

## Section of the History of Medicine.

President—Dr. RAYMOND CRAWFURD.

### The First Printed Documents relating to Modern Surgical Anæsthesia.<sup>1</sup>

By Sir WILLIAM OSLER, M.D., F.R.S.

THE story of surgical anæsthesia illustrates how long it takes an idea to become effective. The idea of producing insensibility to pain during a cutting operation is of great antiquity—e.g., *vide* chapter ii, 21, in the Book of Genesis. Nor is the word anæsthesia modern, as is sometimes said, and invented by Oliver Wendell Holmes. It occurs, Withington tells me, first in Plato ("Timæus"), and is used by Dioscorides in the modern sense.

The extraordinary controversy which has raged, and re-raged every few years, on the question to whom the world is indebted for the introduction of anæsthesia, illustrates the absence of true historical perspective, and a failure to realize just what priority means in the case of a great discovery.

Why do we not give the credit to Dioscorides, who described both the general and local forms, or to Pliny, or Apuleius, or to Hiotho, the Chinaman, who seems to be next in order, or to the inventor of the *Spongia somnifera*, or to Master Mazzeo Montagna, in Boccaccio, or to any one of the score or more of men in the Middle Ages who are known to have operated on patients made insensible by drugs or vapours? Why do we not give the credit to Davy, who had the idea; or to

<sup>1</sup> Remarks made on presenting Morton's original papers to the Royal Society of Medicine, May 15, 1918.

The medium through which Dr. Morton communicated the results of experiments on etherization to the public, was a "circular" which he had printed, at his own expense, almost every week. It was at first, as its name imports, a mere letter of advice; but, as it became the receptacle of newspaper articles, and correspondence from every portion of the Union, announcing the success of etherization, it was necessarily enlarged into a large and closely-printed sheet of four pages. Soon this "circular" became a pamphlet, and of this five different editions were published, under Dr. Morton's immediate supervision, embodying a digest of all the authentic information, both from Europe and America, on "Anæsthesia" (Rice, "Trials of a Public Benefactor," 1859, p. 114).

The Index Catalogue, Surgeon-General's Library, only mentions a 14-page pamphlet, 1846, printed by Dutton and Wentworth, Boston. The early form of the circular may be seen on the back page of the *Boston Medical and Surgical Journal*, December 9. In the number for November 18, with Bigelow's paper, there is only an advertisement of Morton's courses of instruction in dentistry. The circular appeared first November 26, and is copied at pages 14 and 15 of the "Letheon" pamphlet, fifth edition. This pamphlet is made up of more than eighty short articles from medical journals and newspapers, and is of special value in giving the popular, first-hand impressions relating to the great discovery. There is very little of Morton's—only the circular already referred to, and, on page 16, the terms for the "Apparatus, a Bottle of the Preparation, Instruction, &c."

In 1847 Morton published a 44-page pamphlet on "The Proper Mode of Administering Sulphuric Ether by Inhalation" (Boston: Dutton and Wentworth), in which the original apparatus (now a treasured relic at the Massachusetts General Hospital), is described. In the early part of April he found that a sponge would serve the same purpose, and was less dangerous. The greater part of the pamphlet is taken up with general directions, the outcome of the author's experience.

The claims of Morton were very fully stated in a pamphlet published in Paris, 1847, with the title, "Mémoire sur la découverte du nouvel emploi de l'éther sulfurique," and in 1850 he published a small work "On the Physiological Effects of Sulphuric Ether and its Superiority to Chloroform," Boston. So far as I can ascertain, this completes his output on the subject of anæsthesia, except a posthumous pamphlet "On the Use of Ether as an Anæsthetic at the Battle of the Wilderness" (*Journal of the American Medical Association*, April 23, 1904).

of Davy, of Beddoes, the tragic story of Hickman, the remarkable documents relating to anæsthesia produced by compression of arteries, veins, and nerves, Bartholinus's use of cold for local anæsthesia, and the section would conclude with the writings of Esdaile and of Elliotson on hypnotism in surgery. What an education, even to glance at this literature in due sequence on the shelves!

(3) The modern period beginning with Morton, Wells and Jackson, the story of the miserable priority claims, the congressional reports, the publications of the Morton Association, the topical literature, showing the introduction of the practice into different countries, the Long literature, &c.

(4) In chronological order the subject of anæsthesia in midwifery, embracing everything from Simpson's original pamphlet to the latest popular magazine article on twilight sleep.

(5) Chloroform and its introduction. The papers of the discoverers, Guthrie, &c., the Simpson pamphlets, his famous "Encyclopædia Britannica" article dealing with the subject of anæsthesia under the word "Chloroform," which led to the sharp Bigelow-Simpson controversy, the Hyderabad Reports, the British Medical Association and other reports and documents.

(6) Local anæsthesia from Dioscorides and Bartholinus to Kohler, Corning, Halsted, Cushing, and others.

(7) Agents other than ether and chloroform, used for inducing anæsthesia, arranged in order of introduction.

(8) Technique, including the various methods of administration, intravenous, intratracheal, and the literature of apparatus.

(9) Physiology.

(10) Pathology.

I speak as an amateur. Doubtless expert members could easily arrange a more comprehensive scheme. To separate in literature the quick from the dead is one of the functions of a well-ordered library, but much that we carelessly regard as dead is magnetized into life when put in its historical relations. The plan here suggested, which could be applied in other directions, sustains that continuity, to the study of which this Section is devoted. You remember the rings of Lucretius—well, there is a *vis et vincula librorum*, binding together books, a force just as potent as the *vis et vincula lapidis*, which supported the rings; and in the literature of anæsthesia this force is derived from the works here presented to the Library.