eyes could no longer stand the strain of reading fine print.<sup>23</sup> Billings was also assisted by two volunteer proofreaders, Charles Rice and James R. Chadwick. Rice, a pharmaceutical chemist and linguist of New York City, after perusing volume 1, suggested that Billings obtain a new font of Greek type, and offered to read proof in languages except Slavic, Hungarian and English. He was particularly helpful with Greek and some Oriental languages. Although very busy with his own professional affairs, he read galleys for two decades.<sup>24</sup> Chadwick, a founder and librarian of the Boston Medical Library, read proof for many years.<sup>25</sup>

Because of careful work from beginning to end, only occasionally did a reader find an error. Norman E. Harding, a British medical officer, reported that a check of 800 entries revealed only one mistake, the misprint of an r for

an n.<sup>26</sup> William W. Keen sent a glowing testimonial: "The proof reading of both [*Index-Catalogue* and *Index Medicus*] is as good as the proof reading of the Bible, and praise could go no further."<sup>27</sup>

#### THE INFLUENCE OF THE *Index-Catalogue* ON THE DEVELOPMENT OF THE LIBRARY

The *Index-Catalogue* proved good for medicine, but, in a way, bad for the Library. When Billings started the bibliography, he bequeathed to his followers their major task for generations into the future. Henceforth, the Library became preoccupied with the job of grinding out a volume each year. All operations were geared to the production of the *Catalogue*. One-third of the clerks worked full time indexing, preparing copy, and proofreading. Others proofread part time, packaged and sent out hundreds of copies, kept records, and handled the miscellany of odd jobs involved in the production of a monumental reference book every year. The usefulness of a person to the *Index-Catalogue* team became the chief criterion in hiring clerks. The most important qualifications of an employee were, in order of importance: "legibility of handwriting, accuracy in copying and in collation of books, rapidity of copying, knowledge of foreign languages, especially of Russian, Polish, Hungarian, Swedish, Dutch, Portuguese, Spanish, Italian, French, and German; knowledge of proofreading and methods of correcting proof, knowledge of medicine and medical terms."<sup>28</sup> The Library contributed much to the advancement of medicine by producing the *Index-Catalogue* (William Welch considered it America's greatest contribution to medical knowledge)<sup>29</sup> but in so doing, it funneled so much of its resources into the publication that it retarded its development in other areas.<sup>30</sup>

#### THE FOUNDING OF *Index Medicus*

While preparing the *Index-Catalogue* Billings conceived the idea of a periodical that would list the titles of current medical articles, books, reports, and other literature. He found a publisher, Frederick Leypoldt, willing to take a financial gamble in publishing it, and he persuaded a number of physicians to share the financial burden by subsidizing the journal until it would become self-sustaining. Fletcher suggested the title *Index Medicus, a Monthly Classified Record of the Current Medical Literature of the World*.<sup>31</sup>

Billings obtained permission of the Surgeon General to have the Library's *Index-Catalogue* cards copied to provide the text for *Index Medicus*.<sup>32</sup> Library clerks made duplicate cards when they were off duty in the evenings and on weekends, and were paid by the publisher for their work.<sup>33</sup> The clerks' wives and daughters assisted with the copying.<sup>34</sup> Billings conceived, planned, and started the journal and then turned the editorship over to Fletcher—the title page carried the names "Dr. John S. Billings, Surgeon U.S. Army, and Dr. Robert Fletcher, M.R.C.S. Eng.," but Fletcher was the active partner and Billings always acknowledged this.

The first number appeared in January 1879. Thereafter titles of articles from

# Index Medicus

A MONTHLY CLASSIFIED RECORD

OF THE

## Current Medical Literature of the World.

COMPILED UNDER THE SUPERVISION

OF

DR. JOHN S. BILLINGS, SURGEON U. S. ARMY,

AND

DR. ROBERT FLETCHER, M.R.C.S.ENG.

VOL. I.

JANUARY—DECEMBER, 1879.

New York: F. LEYPOLDT, 13 & 15 Park Row.

London: TRUBNER & CO., 57 Ludgate Hill. Paris: C. REINWALD ET CO., 15, Rue des Saints-Pères.

Leipzig: K. F. KOHLER, Poststrasse, 16. Amsterdam: FREDERIK MULLER & CO., Hoornstraat, 30A.

St. Petersburg: KARL RÖTIGER, NEWSKY-PR. NO. 5.

1879.

*Title page of volume one of Index Medicus. Originally a by-product of the Index-Catalogue, Index Medicus outlasted its parent, and is the longest lived, most widely used medical bibliography that ever existed.*

hundreds of journals were at the fingertips of readers, arranged in a system that Billings derived from the classification used by the Royal College of Physicians of London.<sup>35</sup> The classification system was used later for arranging publications in the Library<sup>36</sup> and was adopted for the purpose by other medical libraries. James Chadwick and Edwin Brigham remodeled the classification system of Boston Medical Library along the lines of *Index Medicus*,<sup>37</sup> as did the College of Physicians in Philadelphia and the Library of Congress for its schedule R, Medicine.<sup>38</sup>

Billings requested publishers and authors to send books, pamphlets, and other writings to Washington so that the titles could be listed in *Index Medicus*. His agreement with Leyboldt provided that all publications sent would, after being indexed, be deposited in the Library.<sup>39</sup> "The hope that the contributions to the Library from this source will be large, and thus permit the application of the limited funds provided by the government for its support to the purchase of the many works still required to make it fairly complete, has been my main inducement for undertaking to furnish the necessary data," Billings stated in the prospectus, "Beyond the satisfaction in thus contributing to the convenience of medical writers and teachers, and to the completeness of the Library under my charge, I have no personal or pecuniary interest in the enterprise." Over the years the Library received many publications through this channel, including duplicates which it used for exchange, and some foreign periodicals, which it would have had to pay for otherwise.<sup>40</sup>

Although the price of *Index Medicus* was moderate, \$3 a year, and competitive with that of other journals, almost all American physicians ignored it. Leyboldt and his sponsors struggled to lure subscribers, but they had little success.<sup>41</sup> Leyboldt had to raise the price to \$6 in the second year, but he still lost \$1,000, and his total deficit for the first 2 years was \$5,000, a large sum of money in the 1880's. He might have given up had not a number of subscribers guaranteed to pay part of the deficit. In 1884 he was forced to increase the price to \$10. Later that year he died, and Billings and Fletcher thought that the periodical was doomed. But George S. Davis, a medical publisher in Detroit, took over. By that time there were only about 250 subscribers, many of whom took the journal out of friendship for Billings or because they thought the profession needed such a periodical.<sup>42</sup> The sale increased slowly; by 1891 there were only 482 subscribers, 90 of whom were medical officers, 224 were U.S. civilian physicians and libraries, and 168 were from other countries.<sup>43</sup> The inability of the journal to find more than a few hundred physicians (out of the 80,000 to 100,000 in the United States between 1880 and 1890) willing to pay for its services indicates the lack of interest of physicians in research and continuing education at that time.<sup>44</sup>

Hard times during the Depression of 1893 caused some subscribers to drop off. The publisher's deficit increased further in 1894. By the spring of 1895 Davis felt that he could no longer bear the financial loss and he decided to stop publishing the periodical. Apparently some of Billings' friends suggested they



were willing to pay \$25 a year for the *Index Medicus* if it could be continued. Billings sent out a circular letter soliciting subscriptions at that price. Editorials in medical journals urged physicians to support the undertaking. More than 200 patrons responded, not an overwhelming number but sufficient to rescue the publication. In the meantime a disagreement caused Davis to withdraw permanently, leaving Billings and Fletcher with the full responsibility of preparing, publishing, and selling the journal.<sup>45</sup>

*Index Medicus* was a companion to *Index-Catalogue*. A complete series of the *Index-Catalogue* took many years to complete, and in the intervals between comparable volumes in each series *Index Medicus* provided up-to-date references to the current literature. Through the journal physicians could keep abreast of almost all medical articles in the world within 1 to 3 months of their appearance. If they wished to read an article cited in *Index Medicus*, they could, if they resided in one of the larger cities, perhaps obtain the journal in their local medical library. Otherwise they could borrow the journal from the Surgeon General's Library through an interlibrary loan or pay a clerk in Washington to write out a manuscript copy.

Without the Surgeon General's Library with its never ending stream of journals arriving from American and foreign publishers, and without the Library's indexing operations, *Index Medicus* could not have existed. No publisher could have afforded to subscribe to the 600 journals received by the library<sup>46</sup> or pay the salaries of a group of indexers.

#### BILLINGS' REWARD

Billings' bibliographic labors established his reputation internationally and brought him many honors. In 1881 he was invited to give the general address before the International Medical Congress, the first time an American was chosen to give this important speech. Thereafter he was frequently asked to give addresses, here and in Europe.<sup>47</sup> He was elected to honorary memberships in many organizations, among them the Medical Society of the County of New York (1879), Medical Society of the State of New York (1880), Medical and Chirurgical Faculty of Maryland (1880), Medical Society of London (1881), Clinical Society of London (1881), Society of Medical Officers of Health, London (1881), National Academy of Sciences (1883), College of Physicians of Philadelphia (1883), and others. He was invited to be a member of the Board of Visitors of Baltimore Medical College.<sup>48</sup> He was sought after for testimonials.<sup>49</sup> He was offered a professorship at Johns Hopkins<sup>50</sup> and invited to lecture at Columbia<sup>51</sup> and in Boston.<sup>52</sup> He was offered the editorship of *Louisville Medical News*.<sup>53</sup> In 1884 he was presented with the first of eight honorary degrees that he would receive from European and American universities.

A few years later 259 physicians of the United States and Great Britain contributed a gift of \$10,000 to Billings, to thank him in some measure for his arduous work developing the Library, the *Index-Catalogue* and *Index Medicus*. A check for the sum was placed in a silver box and handed to a surprised Billings



*John Shaw Billings, Librarian from 1865 to 1895. This photo was taken, it is believed, in the 1870's when Billings was founding Index-Catalogue and Index Medicus.*

during a banquet held in his honor at the Bellevue Hotel in Philadelphia. The physicians also commissioned artist Cecilia Beaux to paint a full-length portrait of Billings. This colorful painting showing Billings in his uniform and academic gown hangs in the reading room of the Library.<sup>54</sup>

In the eyes of his contemporaries Billings was one of the world's great bibliographers, and it is chiefly as this that his reputation has lasted. His few attempts at investigation of fungi and crania did not produce significant results. The course into which he steered the National Board of Health may have helped wreck that agency. His work on vital statistics, and on the design of libraries, Johns Hopkins Hospital and other hospitals were noteworthy but did not have the universal importance of the *Index-Catalogue* or *Index Medicus*. "Years after the iniquity of oblivion has covered Dr. Billings' work in the army, as an organizer in connection with hospitals, and even his relation to the great Library," said Osler, "the great Index will remain an enduring monument to his fame."<sup>55</sup>

#### Notes

<sup>1</sup> Letter, Barnes to Sen. H. B. Anthony, Oct. 31, 1877: NA.

<sup>2</sup> New York *Med. Rec.* 13: 211-212 (1878).

<sup>3</sup> New York *Med. Rec.* 13: 220 (1878).

<sup>4</sup> *Trans. A.M.A.* 29: 45 (1878). The committee also issued a circular appealing to Congress to finance the *Catalogue*.

<sup>5</sup> 45th Cong. 2d sess. Bill H.R. 4727, May 6, 1878, "A bill authorizing the printing, binding, and stereotyping of an index-catalogue of the Library of the Surgeon General's Office." Around this time for reasons not now known the

expression "National Medical Library" used by Billings for several years was dropped, and the title "Library of the Surgeon General's Office" was used thereafter.

<sup>6</sup> Letter, Billings to Jacobi, June 20, 1878: MS/C/1. The committee mentioned by Billings was probably the committee of the Medical Society of the County of New York. A Memorial to Congress by this committee, signed by Jacobi and other prominent physicians, is in New York *Med. Rec.* 13: 220 (1878).

<sup>7</sup> Letter, Billings to Briggs, June 28, 1878,

marked "personal" MS/C/81 Billings sent the same letter to Theophilus Parvin, editor and teacher, Kentucky, probably substituting the name of a Kentucky congressman in place of Rep Atkins of Tennessee MS/C/81 He wrote to Lewis Steiner, an influential physician of Frederick, Md, who wrote to Sen George R Dennis, Md, regarding the catalog, see letter, Steiner to Billings, Dec 20, 1878 NYPL

<sup>8</sup> Letter, Billings to Van de Warker, Oct 30, 1878 MS/C/81

<sup>9</sup> On Feb 24 the portion of the bill referring to the catalog was read in the House and passed see *Congressional Record*, p 1867 The bill passed the Senate on Feb 28

<sup>10</sup> Letter, Billings to Jacobi, Mar 4, 1879 MS/C/1

<sup>11</sup> 46th Cong, 2d sess, Senate Ex Doc 62, Feb 2, 1880, contains letter of Surg Gen Barnes requesting \$6,500 more for printing and binding volumes 1 and 2

<sup>12</sup> Letters from J D Keller, Glenville, Pa, July 5, 1880, A G Smythe, Baldwin, Miss, July 10, J E Wharton, Portsmouth, Ohio, Public Library, July 12, Charles Jewett, editor, *Annals of the Anatomical and Surgical Society*, Brooklyn, N Y, July 12, Thomas Ryerson, Dennis Library, Newton, N J, July 14, Charles Ruce, Librarian, College of Pharmacy, N Y, July 22 MS/C/81

<sup>13</sup> Letters and receipts, Fisher to Billings, Sept 9, Noyes to Billings, Sept 11, Gross to Billings, Sept 20, 1880 MS/C/1

Names of persons, societies, and libraries, here and abroad, who received copies of the *Catalogue*, are in notebooks, NLM

<sup>14</sup> Letters and receipts, Purdy to Billings, Sept 10, Flint to Billings, Oct 1, Rice to Billings, Sept 21, 1880 MS/C/1

<sup>15</sup> Holmes to Billings, Sept 12, 1880 copied in scrapbook MS/C/81, original letter is missing Billings had one of his clerks compile a large scrapbook of reviews and letters praising volume 1 and subsequent volumes of the *Catalogue* MS/C/81

<sup>16</sup> *Cincinnati Lancet-Clinic* 44 286 (1880)

<sup>17</sup> Letter, Lee to N Senn, Oct 26, 1880 MS/C/81

<sup>18</sup> W Osler, "Some Aspects of American Medical Bibliography," *Bull Assoc Med Librarians* 1 22-23 (1909)

<sup>19</sup> Memo, Garrison for the Surgeon General and Librarian, Aug 5, 1929, MS/C/166, contains a long exposition about the selectivity of Billings and Fletcher on the *Index-Catalogue* and *Index Medicus*

<sup>20</sup> Letter, Billings to H Leffmann, Oct 20, 1883 MS/C/81

<sup>21</sup> Letter, Garrison to G Simmons, Aug 2, 1916 copy at JH

<sup>22</sup> *Index-Catalogue*, 4s v 1, 1936, pp iv-v

"The printing of the Index Catalogue is probably the most difficult piece of technical work done at the printing office, a great many varieties of type being used and many languages The correctness and beauty of the printed page in a work of this nature is of the utmost importance, and so far it has been carried on in a way that has provoked the admiration of the learned men who use the catalogue in this country and in Europe", 3 indorsement, Library to the Surgeon General, Jan 31, 1913, on memo, Public Printer to Asst Chief Clerk, War Dept, Jan 29, 1913 MS/C/116

<sup>23</sup> Sketch of Yarrow in W T Parker, *Records Acting Assistant Surgeons*, pp 103-106

<sup>24</sup> Correspondence of Rice in MS/C/81, particularly to Billings, Sept 21, 25, and Billings to Rice, Sept 25, 1880 Rice did not wish to read proof of titles in English because he knew the Library was proficient in this language A sketch of Rice may be found in *Dictionary of American Biography*

<sup>25</sup> *Index-Catalogue*, v 16, 1895, p v A sketch of Chadwick is in *Dictionary of American Biography*

<sup>26</sup> Letter, Harding to Librarian, Sept 4, 1909 MS/C/116

<sup>27</sup> Letter, Keen to Maj Walter D McCaw, Dec 28, 1908 MS/C/116

<sup>28</sup> Letter, Billings to Surgeon General, May 27, 1887 MS/C/81 Typewriters were not yet widely used, thus the importance of legible handwriting

<sup>29</sup> E E Hume, "The Centennial of the World's Largest Medical Library The Army Medical Library of Washington, founded 1836," *Military Surgeon* 78 241-2 (1936) Welch, in *Memorial Meeting in Honor of the Late Dr John Shaw Billings*, April 25, 1913, p 10

<sup>30</sup> The cost of printing the first series of the *Catalogue* was \$192,000 This was a large sum during the period 1880-1895, in comparison, it was approximately the cost of the building erected in 1886-1887

<sup>31</sup> In 1898 Adolf Growoll, managing editor of *Publishers' Weekly*, wrote *Book-Trade Bibliography in the United States in the XIXth Century*, in which he placed, pp lxxvii-lxxviii, a biography of Leyboldt, 1835-1884 Growoll said (p lxxvi) "In 1879 Leyboldt, desiring to carry his bibliographical enterprise into fresh fields, projected the *Index Medicus*, a monthly key to medical books and periodicals, which should be a periodical supplement to the great *Index Catalogue* of the Library of the Surgeon-General's Office United States Army", by Dr John S Billings, now of the New York Public Library, Astor, Lenox, and Tilden Foundations Fearing

that his friends and associates would be inclined to persuade him from new ventures, he kept his plans quiet until they were nearly ready for the launch." Growoll wrote essentially the same in *Frederick Leyboldt, Biographical and Bibliographical Sketch* (1899), a 15-page pamphlet. I have not seen any other attributing the conception of *Index Medicus* to Leyboldt. Growoll was associated with Leyboldt and it can be argued that he knew whereof he spoke.

Fielding Garrison said this "One year before the publication of the first volume of the *Index Catalogue*, Dr Billings and Dr Fletcher hit upon another bibliographical expedient. This was the *Index Medicus*" (*John Shaw Billings*, p. 225).

I have not seen any statement, except Growoll's, that disagrees with Garrison's. Garrison was associated with Billings for 5 years, with Fletcher for 22 years, and it can be argued that he was closer to them than Growoll was to Leyboldt. My personal feeling is that Garrison was correct. It seems to me less reasonable that Leyboldt, who worked in the literature of the book trade and in general bibliography, would have singled medicine out of all sciences and other endeavors as a field in which to publish a bibliographical journal, than would Billings, who had specialized in medical bibliography for a decade.

"Dr Fletcher very deeply resented the use of that term [*Index Medicus*] as a title for other medical bibliographies, because it was a Latin expression devised by himself which he regarded as his personal property. More than one medical journal has employed it in this way and he always denounced it to the editors in virgorous terms", letter, Garrison to George H. Simmons, Aug. 8, 1914. JH.

<sup>32</sup> Letter, Fletcher to James Tyson, Aug. 13, 1909. MS/C/116.

<sup>33</sup> *Index Medicus* paid a total of about \$50 a month to clerks for copying in the early 1880's, \$80 a month by 1899, letter, Fletcher to Billings, April 30, 1899. NYPL.

<sup>34</sup> "the work of copying the library cards for redaction having been parceled out among the wives and daughters of the office force, as private work" Fielding H. Garrison, "In Memoriam Dr. John Shaw Billings," *Index Medicus* 2S, vol. 11, Mar. 1913.

<sup>35</sup> The classification, or table of contents, may be found at the beginning of occasional numbers of *Index Medicus*, and particularly in the editorial at the beginning of the first number, January 1884, vol. 6.

<sup>36</sup> Fielding Garrison, "Report of Committee on Library Classification," *Bull. M. Lib. Assoc.* 7:28 (1917-18), "Subject Bibliography and Shelf Classification," *Ibid.*, 10:29-37 (1920-21).

<sup>37</sup> Letters, E. Brigham to Billings, July 19, 1882, Billings to Brigham, July 22. MS/C/81. See also Joseph E. Garland, *The Centennial History of the Boston Medical Library, 1875-1975*, pp. 34-35.

<sup>38</sup> C. Martel, "Remarks on Cataloguing and Classification," *Bull. Med. Lib. Assoc.* n.s. 5:43-45 (1915/16).

<sup>39</sup> Prospectus, dated Nov. 1, 1878, bound at the beginning of vol. 1, *Index Medicus*, HMD, NLM.

<sup>40</sup> Billings, preface to *Index-Catalogue*, vol. 16, 1895, p. iv.

<sup>41</sup> In NLM are several letters to and from Leyboldt in which the publisher mentioned the lack of support for *Index Medicus*. See, for example, Billings to Leyboldt, Oct. 25, 1882, MS/C/81, and Leyboldt to A. Jacobi, Oct. 10, 1881, MS/C/1.

See also letter, Billings to A. Van Derveer, May 5, 1884. MS/C/81.

<sup>42</sup> "As to the *Index Medicus* the deficiency was about \$1000.00. Five hundred copies of it cost about \$5000, and it does not seem possible to cheapen it in any way. The simple truth is that there are only about 250 persons who want it—quite a number took it not because they had any use for it, but for the general good or from friendly feelings to me . . .", letter, Billings to C. R. Agnew, Jan. 27, 1885. MS/C/272.

<sup>43</sup> Billings, "The Conditions and Prospects of the Library of the Surgeon-General's Office and of its *Index Catalogue*," *Trans. Assoc. Amer. Phys.* 6:251-7 (1891). In this article Billings lists the number of subscribers from each foreign country, as Australia 5, Belgium 2, Brazil 1, and so on.

"The number of subscribers to the *Index Medicus* is hardly sufficient to pay Mr. Davis for the expense of printing it, and I have for two or three years feared that he would soon be unwilling to go on with its publication", letter, Billings to A. Mosso, Turin, Italy, Mar. 7, 1892. MS/C/81.

In an effort to attract more subscribers Davis published excerpts from scores of European and American reviews and from letters of physicians in a pamphlet, *An Explanation, by the Publisher, of the Nature, Scope, Form and Method of Preparation of the Index Medicus* [1886?]. Arch. Coll., NLM.

<sup>44</sup> "I believe it [*Index Medicus*] will be a success among the scholars in the profession. Unfortunately, however, that class is much too small", letter, G. F. Schrady, ed. *New York Med. Rec.*, to Billings, Mar. 5, 1879. NYPL, copy in NLM.

<sup>45</sup> A scrapbook containing letters and clippings relating to *Index Medicus* is in NLM. Letters, Fletcher to Billings, Nov. 16, 18, 20, 1895,

## THE INDEX-CATALOGUE AND INDEX MEDICUS

has information and a list of American subscribers NYPL, copy in MS/C/276

<sup>46</sup> A list of journals being received is in *Index Medicus*, vol 1, Jan 1879, pp 4-28

<sup>47</sup> Example Billings' invitation, May 22, 1882, from the British Medical Association to speak at its 50th anniversary meeting is in MS/C/81

<sup>48</sup> Letter, Billings to H Byrd, June 5, 1882 MS/C/81

<sup>49</sup> Letter, John Chiene, Edinburgh, to Billings, June 8, 1882 MS/C/81 Chiene, applying for the professorship of surgery, told Billings, "Your name is now well known here "

<sup>50</sup> Letter, Billings to D C Gilman, June 18, 1883 JH

<sup>51</sup> Letters, Billings to F A P Barnard, Dec 4, 1883, May 26, 1886 MS/C/81

<sup>52</sup> Letter, Billings to B Cotting, Sept 29, 1884 MS/C/81

<sup>53</sup> Letters, Billings to T Parvin, and to N S Davis, Jan 25, 1883 MS/C/81

<sup>54</sup> The banquet was held November 30, 1895 The silver box that contained the check is in HMD, NLM Garrison, *Billings*, pp 282-7, gives excerpts from speeches at the banquet

<sup>55</sup> *Memorial Meeting in Honor of the Late Dr John Shaw Billings, April 25, 1913*, p 10

As late as the 1930's mail from foreign countries was received at the Library addressed to John Shaw Billings